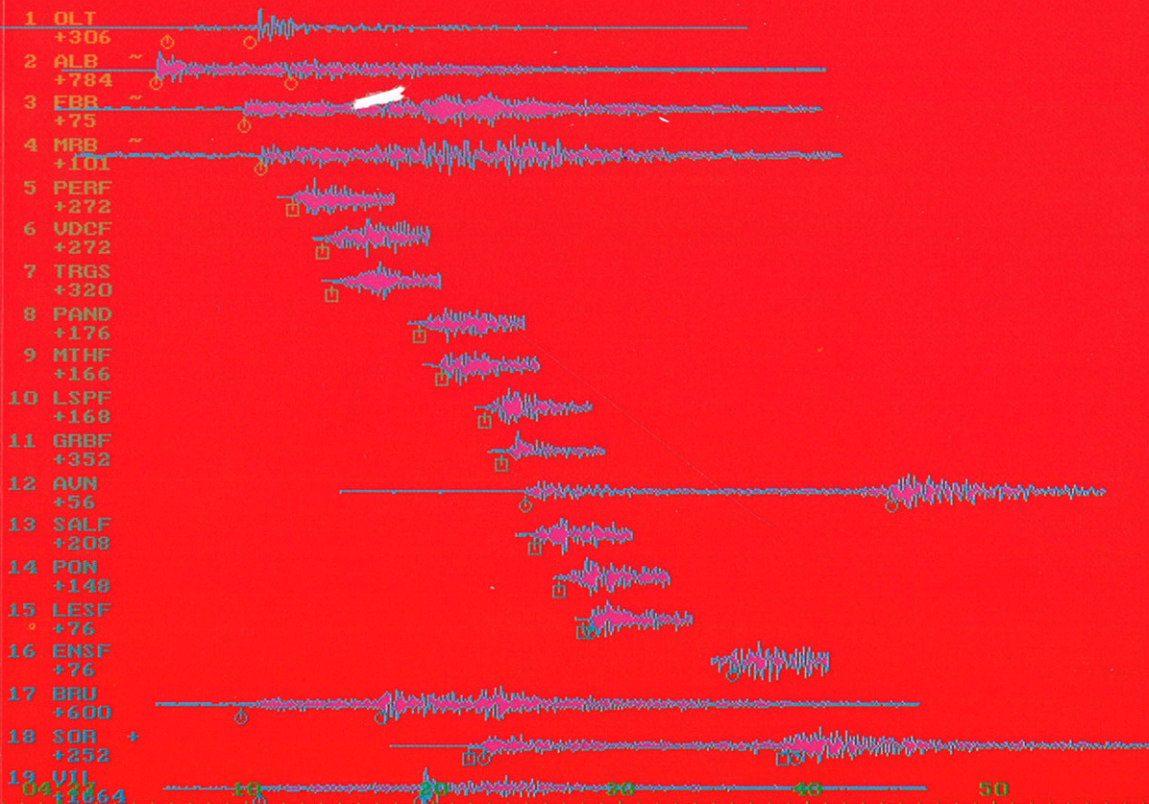




Generalitat de Catalunya  
Departament de Política Territorial  
i Obres Públiques  
**Secretaria General**  
Servei Geològic de Catalunya

# Butlletí Sismològic 1993



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Generalitat de Catalunya  
Departament de Política Territorial  
i Obres Públiques  
**Secretaria General**  
Servei Geològic de Catalunya

# Butlletí Sismològic 1993

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Departament de Política Territorial i Obres Públiques

Secretaria General

Servei Geològic de Catalunya

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amb la col·laboració de l'Observatori Fabra

Coberta:

Registres de diferents estacions, del terratrèmol del 20 de setembre de 1993, magnitud 2.8, amb epicentre prop de Santa Coloma de Farners, transmesos, per telèfon o via satèl·lit, al centre de recepció del Servei Geològic de Catalunya.

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## I. INTRODUCCIÓ

---

L'objectiu d'aquesta publicació és presentar un recull sobre la sismicitat observada a Catalunya durant l'any 1993.

En el capítol II del Butlletí, després d'aquesta introducció, es descriuen, a manera de memòria resumida, les principals activitats que s'han desenvolupat al Servei Geològic de Catalunya en el camp de la sismologia.

El capítol III, dedicat a presentar les dades de sismicitat observada durant l'any 1992, s'estructura en cinc apartats: 1) informació bàsica (distribució i titularitat de les estacions sísmiques utilitzades i nomenclatura adoptada); 2) determinacions epicentrals, on s'inclouen les lectures de les diferents estacions utilitzades; 3) mecanisme focal calculat; 4) resultats dels estudis macrosísmics de terratrèmols percebuts per la població, realitzats en col.laboració amb l'Observatori Fabra mitjançant l'anàlisi de qüestionaris, i 5) síntesi - resum amb mapes de sismicitat.

Finalment, al capítol IV es presenta una relació dels terratrèmols més notables ocorreguts fora de la nostra àrea d'estudi, enregistrats a les estacions de la xarxa sísmica de Catalunya.

Cal esmentar la col.laboració contínua mantinguda amb l'*Observatoire Midi-Pyrénées de Toulouse*, juntament amb el qual disposem d'una xarxa d'observació constituïda per estacions situades a ambdós costats del Pirineu que transmeten les dades, a través del satèl.lit Meteosat, als centres de recepció de Barcelona i Toulouse.

Manifestem un cop més el nostre agraïment a tots aquells que ens ajuden a la realització d'aquest Butlletí, en particular als qui ens subministren la informació necessària per als estudis macrosísmics. I també a tots els que col.laboren en la vigilància i el manteniment de les estacions sísmiques instal.lades a diferents llocs de Catalunya.

Recordem que, quan es produeixen sismes percebuts per la població, es pot obtenir informació trucant al nostre contestador automàtic, al qual es poden deixar també missatges sobre efectes observats.

CONTESTADOR AUTOMÀTIC DE LA XARXA SÍSMICA DE CATALUNYA: (93) 442 95 19



## II. ACTIVITATS EN SISMOLOGIA

---

Resumim a continuació les principals activitats en sismologia desenvolupades durant l'any 1993 a la Secció de Geofísica:

### **Desenvolupament de la xarxa sísmica i estudi instrumental de la sismicitat**

Per a la localització i l'estudi dels terratrèmols s'utilitzen les dades provinents de les estacions del Servei Geològic i les d'alguns altres organismes. Gràcies a la instal·lació de noves estacions i l'adopció d'equipaments més moderns, tant pel que fa a sistemes d'enregistrament com a mitjans de transmissió, actualment la xarxa permet l'adquisició ràpida de les dades i el seu tractament eficaç.

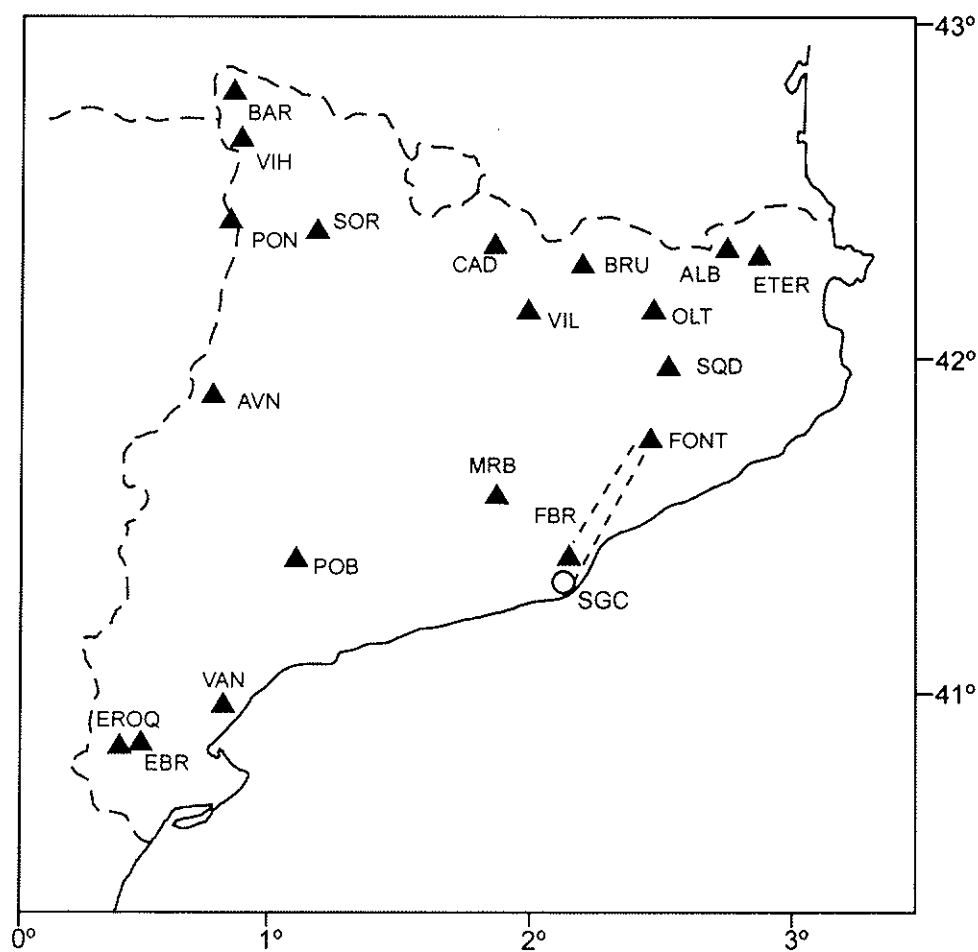
S'ha continuat el desenvolupament de mòduls i instruments amb tecnologia pròpia, adequats a les nostres necessitats específiques i s'han dut a terme, amb èxit, diferents proves del material, en campanyes de mesures amb participació internacional.

La distribució de les estacions sísmiques a Catalunya a final de 1992 es pot veure a la figura 1.

A continuació s'enumeren els treballs relacionats amb la xarxa sísmica de Catalunya que s'han realitzat durant l'any 1993:

- Manteniment de la instrumentació actual de la Xarxa Sísmica i desenvolupament de nous sistemes d'adquisició.
- Equipament de la Xarxa Sísmica amb dues noves estacions amb transmissió de dades per satèl·lit a Albanyà (Alt Empordà) i a Vilada (Berguedà), dos mòduls per a la transmissió telefònica a Roquetes (Baix Ebre) i a l'Observatori Fabra, i una estació analògica a Sort (Pallars Sobirà).
- Col·laboració en el manteniment i la millora de les estacions sísmiques dels observatoris de l'Ebre i Fabra, i també en l'anàlisi de les dades enregistrades.
- Actualització de la base de dades sismològiques.
- Edició i distribució dels butlletins mensuals.
- Edició i distribució del butlletí anual sobre la sismicitat del Pirineu de 1992 conjuntament amb l'Observatori *Midi-Pyrénées de Toulouse*.
- Instal·lació d'un equip per a l'enregistrament dels senyals generats per allaus a la Vall d'Aran. Estudi en col·laboració amb la Universitat de Barcelona.

Figura 1. Situació de les estacions sísmiques al territori català al 1993.



- Anàlisi de les dades macrosísmiques dels sismes de la Cerdanya (octubre 1993) i del seu mecanisme focal.
- Estudi del mecanisme focal del sisme del Barcelonès de 15 de desembre de 1991.
- Resposta a consultes sol·licitades per diferents organismes, empreses i particulars sobre la sismicitat actual.
- Estudi preliminar de les actuacions conjuntes que cal dur a terme amb el Centre de Coordinació d'Emergències en cas de terratrèmol.

### **Determinació de zones sísmiques i resolució de problemes d'enginyeria**

El coneixement de la sismicitat actual no és suficient per a determinar on es poden produir futurs terratrèmols i amb quina freqüència. Cal, a més a més, un coneixement tan exhaustiu com sigui possible de la sismicitat passada, coneguda a partir de documentació escrita o bé per l'estudi de les deformacions tectòniques recents (paleosismicitat) mitjançant tècniques geològiques i geodèsiques.

Per una altra banda, cal disposar d'una bona definició del moviment sísmic del sòl en funció dels sismes esperats i les característiques geològiques dels emplaçaments, com també dels seus efectes sobre els edificis.

S'han dut a terme, doncs, estudis de base per tal de disposar de dades i de mètodes, necessaris per a l'avaluació del risc sísmic a Catalunya en relació amb problemes d'enginyeria i per respondre a necessitats de Protecció Civil. Són els següents:

- Estudis realitzats amb historiadors de la Universitat de Barcelona sobre sismes importants de l'àrea pirinenca.
- Revisió de dades macrosísmiques per a l'elaboració del Catàleg Sísmic.
- Elaboració d'una base de dades d'intensitats percebudes a Catalunya durant el segle XX amb aplicació a sismes de la zona costanera.
- Cartografia temàtica per a la síntesi sismotectònica de Catalunya: discontinuïtat cobertora-sòcol i materials evaporítics.
- Elaboració d'una base de dades d'indicis de deformacions tectòniques recents.

- Estudi de deformacions verticals a partir de les dades d'anivellació d'alta precisió (NAP) corresponents a la zona entre Barcelona i Figueres en col.laboració amb la Universitat de Barcelona.
- Desenvolupament d'un sistema d'enregistrament de moviments sísmics intensos (accelerògraf).
- Determinació de les característiques del moviment sísmic del sòl a partir de dades reals i simulacions per ordinador.
- Posada a punt de programes per al càlcul de la resposta del sòl a l'acció dels moviments sísmics.
- Estudi de vulnerabilitat de les edificacions: aplicació a un sector de l'Eixample de Barcelona amb col.laboració de la Universitat Politècnica de Catalunya i el Col·legi d'Arquitectes.

En les activitats esmentades han participat, a més dels autors d'aquest butlletí, J. Batlló, J. Escuer, S. Figueres, J. Fleta, J. Giménez, X. Goula, J.C. Olmedillas, F. Torrano, P. Valls i J. Vila.

### III. LA SISMICITAT DE CATALUNYA I DE LES REGIONS VEÏNES

#### III.1 Informació bàsica

Per al càlcul de les localitzacions epicentrals hem utilitzat les lectures de temps d'arribada de les estacions sísmiques del Servei Geològic de Catalunya:

| Nom               | Codi | Latitud    | Longitud   | Altitud | Organisme |
|-------------------|------|------------|------------|---------|-----------|
| Albanyà           | ALB  | 42°18.77'N | 02°43.41'E | 400 m   | SGC       |
| Avellanes, les    | AVN  | 41°53.02'N | 00°45.11'E | 630 m   | SGC       |
| Barradós          | BAR  | 42°46.49'N | 00°48.28'E | 1540 m  | SGC       |
| Bruguera          | BRU  | 42°16.98'N | 02°11.16'E | 1300 m  | SGC       |
| Montserrat        | MRB  | 41°35.70'N | 01°50.36'E | 860 m   | SGC       |
| Olot              | OLT  | 42°08.66'N | 02°28.46'E | 700 m   | SGC       |
| Pont de Suert, el | PON  | 42°24.26'N | 00°45.44'E | 1220 m  | SGC       |
| Sort              | SOR  | 42°22.58'N | 01°08.15'E | 1240 m  | SGC       |
| Vielha            | VIH  | 42°37.73'N | 00°46.20'E | 1700 m  | SGC       |
| Vilada            | VIL  | 42°08.18'N | 01°53.48'E | 400 m   | SGC       |

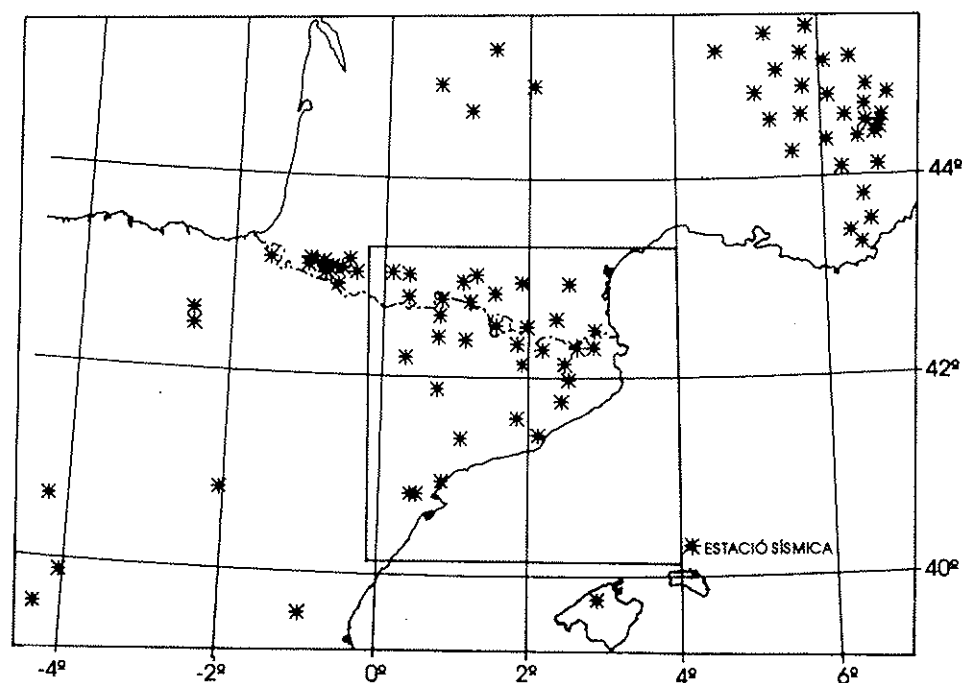
així com dades d'altres estacions (figura 2) de diferents organismes com són:

| Organisme                                  | Codi                                                                  |
|--------------------------------------------|-----------------------------------------------------------------------|
| Hidroelèctrica de Catalunya                | SQD                                                                   |
| Institut d'Estudis Catalans                | CAD, POB, VAN                                                         |
| Instituto Geográfico Nacional              | ECHE, ECRI, EGRA, ELIZ, EROQ, ESEL, ETER, ETOR, EVIA, GUD, LGR, TOL   |
| Institut de Physique du Globe de Paris     | ATE, ESCF, MADF, ISSF, OGE, JAU, BOH, LHE                             |
| Laboratoire de Détection et de Géophysique | BOF, CAF, EPF, FRF, LFF, LMR, LPG, LPO, LRG, RJF, SBF                 |
| Observatori de l'Ebre                      | EBR                                                                   |
| Observatori Fabra                          | FBR, FONT                                                             |
| Observatoire de Grenoble                   | Xarxa Sismalp                                                         |
| Observatoire Midi-Pyrénées de Toulouse     | BDBF, ENSF, GRBF, LESF, LSPF, MLS, MTHF, PAND, PERF, SALF, TRGS, VDCF |

La zona objecte del nostre estudi és la delimitada pels paral·lels  $43^{\circ}20'N$ - $40^{\circ}10'N$  i els meridians  $0^{\circ}20'W$ - $4^{\circ}E$ .

Per a la magnitud s'utilitza una fórmula, basada en la durada del senyal, ajustada per a cada una de les estacions analògiques del Servei Geològic de Catalunya (VIH, OLT, AVN, MRB) i per a les estacions amb transmissió via satèl·lit de la xarxa conjunta SGC/OMPT.

Figura 2. Situació dels sismògrafs més propers a l'àrea d'estudi, la qual és enquadrada



La nomenclatura utilitzada és la següent:

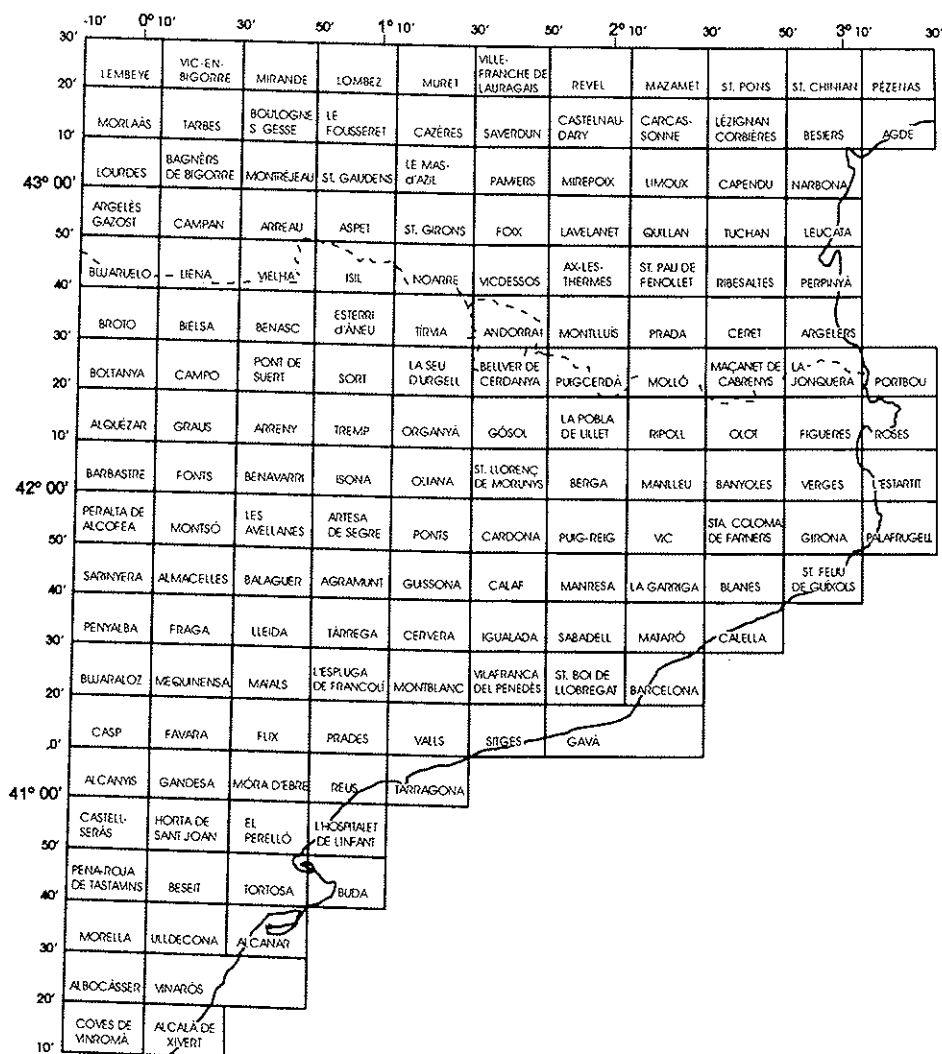
|      |                                                          |
|------|----------------------------------------------------------|
| Ho:  | Hora origen (Temps universal)                            |
| LAT: | Latitud en graus                                         |
| LON: | Longitud en graus                                        |
| PRO: | Profunditat en quilòmetres                               |
| RMS: | Error quadràtic mitjà en segons                          |
| ERH: | Error de l'epicentre en quilòmetres                      |
| ERZ: | Error de la profunditat en quilòmetres                   |
| MAG: | Magnitud de durada.                                      |
| I:   | Intensitat màxima (escala MSK)                           |
| EST: | Codi d'estació                                           |
| C/D: | Sentit del primer moviment en compressió o dilatació     |
| W:   | 0: pes 1                                                 |
|      | 1: pes 3/4                                               |
|      | 2: pes 1/2                                               |
|      | 3: pes 1/4                                               |
|      | 4: pes 0 (no té en compte la lectura en la determinació) |
|      | 9: utilitza la diferència de temps S-P                   |
| TP:  | Temps d'arribada de la fase P                            |
| TS:  | Temps d'arribada de la fase S                            |

### III. LA SISMICITAT DE CATALUNYA I DE LES REGIONS VEÏNES

#### III.2 Determinacions epicentrals

A continuació presentem les dades i els resultats obtinguts en les determinacions per a cadascun dels terratrèmols. Sota la dada s'indica l'àrea on es localitza l'epicentre, d'acord amb les regions de la figura 3.

Figura 3. Nom de les regions a què es fa referència quan donem la situació dels epicentres.



### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 2 gener 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|--------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|              | 20:06:34.6 | 42.95 | 0.42  |             | 0.3 | 2.2 |       | 2.4 |
| Campan       |            |       |       |             |     |     |       |     |
|              | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|              | EPF        |       | 1     | 20:06:37.10 |     | 2   | 39.50 |     |
|              | ENSF       | +     | 0     | 37.88       |     | 2   | 41.28 |     |
|              | VIH        |       | 2     | 42.60       |     | 3   | 48.80 |     |
|              | SALF       | +     | 1     | 45.93       |     | 3   | 54.55 |     |
|              | PON        |       | 1     | 45.99       |     | 2   | 53.66 |     |
|              | AVN        |       | 3     | 54.97       |     | 2   | 69.30 |     |
|              | LPO        |       | 9     | 20:07:07.30 |     | 3   | 32.00 |     |

| 4 gener 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|--------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|              | 03:10:21.0 | 42.64 | 0.71  | 5           | 0.2 | 1.4 | 3.1   |     |
| Benasc       |            |       |       |             |     |     |       |     |
|              | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|              | VIH        |       | 1     | 03:10:22.60 |     |     |       |     |
|              | PON        | D     | 0     | 25.76       |     | 2   | 29.28 |     |
|              | ENSF       | -     | 0     | 27.53       |     | 3   | 31.93 |     |
|              | SALF       |       | 3     | 33.65       |     |     |       |     |
|              | AVN        |       | 9     | 50.00       |     | 3   | 61.30 |     |

| 5 gener 1993    | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|-----------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                 | 09:38:17.3 | 42.53 | 0.97  | 14          | 0.4 | 2.0 | 6.1   | 2.4 |
| Esterrri d'Àneu |            |       |       |             |     |     |       |     |
|                 | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                 | VIH        |       | 2     | 09:38:21.00 |     | 3   | 23.70 |     |
|                 | SOR        | D     | 0     | 21.59       |     | 2   | 25.56 |     |
|                 | PON        | C     | 0     | 21.81       |     | 2   | 25.60 |     |
|                 | SALF       | +     | 0     | 23.68       |     | 2   | 27.46 |     |
|                 | PAND       |       |       |             |     | 3   | 31.41 |     |
|                 | GRBF       | +     | 0     | 27.06       |     |     |       |     |
|                 | FONT       |       | 4     | 43.90       |     | 4   | 60.00 |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

|              |            |       |       |     |       |     |       |     |
|--------------|------------|-------|-------|-----|-------|-----|-------|-----|
| 6 gener 1993 | Ho         | LAT N | LON E | PRO | RMS   | ERH | ERZ   | MAG |
|              | 19:25:20.4 | 42.68 | 2.53  | 4   | 0.2   | 0.8 | 2.6   | 2.3 |
| Ribesaltes   |            |       |       |     |       |     |       |     |
|              | EST        | C/D   | W     | TP  |       | W   | TS    |     |
|              | MTHF       | +     | 0     |     | 25.42 | 3   | 29.50 |     |
|              | PERF       | +     | 0     |     | 26.59 | 2   | 30.95 |     |
|              | TRGS       | +     | 0     |     | 29.04 | 3   | 35.13 |     |
|              | BRU        | C     | 0     |     | 29.59 |     |       |     |
|              | OLT        |       | 2     |     | 31.00 |     |       |     |
|              | FONT       |       | 2     |     | 38.30 | 3   | 50.80 |     |
|              | SALF       |       |       |     |       | 3   | 52.94 |     |
|              | EPF        |       | 9     |     | 51.70 | 3   | 73.30 |     |

| 7 gener 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|--------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|              | 15:57:23.7 | 42.78 | 2.53        | 1   | 0.5   | 1.1 | 2.2 | 3.3 |
| Ribesaltes   |            |       |             |     |       |     |     |     |
| EST          | C/D        | W     | TP          | W   | TS    |     |     |     |
| MTHF         | +          | 0     | 15:57:26.70 | 2   | 29.78 |     |     |     |
| VDCF         | +          | 0     | 28.22       | 3   | 31.82 |     |     |     |
| PERF         | +          | 0     | 31.28       | 2   | 36.83 |     |     |     |
| LSPF         | -          | 0     | 33.06       | 2   | 40.42 |     |     |     |
| TRGS         | +          | 0     | 33.16       | 2   | 39.88 |     |     |     |
| ETER         |            | 4     | 39.30       | 2   | 41.00 |     |     |     |
| BRU          | C          | 0     | 34.48       |     |       |     |     |     |
| OLT          |            | 1     | 36.48       | 2   | 45.82 |     |     |     |
| CAD          |            | 3     | 36.60       | 3   | 46.00 |     |     |     |
| GRBF         |            | 3     | 37.75       | 3   | 48.07 |     |     |     |
| SQD          |            | 2     | 38.70       | 3   | 49.50 |     |     |     |
| LESF         | +          | 1     | 41.66       | 3   | 55.76 |     |     |     |
| SALF         |            | 1     | 41.95       | 3   | 55.80 |     |     |     |
| FONT         |            | 2     | 43.30       | 3   | 57.70 |     |     |     |
| MLS          |            | 1     | 44.50       | 3   | 59.00 |     |     |     |
| SOR          | D          | 0     | 44.24       |     |       |     |     |     |
| MRB          |            | 1     | 48.67       |     |       |     |     |     |
| PON          |            | 0     | 49.41       |     |       |     |     |     |
| AVN          |            | 1     | 53.75       |     |       |     |     |     |
| ENSF         |            |       |             | 3   | 75.86 |     |     |     |
| EPF          |            | 1     | 53.20       |     |       |     |     |     |
| LPO          |            | 1     | 58.30       |     |       |     |     |     |
| EROQ         |            | 9     | 15:58:12.50 | 2   | 43.50 |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 9 gener 1993   | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                | 06:19:11.2 | 42.61 | 0.89        |     | 0.2   | 4.2 |     | 2.3 |
| Esterri d'Àneu |            |       |             |     |       |     |     |     |
| EST            | C/D        | W     | TP          | W   | TS    |     |     |     |
| PON            | C          | 0     | 06:19:15.74 | 3   | 19.28 |     |     |     |
| SOR            | D          | 0     | 16.86       | 2   | 21.82 |     |     |     |
| PAND           |            |       |             | 3   | 27.58 |     |     |     |
| GRBF           |            | 1     | 21.57       | 3   | 28.78 |     |     |     |

| 9 gener 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|--------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|              | 13:54:36.6 | 42.79 | 2.55        | 1   | 0.5   | 1.2 | 2.0 | 3.4 |
| Ribesaltes   |            |       |             |     |       |     |     |     |
| EST          | C/D        | W     | TP          | W   | TS    |     |     |     |
| MTHF         | -          | 0     | 13:54:39.83 | 3   | 42.58 |     |     |     |
| VDCF         |            | 1     | 41.33       |     |       |     |     |     |
| PERF         |            | 0     | 44.40       | 3   | 48.11 |     |     |     |
| LSPF         |            | 1     | 46.10       | 3   | 53.50 |     |     |     |
| TRGS         |            | 1     | 46.26       |     |       |     |     |     |
| ETER         |            | 4     | 45.20       | 4   | 50.60 |     |     |     |
| BRU          | C          | 0     | 47.63       |     |       |     |     |     |
| OLT          |            | 1     | 49.18       |     |       |     |     |     |
| CAD          |            | 3     | 49.40       | 3   | 58.80 |     |     |     |
| GRBF         |            | 1     | 50.22       | 3   | 62.22 |     |     |     |
| SQD          |            | 2     | 52.00       | 3   | 62.80 |     |     |     |
| LESF         |            | 2     | 54.76       | 3   | 69.00 |     |     |     |
| SALF         |            | 1     | 55.00       | 3   | 69.10 |     |     |     |
| FONT         |            | 2     | 56.30       | 3   | 70.70 |     |     |     |
| MLS          |            | 2     | 56.50       | 3   | 71.20 |     |     |     |
| SOR          | D          | 0     | 57.36       |     |       |     |     |     |
| MRB          |            | 1     | 13:55:00.76 | 2   | 18.96 |     |     |     |
| PON          |            | 1     | 02.35       | 2   | 20.65 |     |     |     |
| AVN          |            | 1     | 06.29       | 2   | 27.54 |     |     |     |
| ENSF         | +          | 1     | 07.15       | 3   | 29.02 |     |     |     |
| EPF          |            | 1     | 06.40       |     |       |     |     |     |
| LPO          |            | 1     | 12.00       |     |       |     |     |     |
| EROQ         |            | 9     | 23.50       | 3   | 53.80 |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 9 gener 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|--------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|              | 17:19:00.6 | 42.93 | 0.34        |     | 0.1   | 6.9 |     |     |
| Campan       |            |       |             |     |       |     |     |     |
| EST          | C/D        | W     | TP          | W   | TS    |     |     |     |
| EPF          |            | 1     | 17:19:02.90 | 2   | 04.20 |     |     |     |
| ENSF         |            | 1     | 03.33       | 3   | 05.65 |     |     |     |
| SALF         |            |       |             | 3   | 22.22 |     |     |     |

| 14 gener 1993  | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                | 02:38:56.9 | 42.53 | 0.94        | 2   | 0.2   | 1.0 | 2.7 | 2.3 |
| Esterri d'Àneu |            |       |             |     |       |     |     |     |
| EST            | C/D        | W     | TP          | W   | TS    |     |     |     |
| VIH            |            | 1     | 02:39:00.50 | 2   | 03.00 |     |     |     |
| PON            | C          | 0     | 01.00       | 1   | 03.42 |     |     |     |
| SOR            | C          | 0     | 01.20       | 1   | 04.46 |     |     |     |
| SALF           | +          | 0     | 02.88       | 1   | 06.81 |     |     |     |
| MLS            | +          | 1     | 05.73       | 3   | 11.65 |     |     |     |
| GRBF           |            | 1     | 07.40       | 3   | 15.02 |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

|                  |            |       |       |             |     |     |     |       |
|------------------|------------|-------|-------|-------------|-----|-----|-----|-------|
| 16 gener 1993    | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ | MAG   |
|                  | 15:36:25.4 | 43.02 | 0.30  | 16          | 0.4 | 1.4 | 1.2 | 2.8   |
| Bagnères Bigorre |            |       |       |             |     |     |     |       |
|                  | EST        | C/D   | W     | TP          |     | W   |     | TS    |
|                  | EPF        |       | 1     | 15:36:28.50 |     | 2   |     | 30.70 |
|                  | BDBF       |       | 1     | 28.81       |     | 2   |     | 31.75 |
|                  | ENSF       | +     | 0     | 30.19       |     | 2   |     | 34.06 |
|                  | BTH        |       | 2     | 32.50       |     | 3   |     | 37.80 |
|                  | VIH        |       | 2     | 35.60       |     | 2   |     | 42.50 |
|                  | MLS        |       | 2     | 36.50       |     | 3   |     | 44.00 |
|                  | PON        | D     | 0     | 38.70       |     | 2   |     | 48.14 |
|                  | SALF       | +     | 1     | 38.57       |     |     |     |       |
|                  | LESF       | +     | 1     | 39.13       |     |     |     |       |
|                  | EGR        | D     | 0     | 40.90       |     | 3   |     | 53.50 |
|                  | GRBF       | +     | 1     | 42.60       |     |     |     |       |
|                  | AVN        |       | 1     | 47.31       |     |     |     |       |
|                  | LPO        |       | 3     | 53.80       |     |     |     |       |
|                  | OLT        |       | 4     | 15:37:01.00 |     |     |     |       |
|                  | FONT       |       | 9     | 03.30       |     | 3   |     | 28.70 |
|                  | ECRI       |       | 0     | 00.50       |     | 3   |     | 26.40 |
|                  | EROQ       |       | 9     | 04.00       |     | 3   |     | 32.50 |

|               |                  |                |               |     |            |            |     |            |
|---------------|------------------|----------------|---------------|-----|------------|------------|-----|------------|
| 17 gener 1993 | Ho<br>15:56:41.6 | LAT N<br>41.80 | LON E<br>2.73 | PRO | RMS<br>0.1 | ERH<br>0.9 | ERZ | MAG<br>2.1 |
| Blanes        |                  |                |               |     |            |            |     |            |
| EST           | C/D              | W              | TP            | W   | TS         |            |     |            |
| FONT          |                  | 1              | 15:56:46.00   | 2   | 49.50      |            |     |            |
| OLT           |                  | 0              | 49.24         | 4   | 55.06      |            |     |            |
| BRU           | C                | 0              | 53.64         | 2   | 62.46      |            |     |            |
| PERF          | C                | 0              | 54.55         |     |            |            |     |            |
| TRGS          |                  | 1              | 58.52         |     |            |            |     |            |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 19 gener 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|---------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|               | 14:08:38.2 | 42.62 | 2.34        | 5   | 0.3   | 0.8 | 1.1 | 3.0 |
| Prada         |            |       |             |     |       |     |     |     |
| EST           | C/D        | W     | TP          | W   | TS    |     |     |     |
| VDCF          | +          | 0     | 14:08:39.52 | 2   | 40.56 |     |     |     |
| TRGS          | -          | 1     | 43.74       | 2   | 48.14 |     |     |     |
| MTHF          | +          | 0     | 44.86       | 3   | 50.06 |     |     |     |
| BRU           | C          | 0     | 44.99       |     |       |     |     |     |
| LSPF          | +          | 0     | 46.86       | 2   | 53.76 |     |     |     |
| OLT           |            | 3     | 47.53       |     |       |     |     |     |
| ETER          | C          | 0     | 47.90       | 2   | 54.60 |     |     |     |
| GRBF          | -          | 1     | 50.15       | 3   | 59.04 |     |     |     |
| SALF          |            | 1     | 54.00       |     |       |     |     |     |
| FONT          |            | 2     | 54.30       | 3   | 66.00 |     |     |     |
| LESF          | +          | 1     | 54.39       |     |       |     |     |     |
| VIH           |            | 3     | 14:09:00.10 | 3   | 15.50 |     |     |     |
| PON           |            | 1     | 00.31       |     |       |     |     |     |
| AVN           |            | 0     | 04.20       |     |       |     |     |     |

| 23 gener 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|---------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|               | 01:00:00.1 | 42.93 | 0.34        |     | 0.4   | 3.9 |     |     |
| Campan        |            |       |             |     |       |     |     |     |
| EST           | C/D        | W     | TP          | W   | TS    |     |     |     |
| EPF           |            | 1     | 01:00:01.80 | 2   | 04.10 |     |     |     |
| ENSF          |            | 1     | 02.72       | 3   | 05.46 |     |     |     |
| SALF          |            |       |             | 3   | 21.92 |     |     |     |
| AVN           |            |       |             | 3   | 36.50 |     |     |     |
| LPO           |            | 9     | 32.90       | 3   | 57.80 |     |     |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 27 gener 1993  | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|----------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                | 23:08:58.3 | 42.81 | 2.00  | 1           | 0.3 | 1.0 | 2.6   | 2.5 |
| Ax-les-Thermes |            |       |       |             |     |     |       |     |
|                | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                | LSPF       | —     | 0     | 23:09:01.29 |     |     |       |     |
|                | TRGS       | —     | 0     | 04.63       |     | 2   | 09.30 |     |
|                | GRBF       |       |       |             |     | 3   | 10.51 |     |
|                | VDCF       | —     | 0     | 05.11       |     |     |       |     |
|                | MTHF       |       |       |             |     | 3   | 12.72 |     |
|                | PAND       |       |       |             |     | 3   | 13.78 |     |
|                | BRU        |       | 1     | 09.24       |     |     |       |     |
|                | SALF       |       | 1     | 09.35       |     | 3   | 18.30 |     |
|                | MLS        |       |       |             |     | 3   | 21.50 |     |
|                | PON        |       | 1     | 17.53       |     |     |       |     |
|                | FONT       |       | 3     | 20.00       |     | 3   | 34.70 |     |
|                | EPF        |       | 2     | 21.50       |     | 3   | 38.60 |     |
|                | LPO        |       | 9     | 34.70       |     | 3   | 59.70 |     |

| 2 febrer 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|---------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|               | 22:53:32.6 | 43.01 | 0.05  | 8           | 0.2 | 1.5 | 2.8   | 2.2 |
| Lourdes       |            |       |       |             |     |     |       |     |
|               | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|               | BDBF       | —     | 0     | 22:53:34.86 |     | 2   | 36.33 |     |
|               | EPF        |       | 0     | 37.00       |     | 2   | 40.10 |     |
|               | BTH        |       | 1     | 37.00       |     | 3   | 40.50 |     |
|               | ENSF       | —     | 1     | 38.31       |     | 3   | 42.68 |     |
|               | AVN        |       | 9     | 57.50       |     | 3   | 75.44 |     |
|               | LPO        |       | 9     | 22:54:08.60 |     | 3   | 33.00 |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 4 febrer 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|---------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|               | 14:15:56.7 | 42.59 | 0.77  |             | 0.1 |     |       | 1.3 |
| Benasc        |            |       |       |             |     |     |       |     |
|               | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|               | VIH        |       | 1     | 14:15:58.80 |     | 3   | 60.10 |     |
|               | PON        |       | 1     | 14:16:00.66 |     |     |       |     |
|               | SALF       |       | 1     | 03.69       |     |     |       |     |

| 5 febrer 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|---------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|               | 08:15:25.8 | 42.39 | 0.73  |             | 0.0 |     |       | 1.9 |
| Pont Suert    |            |       |       |             |     |     |       |     |
|               | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|               | VIH        |       | 3     | 08:15:30.75 |     |     |       |     |
|               | SOR        | D     | 0     | 31.90       |     | 1   | 36.40 |     |
|               | SALF       | +     | 1     | 35.46       |     |     |       |     |

| 6 febrer 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|---------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|               | 07:18:11.9 | 42.67 | 0.58  |             | 0.1 | 1.2 |       | 1.7 |
| Benasc        |            |       |       |             |     |     |       |     |
|               | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|               | VIH        |       | 2     | 07:18:15.20 |     | 2   | 17.50 |     |
|               | PON        |       | 1     | 17.67       |     | 2   | 22.11 |     |
|               | SALF       | +     | 1     | 20.65       |     |     |       |     |
|               | GRBF       | +     | 1     | 25.67       |     | 3   | 35.67 |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 8 febrer 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|---------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|               | 12:49:24.7 | 42.38 | 3.05  |             | 0.5 | 5.1 |       | 1.5 |
| La Jonquera   |            |       |       |             |     |     |       |     |
|               | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|               | PERF       | —     | 1     | 12:49:28.11 |     | 3   | 30.96 |     |
|               | ALB        |       | 1     | 29.68       |     |     |       |     |
|               | VDCF       |       | 3     | 36.71       |     |     |       |     |
|               | BRU        |       | 3     | 36.27       |     |     |       |     |
|               | MTHF       |       | 2     | 37.69       |     |     |       |     |
|               | FONT       |       | 2     | 39.70       |     | 3   | 50.70 |     |
|               | TRGS       |       | 3     | 41.65       |     |     |       |     |

| 9 febrer 1993       | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|---------------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                     | 03:48:35.1 | 43.06 | 0.17  |             | 0.2 | 3.6 |       | 1.4 |
| Bagnères de Bigorre |            |       |       |             |     |     |       |     |
|                     | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                     | BDBF       | +     | 0     | 03:48:37.44 |     | 2   | 39.02 |     |
|                     | EPF        |       | 1     | 38.80       |     | 2   | 40.80 |     |
|                     | ENSF       |       | 1     | 40.76       |     | 3   | 45.78 |     |

| 9 febrer 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|---------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|               | 08:46:33.2 | 41.54 | 2.20  | 1           | 0.4 | 1.8 | 4.2   | 2.4 |
| Mataró        |            |       |       |             |     |     |       |     |
|               | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|               | FBR        | D     | 0     | 08:46:35.87 |     | 2   | 38.31 |     |
|               | FONT       |       | 1     | 38.90       |     | 3   | 42.90 |     |
|               | ALB        | —     | 1     | 49.34       |     | 3   | 61.63 |     |
|               | ETER       |       | 1     | 50.60       |     | 2   | 62.60 |     |
|               | TRGS       |       | 2     | 52.02       |     |     |       |     |
|               | AVN        |       | 1     | 54.40       |     | 3   | 69.79 |     |
|               | SOR        |       | 1     | 54.88       |     | 2   | 70.30 |     |
|               | EGRA       |       | 1     | 08:47:02.20 |     | 3   | 22.30 |     |
|               | LESF       |       | 2     | 03.79       |     |     |       |     |

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| 15 febrer 1993 |      | Ho         | LAT N | LON E       | PRO | RMS | ERH   | ERZ | MAG |
|----------------|------|------------|-------|-------------|-----|-----|-------|-----|-----|
|                |      | 11:58:28.1 | 42.95 | 0.13        |     | 0.3 | 2.1   |     | 2.1 |
| Argelès Gazost |      |            |       |             |     |     |       |     |     |
|                | EST  | C/D        | W     | TP          |     | W   | TS    |     |     |
|                | BDBF | —          | 0     | 11:58:30.76 |     | 2   | 32.45 |     |     |
|                | EPF  |            | 1     | 31.70       |     | 2   | 34.10 |     |     |
|                | ENSF | —          | 0     | 32.43       |     | 2   | 35.39 |     |     |
|                | BTH  |            | 2     | 34.20       |     | 3   | 37.20 |     |     |
|                | AVN  |            |       |             |     | 3   | 65.95 |     |     |

| 16 febrer 1993 |      | Ho         | LAT N | LON E       | PRO | RMS | ERH   | ERZ | MAG |
|----------------|------|------------|-------|-------------|-----|-----|-------|-----|-----|
|                |      | 03:52:30.8 | 42.58 | 0.72        | 8   | 0.2 | 1.4   | 1.5 | 1.7 |
| Benasc         |      |            |       |             |     |     |       |     |     |
|                | EST  | C/D        | W     | TP          |     | W   | TS    |     |     |
|                | VIH  | D          | 1     | 03:52:33.30 |     | 2   | 34.20 |     |     |
|                | PON  | D          | 0     | 34.75       |     |     |       |     |     |
|                | ENSF |            | 1     | 37.70       |     |     |       |     |     |
|                | SOR  | C          | 0     | 38.03       |     | 2   | 43.29 |     |     |
|                | SALF | +          | 0     | 38.45       |     |     |       |     |     |
|                | GRBF | —          | 1     | 43.46       |     |     |       |     |     |
|                | FONT |            | 9     | 59.70       |     | 3   | 80.00 |     |     |

| 16 febrer 1993 |      | Ho         | LAT N | LON E       | PRO | RMS | ERH   | ERZ | MAG |
|----------------|------|------------|-------|-------------|-----|-----|-------|-----|-----|
|                |      | 22:23:06.7 | 42.45 | 2.11        | 0   | 0.4 | 2.3   | 4.2 | 2.2 |
| Puigcerdà      |      |            |       |             |     |     |       |     |     |
|                | EST  | C/D        | W     | TP          |     | W   | TS    |     |     |
|                | CAD  |            | 1     | 22:23:11.35 |     | 2   | 14.54 |     |     |
|                | MTHF | +          | 1     | 17.97       |     |     |       |     |     |
|                | FONT |            | 3     | 20.90       |     |     |       |     |     |
|                | SOR  | D          | 1     | 20.73       |     | 2   | 32.03 |     |     |
|                | AVN  |            | 9     | 29.10       |     | 3   | 46.20 |     |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 17 febrer 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|----------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                | 10:36:57.7 | 42.99 | 0.22  |             | 0.0 | 0.2 |       | 1.9 |
| Campan         |            |       |       |             |     |     |       |     |
|                | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                | BDBF       | +     | 0     | 10:37:00.14 |     | 2   | 01.98 |     |
|                | EPF        |       | 1     | 00.30       |     | 2   | 02.20 |     |
|                | ENSF       |       |       |             |     | 3   | 05.34 |     |

| 19 febrer 1993  | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|-----------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                 | 00:57:59.2 | 43.08 | -0.30 | 3           | 0.4 | 1.4 | 1.4   | 2.0 |
| Oest de Lourdes |            |       |       |             |     |     |       |     |
|                 | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                 | JAU        |       | 0     | 00:58:01.04 |     |     |       |     |
|                 | BTH        |       | 2     | 01.40       |     |     |       |     |
|                 | OGE        |       | 0     | 02.51       |     |     |       |     |
|                 | ESCF       |       | 1     | 03.14       |     | 2   | 06.31 |     |
|                 | LHE        |       | 1     | 04.68       |     |     |       |     |
|                 | ATE        |       | 1     | 04.83       |     | 3   | 09.12 |     |
|                 | BDBF       |       | 1     | 05.17       |     | 3   | 10.60 |     |
|                 | ISS        |       | 1     | 06.39       |     | 3   | 11.51 |     |
|                 | MAD        |       | 1     | 06.63       |     | 3   | 12.85 |     |
|                 | EPF        |       | 1     | 08.20       |     | 2   | 14.90 |     |
|                 | ELY        |       |       |             |     | 3   | 16.90 |     |
|                 | BOH        |       | 1     | 09.25       |     | 3   | 16.53 |     |
|                 | ENSF       | -     | 0     | 09.41       |     |     |       |     |
|                 | VIH        |       | 3     | 16.00       |     |     |       |     |
|                 | ELIZ       |       | 4     | 19.80       |     | 4   | 30.50 |     |
|                 | EGRA       |       | 9     | 21.20       |     | 3   | 34.00 |     |
|                 | PON        |       | 1     | 18.71       |     |     |       |     |
|                 | SALF       |       |       |             |     | 3   | 35.84 |     |
|                 | SOR        |       | 2     | 23.06       |     | 4   | 41.99 |     |
|                 | AVN        |       | 2     | 26.82       |     |     |       |     |
|                 | ECRI       |       | 2     | 31.00       |     | 4   | 48.00 |     |
|                 | LPO        |       | 9     | 35.20       |     | 3   | 60.60 |     |
|                 | MRB        |       | 4     | 42.00       |     | 4   | 68.29 |     |
|                 | EROQ       |       | 2     | 38.40       |     | 3   | 65.00 |     |
|                 | FONT       |       | 4     | 41.30       |     | 4   | 76.00 |     |

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 III.2 Determinacions epicentrals

| 19 febrer 1993 |      | Ho         | LAT N | LON E       | PRO | RMS | ERH   | ERZ | MAG |
|----------------|------|------------|-------|-------------|-----|-----|-------|-----|-----|
|                |      | 10:05:10.5 | 42.64 | 0.63        | 2   | 0.3 | 1.1   | 2.2 | 1.7 |
| Benasc         |      |            |       |             |     |     |       |     |     |
|                | EST  | C/D        | W     | TP          |     | W   | TS    |     |     |
|                | VIH  | D          | 1     | 10:05:12.90 |     | 4   | 13.70 |     |     |
|                | PON  |            | 1     | 15.84       |     | 2   | 19.96 |     |     |
|                | ENSF | —          | 0     | 16.05       |     | 3   | 20.20 |     |     |
|                | SALF |            | 1     | 19.53       |     |     |       |     |     |
|                | SOR  | C          | 0     | 19.24       |     | 2   | 26.12 |     |     |
|                | MLS  |            | 3     | 19.20       |     |     |       |     |     |
|                | EGRA |            | 0     | 20.50       |     | 2   | 27.80 |     |     |

| 22 febrer 1993 |      | Ho         | LAT N | LON E       | PRO | RMS | ERH   | ERZ | MAG |
|----------------|------|------------|-------|-------------|-----|-----|-------|-----|-----|
|                |      | 13:28:26.9 | 43.00 | 0.17        | 4   | 0.4 | 2.2   | 5.9 | 2.6 |
| Argelès Gazost |      |            |       |             |     |     |       |     |     |
|                | EST  | C/D        | W     | TP          |     | W   | TS    |     |     |
|                | EPF  |            | 1     | 13:28:29.70 |     |     |       |     |     |
|                | BTH  |            | 2     | 32.20       |     | 3   | 37.20 |     |     |
|                | VIH  |            | 2     | 37.70       |     | 3   | 45.60 |     |     |
|                | MLS  |            |       |             |     | 3   | 50.30 |     |     |
|                | PON  |            | 1     | 40.67       |     | 3   | 51.17 |     |     |
|                | SALF |            | 2     | 41.88       |     | 3   | 52.40 |     |     |
|                | AVN  |            | 1     | 49.51       |     | 4   | 67.59 |     |     |
|                | LPO  |            | 9     | 13:29:01.00 |     | 3   | 24.10 |     |     |

| 24 febrer 1993  | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                 | 05:56:39.6 | 43.08 | -0.31       | 4   | 0.5   | 1.3 | 1.5 | 3.1 |
| Oest de Lourdes |            |       |             |     |       |     |     |     |
| EST             | C/D        | W     | TP          | W   | TS    |     |     |     |
| JAU             |            | 1     | 05:56:41.40 |     |       |     |     |     |
| OGE             |            | 1     | 42.88       | 2   | 45.63 |     |     |     |
| ESCF            |            | 1     | 43.55       | 2   | 46.52 |     |     |     |
| LHE             |            | 1     | 45.02       | 2   | 49.25 |     |     |     |
| ATE             |            | 2     | 45.22       | 3   | 49.51 |     |     |     |
| ISS             |            | 2     | 46.63       | 3   | 51.87 |     |     |     |
| EPF             |            | 1     | 48.50       | 2   | 55.20 |     |     |     |
| ENSF            |            | 1     | 49.80       |     |       |     |     |     |
| ELIZ            |            | 1     | 56.00       | 2   | 68.50 |     |     |     |
| VIH             |            | 2     | 56.30       |     |       |     |     |     |
| PON             |            | 1     | 59.31       |     |       |     |     |     |
| MLS             |            | 2     | 59.00       | 4   | 75.40 |     |     |     |
| SALF            |            | 3     | 05:57:00.68 | 3   | 15.88 |     |     |     |
| EGRA            |            | 9     | 00.70       | 3   | 16.20 |     |     |     |
| SOR             |            | 1     | 03.28       |     |       |     |     |     |
| GRBF            |            |       |             | 3   | 24.20 |     |     |     |
| AVN             |            | 2     | 06.82       |     |       |     |     |     |
| ECRI            |            | 9     | 10.71       | 2   | 32.80 |     |     |     |
| LPO             |            | 9     | 15.60       | 3   | 41.00 |     |     |     |
| BRU             |            | 9     | 17.94       | 3   | 45.96 |     |     |     |
| MRB             |            | 9     | 22.00       | 3   | 48.00 |     |     |     |
| EROQ            |            | 9     | 21.32       | 2   | 49.70 |     |     |     |
| FONT            |            | 3     | 21.50       | 4   | 55.90 |     |     |     |
| ETER            |            | 9     | 23.64       | 2   | 55.00 |     |     |     |
| ETOR            |            | 9     | 23.12       | 2   | 54.30 |     |     |     |

| 24 febrer 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                | 07:19:32.9 | 42.98 | 0.09        |     | 0.4   | 2.6 |     |     |
| Argelès Gazost |            |       |             |     |       |     |     |     |
| EST            | C/D        | W     | TP          | W   | TS    |     |     |     |
| EPF            |            | 0     | 07:19:36.60 | 2   | 39.60 |     |     |     |
| ENSF           | +          | 1     | 38.01       | 2   | 42.08 |     |     |     |
| VIH            |            | 2     | 44.80       | 3   | 53.40 |     |     |     |
| MLS            |            |       |             | 3   | 58.50 |     |     |     |
| AVN            |            | 2     | 55.97       |     |       |     |     |     |
| LPO            |            | 9     | 07:20:07.50 | 3   | 33.60 |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 25 febrer 1993 | Ho         | LAT N | LON E       | PRO | RMS | ERH   | ERZ | MAG |
|----------------|------------|-------|-------------|-----|-----|-------|-----|-----|
|                | 03:52:49.9 | 42.83 | 1.44        | 11  | 0.3 | 1.9   | 2.9 |     |
| Noarre         |            |       |             |     |     |       |     |     |
| EST            | C/D        | W     | TP          |     | W   | TS    |     |     |
| GRBF           |            | 0     | 03:52:00.00 |     | 3   | 54.58 |     |     |
| SALF           | +          | 1     | 54.43       |     | 3   | 56.95 |     |     |
| LESF           | +          | 1     | 54.59       |     |     |       |     |     |
| MLS            |            | 2     | 55.20       |     | 3   | 60.70 |     |     |
| PAND           | +          | 1     | 56.39       |     |     |       |     |     |
| SOR            | C          | 0     | 59.57       |     |     |       |     |     |
| PON            | D          | 0     | 03:53:02.24 |     |     |       |     |     |

| 25 febrer 1993 | Ho         | LAT N | LON E       | PRO | RMS | ERH   | ERZ | MAG |
|----------------|------------|-------|-------------|-----|-----|-------|-----|-----|
|                | 09:13:28.8 | 42.53 | 0.59        |     | 0.3 | 3.3   |     | 1.9 |
| Benasc         |            |       |             |     |     |       |     |     |
| EST            | C/D        | W     | TP          |     | W   | TS    |     |     |
| VIH            | +          | 2     | 09:13:32.20 |     |     |       |     |     |
| PON            | D          | 1     | 32.68       |     |     |       |     |     |
| ENSF           | D          | 0     | 35.30       |     |     |       |     |     |
| SOR            | D          | 1     | 36.80       |     | 2   | 43.23 |     |     |
| SALF           | C          | 0     | 38.69       |     |     |       |     |     |

| 1 març 1993 | Ho         | LAT N | LON E       | PRO | RMS | ERH   | ERZ | MAG |
|-------------|------------|-------|-------------|-----|-----|-------|-----|-----|
|             | 13:34:42.4 | 43.00 | 0.59        |     | 0.1 | 1.6   |     | 1.9 |
| Arreau      |            |       |             |     |     |       |     |     |
| EST         | C/D        | W     | TP          |     | W   | TS    |     |     |
| ENSF        | +          | 1     | 13:34:47.97 |     | 3   | 51.72 |     |     |
| MLS         |            | 2     | 49.50       |     |     |       |     |     |
| VIH         |            | 3     | 50.50       |     | 3   | 56.00 |     |     |
| SALF        |            | 2     | 51.93       |     |     |       |     |     |
| GRBF        |            | 2     | 55.97       |     | 3   | 66.00 |     |     |

# III. La sismicitat de Catalunya i de les regions veïnes

## III.2 Determinacions epicentrals

| 2 març 1993     |     | Ho         | LAT N       | LON E | PRO   | RMS | ERH | ERZ | MAG |
|-----------------|-----|------------|-------------|-------|-------|-----|-----|-----|-----|
|                 |     | 23:48:49.7 | 43.08       | -0.30 | 0     | 0.6 | 1.7 | 2.6 | 2.5 |
| Oest de Lourdes |     |            |             |       |       |     |     |     |     |
| EST             | C/D | W          | TP          | W     | TS    |     |     |     |     |
| JAU             |     | 1          | 23:48:51.41 |       |       |     |     |     |     |
| BTH             |     | 2          | 51.50       |       |       |     |     |     |     |
| OGE             |     | 1          | 52.87       | 2     | 55.51 |     |     |     |     |
| ESCF            |     | 1          | 53.45       | 3     | 56.46 |     |     |     |     |
| LHE             |     | 2          | 55.03       | 3     | 59.19 |     |     |     |     |
| ATE             |     | 2          | 54.97       | 3     | 59.48 |     |     |     |     |
| BDBF            |     | 2          | 56.22       | 3     | 60.78 |     |     |     |     |
| ISS             |     | 2          | 56.92       | 3     | 61.82 |     |     |     |     |
| EPF             |     | 1          | 58.50       | 3     | 64.10 |     |     |     |     |
| ENSF            | -   | 1          | 59.76       |       |       |     |     |     |     |
| ELIZ            |     | 2          | 23:49:08.50 | 3     | 19.50 |     |     |     |     |
| VIH             |     | 3          | 07.70       | 3     | 20.00 |     |     |     |     |
| EGRA            |     | 9          | 11.70       | 2     | 27.00 |     |     |     |     |
| PON             |     | 2          | 09.46       |       |       |     |     |     |     |
| SALF            |     | 3          | 11.57       |       |       |     |     |     |     |
| SOR             |     | 2          | 13.22       |       |       |     |     |     |     |
| GRBF            |     | 2          | 15.88       | 3     | 35.25 |     |     |     |     |
| AVN             |     | 2          | 16.96       |       |       |     |     |     |     |
| ECRI            |     | 0          | 21.90       | 2     | 44.00 |     |     |     |     |
| LPO             |     | 9          | 25.80       | 3     | 51.60 |     |     |     |     |
| BRU             |     | 9          | 28.29       | 4     | 56.61 |     |     |     |     |
| FONT            |     | 3          | 31.30       | 4     | 66.00 |     |     |     |     |

| 4 març 1993    |     | Ho         | LAT N       | LON E | PRO   | RMS | ERH | ERZ | MAG |
|----------------|-----|------------|-------------|-------|-------|-----|-----|-----|-----|
|                |     | 15:23:59.8 | 42.76       | 1.96  |       | 0.3 | 2.8 |     |     |
| Ax-les-Thermes |     |            |             |       |       |     |     |     |     |
| EST            | C/D | W          | TP          | W     | TS    |     |     |     |     |
| TRGS           | +   | 0          | 15:24:05.47 | 2     | 08.87 |     |     |     |     |
| GRBF           |     |            |             | 3     | 11.11 |     |     |     |     |
| MTHF           | -   | 0          | 08.36       | 3     | 15.55 |     |     |     |     |
| SALF           |     |            |             | 3     | 18.39 |     |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 6 març 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|             | 18:43:46.6 | 43.01 | 0.12        | 5   | 0.5   | 1.7 | 2.7 | 2.8 |
| Lourdes     |            |       |             |     |       |     |     |     |
| EST         | C/D        | W     | TP          | W   | TS    |     |     |     |
| BDBF        | +          | 0     | 18:43:48.45 | 2   | 50.23 |     |     |     |
| EPF         |            | 0     | 49.70       | 2   | 52.00 |     |     |     |
| ENSF        | +          | 0     | 51.75       | 3   | 55.23 |     |     |     |
| BTH         |            | 1     | 51.40       | 3   | 54.70 |     |     |     |
| MLS         |            | 2     | 18:44:00.40 | 3   | 11.50 |     |     |     |
| PON         | D          | 0     | 00.92       | 2   | 11.31 |     |     |     |
| EGRA        |            | 0     | 02.40       | 3   | 12.50 |     |     |     |
| SALF        |            | 2     | 01.58       | 3   | 12.83 |     |     |     |
| SOR         | C          | 0     | 04.94       | 1   | 19.22 |     |     |     |
| GRBF        | +          | 1     | 05.80       | 3   | 20.53 |     |     |     |
| ELIZ        |            | 4     | 12.50       |     |       |     |     |     |
| AVN         | D          | 0     | 09.56       | 2   | 26.95 |     |     |     |
| LPO         |            | 9     | 19.70       | 2   | 44.40 |     |     |     |
| OLT         |            | 9     | 21.70       | 3   | 47.50 |     |     |     |
| ECRI        |            | 9     | 22.80       | 2   | 48.70 |     |     |     |
| FONT        |            | 3     | 23.70       | 4   | 53.90 |     |     |     |
| EROQ        |            | 4     | 30.50       | 4   | 54.50 |     |     |     |
| ETOR        |            | 0     | 31.20       |     |       |     |     |     |

| 7 març 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|             | 06:21:40.4 | 42.60 | 0.72        |     | 0.3   |     |     |     |
| Benasc      |            |       |             |     |       |     |     |     |
| EST         | C/D        | W     | TP          | W   | TS    |     |     |     |
| PON         | C          | 0     | 06:21:44.23 | 1   | 47.93 |     |     |     |
| ENSF        |            |       |             | 2   | 52.57 |     |     |     |
| SALF        |            |       |             | 2   | 53.48 |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 9 març 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH  | ERZ | MAG |
|-------------|------------|-------|-------------|-----|-------|------|-----|-----|
|             | 20:31:38.1 | 42.25 | 2.47        |     | 0.7   | 12.7 |     | 2.0 |
| Ripoll      |            |       |             |     |       |      |     |     |
| EST         | C/D        | W     | TP          | W   | TS    |      |     |     |
| OLT         |            | 1     | 20:31:40.11 | 2   | 42.91 |      |     |     |
| ALB         | D          | 0     | 41.41       | 1   | 45.51 |      |     |     |
| FONT        |            | 2     | 49.00       | 3   | 53.30 |      |     |     |
| AVN         |            | 3     | 20:32:02.70 |     |       |      |     |     |

| 14 març 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|--------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|              | 17:26:35.4 | 43.02 | 0.13        | 8   | 0.4   | 2.0 | 2.0 | 2.6 |
| Lourdes      |            |       |             |     |       |     |     |     |
| EST          | C/D        | W     | TP          | W   | TS    |     |     |     |
| BDBF         | +          | 0     | 17:26:37.19 | 2   | 38.78 |     |     |     |
| EPF          |            | 0     | 38.40       | 2   | 40.80 |     |     |     |
| ENSF         | +          | 0     | 40.44       | 2   | 44.44 |     |     |     |
| BTH          |            | 1     | 40.30       | 3   | 45.00 |     |     |     |
| VIH          |            | 2     | 47.21       | 3   | 56.00 |     |     |     |
| SALF         | +          | 1     | 50.23       | 3   | 61.77 |     |     |     |
| GRBF         |            | 3     | 55.14       | 3   | 70.74 |     |     |     |
| AVN          | C          | 0     | 58.31       | 3   | 74.71 |     |     |     |
| LPO          |            | 9     | 17:27:09.20 | 3   | 33.10 |     |     |     |

| 14 març 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|--------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|              | 23:32:53.7 | 42.71 | 3.28        |     | 0.3   | 3.1 |     | 2.2 |
| Mediterrània |            |       |             |     |       |     |     |     |
| EST          | C/D        | W     | TP          | W   | TS    |     |     |     |
| PERF         | -          | 0     | 23:33:00.93 | 3   | 6.73  |     |     |     |
| ETER         | D          | 0     | 03.50       | 2   | 11.60 |     |     |     |
| MTHF         | -          | 0     | 05.48       |     |       |     |     |     |
| VDCF         |            | 2     | 06.58       | 3   | 16.17 |     |     |     |
| OLT          |            | 9     | 09.10       | 3   | 21.70 |     |     |     |
| BRU          |            | 1     | 10.66       |     |       |     |     |     |
| SQD          |            | 3     | 11.00       | 3   | 24.40 |     |     |     |
| TRGS         | +          | 1     | 12.57       | 3   | 26.33 |     |     |     |
| FONT         |            | 2     | 15.30       | 3   | 31.50 |     |     |     |
| MLS          |            | 2     | 25.50       | 3   | 45.00 |     |     |     |
| EPF          |            | 9     | 34.80       | 3   | 61.60 |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 17 març 1993        | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|---------------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                     | 09:51:51.8 | 43.03 | 0.18        | 9   | 0.5   | 2.6 | 1.8 | 2.6 |
| Bagnères de Bigorre |            |       |             |     |       |     |     |     |
| EST                 | C/D        | W     | TP          | W   | TS    |     |     |     |
| BDBF                | +          | 0     | 09:51:53.50 | 2   | 55.28 |     |     |     |
| EPF                 |            | 0     | 54.60       | 2   | 57.30 |     |     |     |
| ENSF                | -          | 0     | 56.68       | 2   | 60.75 |     |     |     |
| VIH                 |            | 2     | 09:52:03.50 | 3   | 11.50 |     |     |     |
| PON                 |            | 0     | 05.99       |     |       |     |     |     |
| SALF                | +          | 1     | 06.25       | 3   | 17.39 |     |     |     |
| EGRA                |            | 9     | 11.20       | 2   | 21.50 |     |     |     |
| AVN                 |            | 1     | 14.60       | 3   | 32.62 |     |     |     |
| LPO                 |            | 1     | 22.70       |     |       |     |     |     |

| 19 març 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|--------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|              | 19:48:03.6 | 43.03 | 0.15        |     | 0.1   | 1.5 |     | 1.5 |
| Lourdes      |            |       |             |     |       |     |     |     |
| EST          | C/D        | W     | TP          | W   | TS    |     |     |     |
| BDBF         | +          | 0     | 19:48:05.84 | 2   | 07.61 |     |     |     |
| EPF          |            | 1     | 07.10       | 2   | 09.40 |     |     |     |
| ENSF         | +          | 1     | 08.95       | 3   | 13.30 |     |     |     |

| 25 març 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|--------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|              | 20:27:48.9 | 42.85 | 0.73        | 7   | 0.2   | 1.0 | 8.1 | 1.7 |
| Arreau       |            |       |             |     |       |     |     |     |
| EST          | C/D        | W     | TP          | W   | TS    |     |     |     |
| VIH          |            | 2     | 20:27:53.50 | 3   | 56.70 |     |     |     |
| EPF          |            | 1     | 55.70       | 2   | 60.30 |     |     |     |
| SALF         | +          | 0     | 56.02       | 1   | 60.53 |     |     |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 29 març 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|--------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|              | 10:37:51.9 | 42.97 | 0.30  | 1           | 0.1 | 3.6 | 8.4   | 1.8 |
| Campan       |            |       |       |             |     |     |       |     |
|              | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|              | BDBF       | +     | 0     | 10:37:54.73 |     | 2   | 57.08 |     |
|              | ENSF       | +     | 0     | 55.49       |     | 2   | 58.45 |     |
|              | SALF       |       | 1     | 10:38:05.02 |     | 3   | 14.72 |     |
|              | GRBF       |       | 1     | 09.46       |     | 3   | 22.57 |     |

| 29 març 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|--------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|              | 10:39:05.7 | 41.81 | 1.74  |             | 0.3 | 7.5 |       |     |
| Calaf        |            |       |       |             |     |     |       |     |
|              | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|              | MRB        | —     | 1     | 10:39:10.25 |     | 2   | 13.49 |     |
|              | FONT       |       | 1     | 16.00       |     | 3   | 22.70 |     |
|              | SALF       | C     | 0     | 24.54       |     |     |       |     |
|              | GRBF       |       | 1     | 24.60       |     |     |       |     |
|              | LESF       |       | 1     | 29.18       |     |     |       |     |

| 31 març 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|--------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|              | 12:47:10.1 | 41.45 | 2.29  |             | 0.2 | 5.5 |       |     |
| Barcelona    |            |       |       |             |     |     |       |     |
|              | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|              | FBR        | C     | 1     | 12:47:12.45 |     | 2   | 14.73 |     |
|              | FONT       |       | 1     | 16.90       |     |     |       |     |
|              | ALB        |       | 1     | 27.44       |     |     |       |     |
|              | AVN        |       | 1     | 33.15       |     |     |       |     |
|              | SOR        |       | 1     | 33.75       |     | 2   | 50.91 |     |
|              | GRBF       |       | 1     | 37.86       |     |     |       |     |

| 3 abril 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|--------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|              | 06:09:13.4 | 43.10 | 0.15        |     | 0.4   | 3.6 |     | 1.8 |
| Lourdes      |            |       |             |     |       |     |     |     |
| EST          | C/D        | W     | TP          | W   | TS    |     |     |     |
| BDBF         |            | 0     | 06:09:16.04 | 2   | 18.69 |     |     |     |
| EPF          |            | 0     | 17.40       | 2   | 20.50 |     |     |     |
| ENSF         | —          | 0     | 19.75       | 2   | 24.74 |     |     |     |
| VIH          |            | 3     | 26.20       | 3   | 35.10 |     |     |     |
| AVN          |            | 1     | 36.88       | 2   | 55.34 |     |     |     |
| LPO          |            | 9     | 46.20       | 3   | 68.90 |     |     |     |

| 3 abril 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|--------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|              | 06:29:19.8 | 43.09 | 0.10        |     | 0.2   | 2.4 |     | 1.6 |
| Lourdes      |            |       |             |     |       |     |     |     |
| EST          | C/D        | W     | TP          | W   | TS    |     |     |     |
| BDBF         |            | 0     | 06:29:23.03 | 2   | 25.59 |     |     |     |
| EPF          |            | 0     | 24.50       | 2   | 27.70 |     |     |     |
| ENSF         |            | 1     | 26.60       | 2   | 32.17 |     |     |     |
| LPO          |            | 9     | 53.30       | 3   | 76.10 |     |     |     |

| 8 abril 1993   | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                | 08:18:57.7 | 42.64 | 1.14        | 9   | 0.3   | 1.7 | 3.5 | 1.7 |
| Esterrí d'Àneu |            |       |             |     |       |     |     |     |
| EST            | C/D        | W     | TP          | W   | TS    |     |     |     |
| SALF           | —          | 0     | 08:19:00.85 | 2   | 02.88 |     |     |     |
| VIH            |            | 1     | 03.30       | 2   | 07.00 |     |     |     |
| MLS            |            | 0     | 04.19       | 3   | 09.00 |     |     |     |
| GRBF           | +          | 0     | 04.69       | 2   | 09.30 |     |     |     |
| PON            | C          | 0     | 05.04       | 2   | 10.64 |     |     |     |
| LESF           | +          | 0     | 05.93       |     |       |     |     |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 13 abril 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|---------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|               | 16:20:34.0 | 40.42 | 1.66        | 1   | 0.9   | 2.5 | 5.2 | 3.5 |
| Mediterrània  |            |       |             |     |       |     |     |     |
| EST           | C/D        | W     | TP          | W   | TS    |     |     |     |
| VAN           |            |       | 16:20:00.00 | 3   | 60.33 |     |     |     |
| EROQ          |            | 1     | 54.60       | 2   | 67.20 |     |     |     |
| POB           |            | 2     | 53.21       | 3   | 67.46 |     |     |     |
| FBR           | D          | 0     | 53.93       | 1   | 69.11 |     |     |     |
| ESEL          |            | 0     | 56.00       | 2   | 70.00 |     |     |     |
| MRB           |            | 1     | 55.71       |     |       |     |     |     |
| FONT          | +          | 2     | 16:21:00.00 | 3   | 22.30 |     |     |     |
| AVN           |            | 3     | 02.90       |     |       |     |     |     |
| SQD           |            | 9     | 03.30       | 3   | 28.50 |     |     |     |
| VIL           |            | 2     | 03.97       |     |       |     |     |     |
| OLT           |            | 1     | 05.42       | 2   | 32.90 |     |     |     |
| BRU           |            | 1     | 06.78       |     |       |     |     |     |
| CAD           |            | 2     | 06.90       | 4   | 36.00 |     |     |     |
| SOR           |            | 2     | 07.86       |     |       |     |     |     |
| EGRA          |            | 9     | 13.19       | 3   | 40.30 |     |     |     |
| ALB           | C          | 0     | 08.54       | 2   | 42.28 |     |     |     |
| ETER          |            | 4     | 09.12       | 3   | 40.80 |     |     |     |
| ECHE          |            | 0     | 12.64       | 3   | 40.10 |     |     |     |
| VIH           |            | 9     | 18.00       | 3   | 46.50 |     |     |     |
| GRBF          |            | 0     | 14.32       |     |       |     |     |     |
| EPF           |            | 2     | 19.30       |     |       |     |     |     |
| ECRI          |            | 4     | 28.13       | 4   | 92.20 |     |     |     |

| 18 abril 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|---------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|               | 05:00:23.6 | 42.39 | 2.30        | 2   | 0.3   | 2.0 | 4.0 | 2.2 |
| Molló         |            |       |             |     |       |     |     |     |
| EST           | C/D        | W     | TP          | W   | TS    |     |     |     |
| VDCF          |            | 1     | 05:00:27.86 | 2   | 31.20 |     |     |     |
| TRGS          |            | 3     | 29.35       | 2   | 33.06 |     |     |     |
| OLT           |            | 3     | 29.00       | 3   | 34.00 |     |     |     |
| ALB           |            |       |             | 3   | 34.21 |     |     |     |
| AVN           |            | 9     | 49.20       | 3   | 67.00 |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 19 abril 1993  | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                | 03:18:31.9 | 42.62 | 0.91        | 5   | 0.3   | 1.4 | 5.0 | 2.6 |
| Esterrí d'Àneu |            |       |             |     |       |     |     |     |
| EST            | C/D        | W     | TP          | W   | TS    |     |     |     |
| VIH            | C          | 1     | 03:18:34.40 | 2   | 36.30 |     |     |     |
| SALF           | +          | 0     | 36.82       | 2   | 40.42 |     |     |     |
| MLS            | -          | 1     | 39.44       |     |       |     |     |     |
| LESF           |            | 4     | 41.00       | 3   | 48.52 |     |     |     |
| GRBF           | -          | 0     | 41.62       | 2   | 48.58 |     |     |     |
| EPF            |            | 1     | 42.90       | 3   | 50.50 |     |     |     |
| AVN            |            | 2     | 45.97       |     |       |     |     |     |
| LSPF           | -          | 0     | 47.32       |     |       |     |     |     |
| VIL            |            | 1     | 48.08       |     |       |     |     |     |

| 19 abril 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|---------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|               | 12:24:18.5 | 42.26 | 2.36        |     | 0.3   |     | 7.2 |     |
| Ripoll        |            |       |             |     |       |     |     |     |
| EST           | C/D        | W     | TP          | W   | TS    |     |     |     |
| BRU           | D          | 0     | 12:24:20.87 | 1   | 23.87 |     |     |     |
| OLT           | D          | 0     | 21.49       | 3   | 24.07 |     |     |     |
| TRGS          | D          | 0     | 26.46       |     |       |     |     |     |

| 21 abril 1993       | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|---------------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                     | 02:07:13.3 | 43.06 | 0.21        | 12  | 0.3   | 2.8 | 2.1 | 2.2 |
| Bagnères de Bigorre |            |       |             |     |       |     |     |     |
| EST                 | C/D        | W     | TP          | W   | TS    |     |     |     |
| BDBF                | +          | 0     | 02:07:15.32 | 2   | 17.55 |     |     |     |
| EPF                 |            | 0     | 16.20       | 2   | 18.50 |     |     |     |
| SALF                |            | 2     | 27.48       | 3   | 38.14 |     |     |     |
| AVN                 |            | 1     | 36.13       | 2   | 52.42 |     |     |     |
| VIL                 |            | 9     | 43.03       | 3   | 64.21 |     |     |     |
| LPO                 |            | 9     | 47.00       | 3   | 70.60 |     |     |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 23 abril 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH  | ERZ   | MAG |
|---------------|------------|-------|-------|-------------|-----|------|-------|-----|
|               | 13:30:15.8 | 42.23 | 2.34  |             | 0.4 | 15.3 |       |     |
| Ripoll        |            |       |       |             |     |      |       |     |
|               | EST        | C/D   | W     | TP          |     | W    | TS    |     |
|               | BRU        | D     | 0     | 13:30:17.99 |     | 1    | 21.13 |     |
|               | OLT        |       | 1     | 18.52       |     | 3    | 21.20 |     |
|               | TRGS       | D     | 0     | 23.56       |     |      |       |     |

| 24 abril 1993       | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|---------------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                     | 15:50:16.5 | 42.98 | 0.18  |             | 0.2 | 1.2 |       | 2.3 |
| Bagnères de Bigorre |            |       |       |             |     |     |       |     |
|                     | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                     | BDBF       | +     | 0     | 15:50:18.11 |     | 2   | 19.88 |     |
|                     | EPF        |       | 0     | 19.20       |     | 2   | 21.40 |     |
|                     | SALF       |       | 1     | 31.38       |     | 3   | 42.62 |     |
|                     | AVN        |       | 3     | 38.90       |     | 4   | 58.60 |     |
|                     | LPO        |       | 9     | 49.90       |     | 3   | 74.30 |     |
|                     | LFF        |       | 9     | 51.80       |     | 3   | 78.40 |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 25 abril 1993  | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                | 03:34:27.8 | 42.83 | 2.14        | 2   | 0.3   | 0.8 | 2.0 | 3.0 |
| Ax-les-Thermes |            |       |             |     |       |     |     |     |
| EST            | C/D        | W     | TP          | W   | TS    |     |     |     |
| LSPF           | +          | 0     | 03:34:32.24 | 2   | 35.89 |     |     |     |
| VDCF           | +          | 0     | 33.50       | 2   | 37.89 |     |     |     |
| MTHF           | +          | 0     | 33.68       | 2   | 38.53 |     |     |     |
| TRGS           | +          | 0     | 34.77       | 3   | 40.29 |     |     |     |
| GRBF           | +          | 0     | 36.37       | 3   | 42.28 |     |     |     |
| CAD            |            | 3     | 39.20       |     |       |     |     |     |
| BRU            | C          | 0     | 38.55       |     |       |     |     |     |
| LESF           | -          | 0     | 40.35       | 3   | 50.03 |     |     |     |
| ALB            | C          | 0     | 40.62       | 2   | 50.18 |     |     |     |
| SALF           |            | 1     | 40.82       | 3   | 50.20 |     |     |     |
| ETER           |            | 0     | 42.20       | 2   | 52.30 |     |     |     |
| MLS            | -          | 1     | 42.94       |     |       |     |     |     |
| SQD            |            | 3     | 45.00       | 3   | 57.60 |     |     |     |
| EPF            |            | 2     | 03:34:52.00 |     |       |     |     |     |
| AVN            |            | 9     | 56.20       | 3   | 75.60 |     |     |     |
| LPO            |            | 2     | 03:35:01.80 |     |       |     |     |     |
| MRB            |            |       | 00.00       | 3   | 09.58 |     |     |     |

| 25 abril 1993  | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                | 03:37:10.9 | 42.82 | 2.15        | 5   | 0.3   | 1.1 | 5.4 | 2.0 |
| Ax-les-Thermes |            |       |             |     |       |     |     |     |
| EST            | C/D        | W     | TP          | W   | TS    |     |     |     |
| LSPF           | +          | 0     | 03:37:15.15 | 2   | 18.81 |     |     |     |
| VDCF           | +          | 0     | 16.44       | 2   | 20.82 |     |     |     |
| MTHF           | +          | 0     | 16.63       | 2   | 21.45 |     |     |     |
| GRBF           | -          | 0     | 19.34       | 3   | 25.80 |     |     |     |
| MLS            |            | 1     | 26.21       |     |       |     |     |     |
| EPF            |            | 2     | 35.50       |     |       |     |     |     |
| LPO            |            | 9     | 48.60       | 3   | 74.30 |     |     |     |
| CAF            |            | 9     | 50.30       | 3   | 76.60 |     |     |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 25 abril 1993  | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                | 03:44:47.2 | 42.82 | 2.15        | 5   | 0.2   | 1.2 | 8.3 |     |
| Ax-les-Thermes |            |       |             |     |       |     |     |     |
| EST            | C/D        | W     | TP          | W   | TS    |     |     |     |
| LSPF           | +          | 0     | 03:44:51.51 | 2   | 55.13 |     |     |     |
| MTHF           | +          | 0     | 52.97       | 2   | 57.82 |     |     |     |
| TRGS           | -          | 1     | 54.09       |     |       |     |     |     |
| GRBF           | -          | 1     | 55.64       |     |       |     |     |     |
| BRU            |            | 1     | 57.84       |     |       |     |     |     |
| LESF           | +          | 1     | 03:45:00.08 |     |       |     |     |     |
| SALF           | +          | 1     | 00.38       |     |       |     |     |     |
| MLS            |            | 1     | 02.50       |     |       |     |     |     |
| EPF            |            | 2     | 11.80       |     |       |     |     |     |

| 25 abril 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|---------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|               | 03:45:00.7 | 42.84 | 2.15        | 5   | 0.4   | 1.5 | 3.0 | 3.3 |
| Lavelanet     |            |       |             |     |       |     |     |     |
| EST           | C/D        | W     | TP          | W   | TS    |     |     |     |
| LSPF          | +          | 0     | 03:45:04.68 | 2   | 08.32 |     |     |     |
| TRGS          | +          | 1     | 07.51       | 3   | 12.57 |     |     |     |
| CAD           |            | 3     | 12.00       | 3   | 19.00 |     |     |     |
| PERF          |            |       |             | 3   | 21.71 |     |     |     |
| ALB           |            | 4     | 14.00       | 3   | 23.26 |     |     |     |
| SALF          | +          | 1     | 14.60       | 3   | 23.94 |     |     |     |
| OLT           |            | 1     | 14.52       | 2   | 24.73 |     |     |     |
| ETER          |            | 9     | 12.10       | 3   | 20.30 |     |     |     |
| SQD           |            | 3     | 17.20       | 3   | 29.30 |     |     |     |
| VIH           |            | 2     | 19.80       | 3   | 33.00 |     |     |     |
| MRB           |            | 1     | 24.67       | 2   | 41.75 |     |     |     |
| EPF           |            | 2     | 24.70       |     |       |     |     |     |
| AVN           |            | 9     | 27.10       | 3   | 46.90 |     |     |     |
| BTH           |            | 9     | 33.30       | 3   | 56.30 |     |     |     |
| LPO           |            | 2     | 34.00       |     |       |     |     |     |
| ELIZ          |            | 9     | 47.80       | 3   | 81.10 |     |     |     |
| ECRI          |            | 9     | 57.50       | 3   | 99.90 |     |     |     |
| ETOR          |            | 9     | 03:46:00.10 | 3   | 45.20 |     |     |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 25 abril 1993  | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|----------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                | 04:54:09.1 | 42.81 | 2.16  | 10          | 0.4 | 2.1 | 3.7   |     |
| Ax-les-Thermes |            |       |       |             |     |     |       |     |
|                | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                | LSPF       | —     | 0     | 04:54:13.62 |     | 3   | 18.03 |     |
|                | VDCF       |       |       |             |     | 3   | 18.54 |     |
|                | MTHF       |       |       |             |     | 3   | 19.24 |     |
|                | GRBF       |       |       |             |     | 3   | 24.27 |     |
|                | BRU        |       | 2     | 19.34       |     |     |       |     |
|                | ALB        |       |       |             |     | 3   | 30.84 |     |
|                | EPF        |       | 9     | 33.90       |     | 3   | 51.00 |     |
|                | LPO        |       | 9     | 45.40       |     | 3   | 70.90 |     |
|                | CAF        |       | 9     | 47.80       |     | 3   | 74.40 |     |

| 25 abril 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|---------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|               | 08:33:29.6 | 42.76 | 0.98  |             | 0.1 | 4.1 |       | 1.5 |
| Isil          |            |       |       |             |     |     |       |     |
|               | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|               | SALF       | D     | 0     | 08:33:33.18 |     | 2   | 35.49 |     |
|               | VIH        | C     | 1     | 34.10       |     | 2   | 37.20 |     |
|               | GRBF       |       | 1     | 37.68       |     |     |       |     |

| 29 abril 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|---------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|               | 02:32:06.9 | 42.44 | 2.13  | 0           | 0.1 | 0.3 | 0.7   | 1.6 |
| Puigcerdà     |            |       |       |             |     |     |       |     |
|               | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|               | TRGS       | +     | 0     | 02:32:09.95 |     | 2   | 12.10 |     |
|               | VDCF       | +     | 0     | 11.65       |     | 2   | 15.05 |     |
|               | VIL        |       | 1     | 13.88       |     | 3   | 19.11 |     |
|               | MTHF       | +     | 1     | 18.19       |     | 2   | 26.69 |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 30 abril 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|---------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|               | 16:27:39.0 | 42.44 | 2.14  | 1           | 0.2 | 0.9 | 2.9   | 1.6 |
| Puigcerdà     |            |       |       |             |     |     |       |     |
|               | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|               | TRGS       | +     | 0     | 16:27:42.05 |     | 2   | 44.15 |     |
|               | VDCF       | +     | 0     | 43.73       |     | 2   | 47.05 |     |
|               | VIL        |       | 1     | 45.96       |     | 2   | 51.10 |     |
|               | MTHF       | -     | 1     | 50.15       |     | 3   | 58.80 |     |
|               | FONT       |       | 2     | 53.00       |     | 3   | 62.00 |     |

| 14 maig 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|--------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|              | 11:49:45.2 | 41.80 | 2.72  |             | 0.2 | 2.3 |       | 2.2 |
| Blanes       |            |       |       |             |     |     |       |     |
|              | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|              | FONT       |       | 2     | 11:49:49.50 |     | 3   | 53.10 |     |
|              | SQD        |       | 2     | 49.90       |     | 3   | 53.70 |     |
|              | OLT        |       | 2     | 52.70       |     |     |       |     |
|              | BRU        |       | 1     | 57.40       |     | 2   | 66.02 |     |

| 17 maig 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH  | ERZ   | MAG |
|--------------|------------|-------|-------|-------------|-----|------|-------|-----|
|              | 02:29:14.2 | 41.32 | 1.48  |             | 0.1 | 26.4 |       |     |
| Valls        |            |       |       |             |     |      |       |     |
|              | EST        | C/D   | W     | TP          |     | W    | TS    |     |
|              | AVN        | -     | 1     | 02:29:28.92 |     | 3    | 39.83 |     |
|              | FONT       |       | 3     | 30.00       |     | 3    | 41.60 |     |
|              | OLT        |       | 9     | 35.10       |     | 3    | 50.50 |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 20 maig 1993 |     | Ho         | LAT N       | LON E | PRO   | RMS | ERH | ERZ | MAG |
|--------------|-----|------------|-------------|-------|-------|-----|-----|-----|-----|
|              |     | 00:49:18.8 | 42.42       | 2.30  | 0     | 0.4 | 1.1 | 2.9 | 2.0 |
| Molló        |     |            |             |       |       |     |     |     |     |
| EST          | C/D | W          | TP          | W     | TS    |     |     |     |     |
| VDCF         | C   | 0          | 00:49:22.18 |       |       |     |     |     |     |
| OLT          |     | 3          | 25.10       | 3     | 30.00 |     |     |     |     |
| ALB          | D   | 0          | 25.64       | 2     | 30.90 |     |     |     |     |
| VIL          |     | 0          | 26.60       | 1     | 33.58 |     |     |     |     |
| PERF         |     |            |             | 2     | 33.66 |     |     |     |     |
| FONT         |     | 3          | 31.90       | 3     | 40.80 |     |     |     |     |
| AVN          |     | 3          | 42.20       | 3     | 61.00 |     |     |     |     |

| 23 maig 1993 |     | Ho         | LAT N       | LON E | PRO   | RMS | ERH | ERZ | MAG |
|--------------|-----|------------|-------------|-------|-------|-----|-----|-----|-----|
|              |     | 15:16:25.4 | 42.63       | 0.72  |       | 0.1 | 4.4 |     | 1.6 |
| Benasc       |     |            |             |       |       |     |     |     |     |
| EST          | C/D | W          | TP          | W     | TS    |     |     |     |     |
| VIH          | C   | 2          | 15:16:26.70 | 2     | 27.70 |     |     |     |     |
| PON          | C   | 0          | 30.04       |       |       |     |     |     |     |
| SALF         | C   | 0          | 32.52       |       |       |     |     |     |     |
| GRBF         | D   | 0          | 37.62       |       |       |     |     |     |     |

| 24 maig 1993 |     | Ho         | LAT N       | LON E | PRO   | RMS | ERH | ERZ | MAG |
|--------------|-----|------------|-------------|-------|-------|-----|-----|-----|-----|
|              |     | 14:28:33.9 | 43.04       | 0.15  |       | 0.4 | 2.1 |     | 2.6 |
| Lourdes      |     |            |             |       |       |     |     |     |     |
| EST          | C/D | W          | TP          | W     | TS    |     |     |     |     |
| BDBF         |     | 1          | 14:28:35.88 | 1     | 37.42 |     |     |     |     |
| EPF          |     | 1          | 37.10       | 1     | 39.70 |     |     |     |     |
| VIH          |     | 2          | 45.70       | 3     | 54.00 |     |     |     |     |
| PON          |     | 1          | 48.45       |       |       |     |     |     |     |
| SALF         |     | 2          | 47.82       | 3     | 60.20 |     |     |     |     |
| EGRA         |     | 0          | 50.00       | 2     | 61.00 |     |     |     |     |
| GRBF         |     | 3          | 53.61       | 3     | 68.16 |     |     |     |     |
| AVN          |     | 9          | 57.00       | 3     | 73.10 |     |     |     |     |
| LPO          |     | 1          | 14:29:04.60 |       |       |     |     |     |     |
| ECRI         |     | 4          | 20.00       | 4     | 38.00 |     |     |     |     |
| FONT         |     | 9          | 14.30       | 3     | 40.90 |     |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 26 maig 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|--------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|              | 12:12:36.9 | 42.52 | 1.19        |     | 0.0   | 0.7 |     | 1.7 |
| Tírvia       |            |       |             |     |       |     |     |     |
| EST          | C/D        | W     | TP          | W   | TS    |     |     |     |
| SOR          | C          | 0     | 12:12:40.19 |     |       |     |     |     |
| SALF         |            | 1     | 41.75       | 2   | 45.27 |     |     |     |
| VIH          |            | 3     | 43.40       | 3   | 48.50 |     |     |     |

| 27 maig 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|--------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|              | 06:12:09.1 | 43.04 | 0.14        | 11  | 0.5   | 1.3 | 1.2 | 3.7 |
| Lourdes      |            |       |             |     |       |     |     |     |
| EST          | C/D        | W     | TP          | W   | TS    |     |     |     |
| BDBF         | +          | 0     | 06:12:11.27 | 2   | 13.01 |     |     |     |
| EPF          |            | 1     | 12.40       | 1   | 15.10 |     |     |     |
| JAU          | -          | 1     | 16.53       | 2   | 22.34 |     |     |     |
| OGE          | +          | 1     | 18.18       | 3   | 25.11 |     |     |     |
| BAR          |            | 2     | 19.20       | 3   | 26.57 |     |     |     |
| LHE          | +          | 1     | 19.91       | 2   | 27.45 |     |     |     |
| VIH          | C          | 1     | 20.50       | 3   | 29.00 |     |     |     |
| MLS          |            | 1     | 21.70       |     |       |     |     |     |
| PON          | C          | 0     | 23.64       |     |       |     |     |     |
| SALF         |            | 2     | 23.50       | 3   | 35.42 |     |     |     |
| LESF         |            | 2     | 24.50       | 3   | 37.91 |     |     |     |
| EGRA         | C          | 0     | 25.13       | 2   | 35.70 |     |     |     |
| SOR          | D          | 0     | 27.37       |     |       |     |     |     |
| GRBF         | -          | 1     | 27.98       | 3   | 43.86 |     |     |     |
| PAND         |            | 3     | 30.66       |     |       |     |     |     |
| AVN          | C          | 0     | 31.94       | 1   | 48.68 |     |     |     |
| LSPF         |            | 3     | 32.35       | 3   | 51.64 |     |     |     |
| CAD          |            | 3     | 35.60       | 4   | 58.00 |     |     |     |
| VIL          |            | 2     | 38.45       | 4   | 61.28 |     |     |     |
| LPO          |            | 2     | 39.20       |     |       |     |     |     |
| OLT          | +          | 9     | 46.26       | 2   | 71.56 |     |     |     |
| ECRI         | C          | 9     | 44.69       | 3   | 67.80 |     |     |     |
| ALB          |            | 2     | 45.89       |     |       |     |     |     |
| SQD          |            | 3     | 46.00       | 4   | 75.20 |     |     |     |
| FONT         |            | 3     | 46.10       | 4   | 76.00 |     |     |     |
| ETER         | D          | 9     | 49.55       | 3   | 75.50 |     |     |     |
| FBR          |            | 9     | 49.38       | 3   | 78.73 |     |     |     |
| EROQ         |            | 9     | 50.10       | 3   | 78.80 |     |     |     |
| ETOR         | D          | 9     | 54.51       | 4   | 82.60 |     |     |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 27 maig 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|--------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|              | 20:14:07.9 | 43.03 | 0.09        | 5   | 0.4   | 1.4 | 1.8 | 3.2 |
| Lourdes      |            |       |             |     |       |     |     |     |
| EST          | C/D        | W     | TP          | W   | TS    |     |     |     |
| BDBF         | +          | 0     | 20:14:09.58 | 1   | 11.05 |     |     |     |
| EPF          |            | 1     | 11.20       | 1   | 14.20 |     |     |     |
| JAU          |            | 1     | 14.49       | 2   | 19.87 |     |     |     |
| OGE          |            | 1     | 16.53       | 3   | 22.94 |     |     |     |
| LHE          |            | 1     | 17.80       | 2   | 24.98 |     |     |     |
| VIH          |            | 2     | 19.30       | 4   | 27.20 |     |     |     |
| MLS          |            | 2     | 21.88       | 3   | 32.80 |     |     |     |
| PON          | +          | 1     | 22.42       |     |       |     |     |     |
| BOH          |            | 1     | 23.09       | 2   | 34.64 |     |     |     |
| EGRA         | C          | 0     | 23.77       | 2   | 36.40 |     |     |     |
| SALF         |            | 1     | 23.52       | 3   | 35.96 |     |     |     |
| LESF         |            | 1     | 24.30       | 3   | 36.81 |     |     |     |
| SOR          |            | 1     | 26.38       |     |       |     |     |     |
| GRBF         |            | 1     | 27.73       | 3   | 43.00 |     |     |     |
| AVN          |            | 1     | 30.75       | 2   | 48.82 |     |     |     |
| CAD          |            | 9     | 37.30       | 3   | 57.00 |     |     |     |
| TRGS         |            | 3     | 35.97       |     |       |     |     |     |
| VIL          |            | 2     | 36.62       | 4   | 61.28 |     |     |     |
| MTHF         |            | 1     | 40.15       | 3   | 64.60 |     |     |     |
| LPO          |            | 2     | 37.90       |     |       |     |     |     |
| ECRI         | C          | 9     | 43.42       | 2   | 67.30 |     |     |     |
| OLT          | -          | 9     | 45.02       | 2   | 71.60 |     |     |     |
| SQD          |            | 3     | 45.60       |     |       |     |     |     |
| FONT         |            | 3     | 46.40       | 4   | 76.00 |     |     |     |
| ETER         | D          | 9     | 51.06       | 2   | 78.60 |     |     |     |
| EROQ         |            | 9     | 48.60       | 3   | 77.40 |     |     |     |
| ETOR         |            | 9     | 53.99       | 4   | 84.00 |     |     |     |

| 30 maig 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|--------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|              | 07:19:43.0 | 42.64 | 0.73        |     | 0.0   |     |     |     |
| Benasc       |            |       |             |     |       |     |     |     |
| EST          | C/D        | W     | TP          | W   | TS    |     |     |     |
| VIH          |            | 1     | 07:19:44.20 | 2   | 45.20 |     |     |     |
| PON          |            | 2     | 47.90       |     |       |     |     |     |
| SALF         | D          | 0     | 50.01       |     |       |     |     |     |

| 2 juny 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|             | 12:17:25.0 | 42.54 | 1.25        | 0   | 0.4   | 1.8 | 6.6 | 2.4 |
| Tírvia      |            |       |             |     |       |     |     |     |
| EST         | C/D        | W     | TP          | W   | TS    |     |     |     |
| SOR         | —          | 0     | 12:17:28.63 |     |       |     |     |     |
| PAND        | +          | 0     | 29.83       | 2   | 33.27 |     |     |     |
| SALF        | +          | 0     | 29.32       | 2   | 32.84 |     |     |     |
| GRBF        | +          | 0     | 33.13       | 2   | 36.62 |     |     |     |
| PON         |            | 1     | 33.02       |     |       |     |     |     |
| MLS         |            | 2     | 34.00       | 3   | 40.00 |     |     |     |

| 3 juny 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|             | 11:34:50.0 | 42.45 | 2.13        | 4   | 0.4   | 1.1 | 2.0 | 2.4 |
| Puigcerdà   |            |       |             |     |       |     |     |     |
| EST         | C/D        | W     | TP          | W   | TS    |     |     |     |
| TRGS        | +          | 0     | 11:34:52.96 | 2   | 55.07 |     |     |     |
| VDCF        | +          | 0     | 54.64       | 2   | 58.04 |     |     |     |
| CAD         | C          | 2     | 54.50       | 3   | 57.90 |     |     |     |
| VIL         |            | 1     | 56.77       | 2   | 62.11 |     |     |     |
| OLT         |            | 3     | 58.10       | 3   | 62.60 |     |     |     |
| PAND        |            |       |             | 3   | 64.24 |     |     |     |
| PERF        |            | 1     | 11:35:00.31 | 3   | 06.94 |     |     |     |
| MTHF        | +          | 1     | 00.90       | 3   | 09.81 |     |     |     |
| FONT        |            | 3     | 04.90       |     |       |     |     |     |
| SOR         |            | 0     | 03.89       |     |       |     |     |     |
| SALF        |            | 1     | 04.20       | 3   | 14.20 |     |     |     |
| LESF        | +          | 1     | 06.39       | 3   | 18.16 |     |     |     |
| AVN         |            | 3     | 11.90       | 3   | 28.90 |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 4 juny 1993    | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                | 14:46:40.3 | 43.07 | 0.40        |     | 0.3   | 6.3 |     | 2.1 |
| Ax-les-Thermes |            |       |             |     |       |     |     |     |
| EST            | C/D        | W     | TP          | W   | TS    |     |     |     |
| EPF            |            | 1     | 14:46:41.60 | 2   | 42.30 |     |     |     |
| VIH            |            | 2     | 50.70       | 3   | 57.80 |     |     |     |
| AVN            |            | 9     | 14:47:05.80 | 3   | 23.50 |     |     |     |

| 6 juny 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|             | 01:51:25.1 | 42.96 | 2.21        | 3   | 0.4   | 0.9 | 2.1 |     |
| Quillan     |            |       |             |     |       |     |     |     |
| EST         | C/D        | W     | TP          | W   | TS    |     |     |     |
| MTHF        | +          | 0     | 01:51:29.82 | 1   | 33.66 |     |     |     |
| VDCF        | -          | 0     | 32.63       |     |       |     |     |     |
| TRGS        | -          | 0     | 34.65       | 2   | 41.80 |     |     |     |
| GRBF        | +          | 0     | 34.72       | 2   | 41.96 |     |     |     |
| BRU         | D          | 0     | 38.08       |     |       |     |     |     |
| PERF        | +          | 0     | 37.67       | 2   | 46.81 |     |     |     |
| CAD         | C          | 2     | 38.40       | 3   | 48.00 |     |     |     |
| LESF        | +          | 0     | 37.91       |     |       |     |     |     |
| ALB         | C          | 0     | 39.00       | 2   | 49.26 |     |     |     |
| SALF        | +          | 0     | 39.44       | 2   | 49.90 |     |     |     |
| ETER        |            | 0     | 40.00       | 2   | 51.00 |     |     |     |
| MLS         | +          | 0     | 40.29       | 2   | 52.38 |     |     |     |
| OLT         | D          | 0     | 41.13       | 2   | 51.85 |     |     |     |
| VIL         | D          | 0     | 41.58       | 3   | 54.28 |     |     |     |
| SOR         | -          | 1     | 43.60       |     |       |     |     |     |
| SQD         | C          | 2     | 44.00       | 3   | 57.20 |     |     |     |
| BAR         |            | 2     | 44.69       | 3   | 59.49 |     |     |     |
| VIH         |            | 2     | 45.70       | 4   | 60.20 |     |     |     |
| FONT        | +          | 2     | 46.80       | 3   | 63.30 |     |     |     |
| PON         | -          | 1     | 47.72       |     |       |     |     |     |
| EPF         |            | 9     | 49.70       | 3   | 66.80 |     |     |     |
| ENSF        | +          | 0     | 50.20       |     |       |     |     |     |
| AVN         |            | 1     | 53.67       | 3   | 74.44 |     |     |     |
| FBR         |            | 2     | 53.29       |     |       |     |     |     |
| EGRA        |            | 9     | 55.20       | 3   | 76.50 |     |     |     |
| BTH         |            | 2     | 57.50       | 3   | 79.20 |     |     |     |
| CAF         |            | 2     | 56.40       | 3   | 79.10 |     |     |     |
| EROQ        |            | 9     | 01:52:13.00 | 3   | 44.50 |     |     |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 7 juny 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|             | 10:29:38.3 | 42.75 | 2.57        |     | 0.1   | 1.7 |     | 1.2 |
| Ribesaltes  |            |       |             |     |       |     |     |     |
| EST         | C/D        | W     | TP          | W   | TS    |     |     |     |
| MTHF        | -          | 0     | 10:29:42.55 | 1   | 46.11 |     |     |     |
| VDCF        | +          | 0     | 43.10       | 1   | 46.82 |     |     |     |
| ALB         | C          | 0     | 47.13       | 1   | 53.37 |     |     |     |

| 7 juny 1993    | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                | 20:57:33.9 | 42.58 | 1.06        |     | 0.1   | 0.9 |     | 1.5 |
| Esterri d'Àneu |            |       |             |     |       |     |     |     |
| EST            | C/D        | W     | TP          | W   | TS    |     |     |     |
| SALF           | -          | 0     | 20:57:38.10 | 2   | 40.94 |     |     |     |
| VIH            | D          | 1     | 38.50       | 2   | 41.80 |     |     |     |
| PON            | C          | 0     | 39.73       |     |       |     |     |     |
| MLS            |            | 1     | 41.34       | 2   | 46.54 |     |     |     |
| GRBF           | +          | 0     | 42.15       |     |       |     |     |     |

| 7 juny 1993    | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                | 22:47:53.2 | 42.56 | 1.08        |     | 0.0   | 1.0 |     | 1.3 |
| Esterri d'Àneu |            |       |             |     |       |     |     |     |
| EST            | C/D        | W     | TP          | W   | TS    |     |     |     |
| SALF           | +          | 0     | 22:47:58.02 | 2   | 61.50 |     |     |     |
| VIH            | D          | 2     | 58.50       | 3   | 62.40 |     |     |     |
| PON            |            | 1     | 59.07       |     |       |     |     |     |
| GRBF           | +          | 0     | 22:48:01.65 |     |       |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 9 juny 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|-------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|             | 11:13:47.3 | 41.52 | 0.93  |             | 0.3 | 9.4 |       |     |
| Tàrraga     |            |       |       |             |     |     |       |     |
|             | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|             | EGRA       |       | 0     | 11:14:02.60 |     | 2   | 14.00 |     |
|             | SOR        |       | 2     | 03.29       |     |     |       |     |
|             | PON        |       | 1     | 04.50       |     |     |       |     |
|             | SALF       |       | 1     | 10.38       |     |     |       |     |
|             | ENSF       |       | 1     | 11.53       |     |     |       |     |
|             | LSPF       |       | 2     | 15.75       |     |     |       |     |

| 9 juny 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|-------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|             | 11:14:02.8 | 41.23 | 0.87  |             | 0.5 |     |       |     |
| Prades      |            |       |       |             |     |     |       |     |
|             | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|             | FONT       |       | 9     | 11:14:04.80 |     | 3   | 22.90 |     |
|             | VIH        |       | 9     | 08.00       |     | 3   | 27.30 |     |
|             | BRU        |       | 9     | 07.35       |     | 2   | 26.23 |     |
|             | OLT        | D     | 9     | 08.45       |     | 1   | 29.19 |     |

| 12 juny 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|--------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|              | 18:02:22.7 | 42.64 | 0.72  | 6           | 0.2 | 1.2 | 3.5   | 1.6 |
| Benasc       |            |       |       |             |     |     |       |     |
|              | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|              | VIH        | C     | 2     | 18:02:24.40 |     |     |       |     |
|              | PON        | C     | 0     | 27.39       |     |     |       |     |
|              | ENSF       | +     | 0     | 29.30       |     | 1   | 33.82 |     |
|              | SALF       |       |       |             |     | 2   | 35.20 |     |
|              | SOR        |       | 0     | 30.54       |     |     |       |     |
|              | MLS        | -     | 0     | 31.26       |     | 2   | 36.40 |     |
|              | GRBF       |       | 1     | 34.92       |     |     |       |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 15 juny 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|--------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|              | 02:21:41.9 | 41.57 | 1.88        |     | 0.4   | 2.4 |     | 2.6 |
| Sabadell     |            |       |             |     |       |     |     |     |
| EST          | C/D        | W     | TP          | W   | TS    |     |     |     |
| FBR          |            | 1     | 02:21:46.50 |     |       |     |     |     |
| FONT         | +          | 2     | 50.80       | 3   | 57.30 |     |     |     |
| VIL          |            | 1     | 52.11       | 3   | 60.25 |     |     |     |
| OLT          |            | 3     | 55.50       | 3   | 65.00 |     |     |     |
| TRGS         | +          | 0     | 59.34       |     |       |     |     |     |
| ALB          |            | 0     | 59.75       |     |       |     |     |     |
| VIH          |            | 9     | 02:22:06.60 | 3   | 24.40 |     |     |     |
| LSPF         |            | 2     | 07.99       |     |       |     |     |     |
| EPF          |            | 9     | 15.50       | 3   | 39.30 |     |     |     |

| 15 juny 1993           | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|------------------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                        | 06:22:19.7 | 41.36 | 1.65        |     | 0.4   | 1.7 |     | 2.7 |
| Vilafranca del Penedès |            |       |             |     |       |     |     |     |
| EST                    | C/D        | W     | TP          | W   | TS    |     |     |     |
| FONT                   | +          | 2     | 06:22:32.80 | 3   | 42.70 |     |     |     |
| SQD                    |            | 3     | 36.10       | 3   | 48.50 |     |     |     |
| OLT                    |            | 0     | 38.15       | 2   | 51.41 |     |     |     |
| BRU                    | D          | 0     | 37.33       | 3   | 51.37 |     |     |     |
| EROQ                   |            | 0     | 39.22       | 2   | 53.70 |     |     |     |
| SOR                    | C          | 0     | 39.71       |     |       |     |     |     |
| TRGS                   |            | 2     | 41.27       |     |       |     |     |     |
| ALB                    | C          | 0     | 41.70       | 2   | 58.30 |     |     |     |
| ETER                   |            | 0     | 43.65       | 2   | 60.60 |     |     |     |
| EGRA                   |            | 0     | 43.46       | 2   | 60.40 |     |     |     |
| VDCF                   | +          | 0     | 44.32       |     |       |     |     |     |
| VIH                    |            | 1     | 45.70       | 3   | 64.30 |     |     |     |
| SALF                   | +          | 0     | 45.04       |     |       |     |     |     |
| GRBF                   | +          | 0     | 46.38       |     |       |     |     |     |
| EPF                    |            | 9     | 54.50       | 3   | 79.80 |     |     |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 15 juny 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|--------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|              | 12:26:13.5 | 43.05 | 2.13  |             | 0.3 | 2.5 |       | 2.4 |
| Mirepoix     |            |       |       |             |     |     |       |     |
|              | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|              | LSPF       | +     | 0     | 12:26:17.50 |     | 2   | 20.46 |     |
|              | MTHF       |       | 1     | 19.61       |     | 2   | 24.17 |     |
|              | VDCF       |       | 1     | 22.75       |     |     |       |     |
|              | SALF       |       | 1     | 27.32       |     | 2   | 37.58 |     |
|              | ALB        |       | 1     | 29.13       |     | 3   | 40.74 |     |
|              | VIL        |       | 2     | 31.39       |     |     |       |     |
|              | VIH        | C     | 2     | 33.80       |     | 3   | 48.50 |     |
|              | FONT       |       | 9     | 38.40       |     | 3   | 55.30 |     |
|              | EPF        |       | 9     | 38.20       |     | 3   | 55.10 |     |

| 24 juny 1993   | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|----------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                | 00:51:58.7 | 42.55 | 0.98  | 2           | 0.1 | 2.8 | 7.2   | 1.6 |
| Esterri d'Àneu |            |       |       |             |     |     |       |     |
|                | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                | VIH        | C     | 1     | 00:52:02.60 |     | 2   | 05.40 |     |
|                | SOR        | D     | 0     | 03.04       |     |     |       |     |
|                | SALF       | +     | 0     | 04.10       |     | 2   | 07.91 |     |
|                | GRBF       | +     | 0     | 08.49       |     |     |       |     |

| 25 juny 1993    | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|-----------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                 | 12:29:47.5 | 41.90 | 1.14  |             | 0.3 | 4.3 |       |     |
| Artesa de Segre |            |       |       |             |     |     |       |     |
|                 | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                 | SOR        | +     | 0     | 12:29:56.85 |     |     |       |     |
|                 | PON        | +     | 0     | 58.69       |     |     |       |     |
|                 | VIL        |       | 2     | 58.81       |     |     |       |     |
|                 | VIH        |       | 3     | 12:30:01.90 |     |     |       |     |
|                 | SALF       |       | 1     | 03.45       |     |     |       |     |
|                 | FONT       |       | 2     | 05.90       |     |     |       |     |
|                 | ALB        | C     | 0     | 09.70       |     | 2   | 27.65 |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 28 juny 1993   | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                | 12:21:02.8 | 42.54 | 0.94        |     | 0.3   |     |     |     |
| Esterri d'Àneu |            |       |             |     |       |     |     |     |
| EST            | C/D        | W     | TP          | W   | TS    |     |     |     |
| VIH            |            | 3     | 12:21:05.90 |     |       |     |     |     |
| SOR            | -          | 1     | 7.29        |     |       |     |     |     |
| SALF           | +          | 0     | 8.76        | 2   | 12.35 |     |     |     |

| 30 juny 1993            | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-------------------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                         | 22:33:34.9 | 41.97 | 2.66        |     | 0.3   | 3.0 |     | 2.0 |
| Santa Coloma de Farners |            |       |             |     |       |     |     |     |
| EST                     | C/D        | W     | TP          | W   | TS    |     |     |     |
| SQD                     | D          | 2     | 22:33:37.10 | 3   | 38.10 |     |     |     |
| OLT                     |            | 2     | 39.93       | 1   | 42.97 |     |     |     |
| FONT                    | +          | 2     | 40.50       | 3   | 44.30 |     |     |     |
| ALB                     | C          | 0     | 41.44       |     |       |     |     |     |
| VIL                     | C          | 0     | 46.56       |     |       |     |     |     |

| 1 juliol 1993  | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                | 11:59:27.5 | 42.95 | -0.09       |     | 0.4   | 8.7 |     | 2.2 |
| Argelès Gazost |            |       |             |     |       |     |     |     |
| EST            | C/D        | W     | TP          | W   | TS    |     |     |     |
| EPF            |            | 1     | 11:59:33.50 | 2   | 39.20 |     |     |     |
| ENSF           |            | 1     | 34.51       |     |       |     |     |     |
| VIH            |            | 1     | 41.40       | 2   | 51.20 |     |     |     |
| SALF           |            | 1     | 45.50       | 3   | 58.57 |     |     |     |
| VIL            |            | 9     | 11:60:00.05 | 3   | 23.64 |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 2 juliol 1993 | Ho         | LAT N | LONE        | PRO | RMS   | ERH | ERZ | MAG |
|---------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|               | 07:50:36.1 | 42.78 | 2.69        |     | 0.3   | 5.2 |     | 2.2 |
| Ribesaltes    |            |       |             |     |       |     |     |     |
| EST           | C/D        | W     | TP          | W   | TS    |     |     |     |
| MTHF          | +          | 1     | 07:50:39.89 | 2   | 43.70 |     |     |     |
| PERF          |            | 1     | 42.20       | 2   | 47.35 |     |     |     |
| ALB           |            | 0     | 45.12       |     |       |     |     |     |

| 3 juliol 1993 | Ho         | LAT N | LONE        | PRO | RMS   | ERH | ERZ | MAG |
|---------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|               | 11:56:47.2 | 42.22 | 3.00        |     | 0.1   | 1.3 |     |     |
| Figueres      |            |       |             |     |       |     |     |     |
| EST           | C/D        | W     | TP          | W   | TS    |     |     |     |
| ETER          | C          | 0     | 11:56:50.00 | 1   | 52.00 |     |     |     |
| ALB           | D          | 0     | 51.82       | 1   | 55.46 |     |     |     |
| PERF          |            | 1     | 52.97       |     |       |     |     |     |

| 4 juliol 1993 | Ho         | LAT N | LONE        | PRO | RMS   | ERH | ERZ | MAG |
|---------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|               | 05:14:53.7 | 42.46 | 2.17        |     | 0.1   | 1.5 |     |     |
| Molló         |            |       |             |     |       |     |     |     |
| EST           | C/D        | W     | TP          | W   | TS    |     |     |     |
| TRGS          |            | 0     | 05:14:57.45 | 1   | 59.89 |     |     |     |
| BRU           |            | 0     | 57.61       | 1   | 60.82 |     |     |     |
| VDCF          |            | 0     | 57.77       |     |       |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 8 juliol 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|---------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|               | 15:19:59.0 | 42.64 | 2.30  | 11          | 0.3 | 1.2 | 1.0   | 2.0 |
| Prada         |            |       |       |             |     |     |       |     |
|               | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|               | VDCF       | +     | 0     | 15:20:01.20 |     | 2   | 03.02 |     |
|               | MTHF       | +     | 1     | 05.58       |     |     |       |     |
|               | LSPF       |       | 1     | 07.21       |     | 2   | 13.50 |     |
|               | PERF       | +     | 1     | 07.58       |     | 2   | 13.87 |     |
|               | OLT        |       | 1     | 08.99       |     | 3   | 16.13 |     |
|               | ETER       |       | 0     | 09.00       |     | 4   | 14.20 |     |
|               | GRBF       |       | 3     | 10.29       |     | 3   | 18.82 |     |
|               | SALF       |       | 1     | 14.10       |     | 3   | 25.29 |     |
|               | LESF       |       | 1     | 14.63       |     | 3   | 26.72 |     |
|               | SOR        |       | 1     | 15.74       |     |     |       |     |
|               | MLS        |       | 2     | 16.26       |     | 2   | 28.80 |     |
|               | VIH        |       | 3     | 20.00       |     | 3   | 33.00 |     |

| 10 juliol 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|----------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                | 07:23:53.8 | 42.91 | 0.46  |             | 0.2 | 1.6 |       | 1.6 |
| Campan         |            |       |       |             |     |     |       |     |
|                | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                | ENSF       | +     | 0     | 07:23:56.85 |     | 2   | 59.43 |     |
|                | EPF        |       | 0     | 56.90       |     | 1   | 59.60 |     |
|                | VIH        |       | 3     | 07:24:01.40 |     | 3   | 06.80 |     |
|                | SALF       |       | 1     | 04.06       |     | 3   | 12.33 |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 10 juliol 1993 |     | Ho         | LAT N       | LON E | PRO   | RMS | ERH | ERZ | MAG |
|----------------|-----|------------|-------------|-------|-------|-----|-----|-----|-----|
|                |     | 14:53:03.3 | 42.74       | 2.00  | 5     | 0.4 | 0.9 | 3.3 | 2.4 |
| Ax-les-Thermes |     |            |             |       |       |     |     |     |     |
| EST            | C/D | W          | TP          | W     | TS    |     |     |     |     |
| TRGS           |     | 0          | 14:53:08.37 | 3     | 11.70 |     |     |     |     |
| VDCF           | +   | 0          | 09.43       | 2     | 13.69 |     |     |     |     |
| GRBF           | -   | 0          | 10.37       | 3     | 15.31 |     |     |     |     |
| MTHF           | -   | 1          | 11.93       | 2     | 18.47 |     |     |     |     |
| SALF           | +   | 1          | 14.36       | 3     | 23.06 |     |     |     |     |
| LESF           | -   | 1          | 14.76       | 2     | 22.72 |     |     |     |     |
| VIL            | +   | 1          | 15.64       | 2     | 23.92 |     |     |     |     |
| ALB            | C   | 0          | 15.82       | 1     | 24.98 |     |     |     |     |
| OLT            |     | 1          | 17.00       | 2     | 26.01 |     |     |     |     |
| PERF           |     | 2          | 16.36       | 2     | 26.00 |     |     |     |     |
| MLS            | +   | 1          | 16.46       | 3     | 26.00 |     |     |     |     |
| SOR            |     | 1          | 17.17       |       |       |     |     |     |     |
| ETER           |     | 0          | 17.10       | 1     | 27.80 |     |     |     |     |
| SQD            |     | 2          | 19.50       |       |       |     |     |     |     |
| VIH            | D   | 1          | 20.40       | 3     | 33.20 |     |     |     |     |
| PON            |     | 0          | 21.64       |       |       |     |     |     |     |
| ENSF           |     | 3          | 26.12       | 3     | 42.93 |     |     |     |     |
| EPF            |     | 2          | 26.60       | 3     | 42.80 |     |     |     |     |
| EGRA           |     | 9          | 29.50       | 3     | 47.40 |     |     |     |     |
| LPO            |     | 9          | 42.00       | 3     | 67.00 |     |     |     |     |
| EROQ           |     |            |             | 4     | 74.70 |     |     |     |     |

| 12 juliol 1993 |     | Ho         | LAT N       | LON E | PRO   | RMS | ERH | ERZ | MAG |
|----------------|-----|------------|-------------|-------|-------|-----|-----|-----|-----|
|                |     | 22:28:05.4 | 42.64       | 2.25  | 1     | 0.2 | 1.2 | 2.0 | 1.6 |
| Prada          |     |            |             |       |       |     |     |     |     |
| EST            | C/D | W          | TP          | W     | TS    |     |     |     |     |
| VDCF           | +   | 0          | 22:28:07.52 | 1     | 09.06 |     |     |     |     |
| TRGS           | +   | 0          | 10.78       | 2     | 14.29 |     |     |     |     |
| MTHF           |     |            |             | 3     | 17.67 |     |     |     |     |
| BRU            | D   | 0          | 12.45       | 2     | 18.44 |     |     |     |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 14 juliol 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|----------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                | 09:54:20.5 | 42.40 | 2.37  | 3           | 0.4 | 1.3 | 5.4   | 1.7 |
| Molló          |            |       |       |             |     |     |       |     |
|                | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                | VDCF       | +     | 0     | 09:54:24.58 |     | 1   | 27.18 |     |
|                | ALB        |       | 0     | 25.66       |     | 2   | 29.70 |     |
|                | TRGS       | +     | 0     | 26.67       |     | 2   | 30.75 |     |
|                | PERF       | +     | 1     | 28.16       |     | 3   | 33.48 |     |
|                | VIL        | D     | 0     | 29.56       |     |     |       |     |
|                | MTHF       | -     | 1     | 31.23       |     |     |       |     |

| 16 juliol 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|----------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                | 01:42:55.5 | 41.84 | 2.88  |             | 0.4 | 2.8 |       | 2.4 |
| Girona         |            |       |       |             |     |     |       |     |
|                | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                | FONT       |       | 2     | 01:43:01.70 |     | 3   | 06.70 |     |
|                | OLT        |       | 1     | 04.00       |     | 2   | 10.40 |     |
|                | ALB        | D     | 0     | 04.31       |     | 2   | 11.38 |     |
|                | PERF       | C     | 0     | 07.67       |     |     |       |     |
|                | BRU        | C     | 0     | 08.75       |     | 1   | 17.73 |     |
|                | VIL        | C     | 0     | 10.76       |     | 2   | 21.69 |     |
|                | TRGS       | C     | 0     | 13.42       |     |     |       |     |
|                | AVN        |       | 9     | 25.80       |     | 3   | 45.40 |     |

| 17 juliol 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|----------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                | 03:02:51.8 | 42.58 | 1.01  |             | 0.1 | 0.5 |       | 1.8 |
| Esterrí d'Àneu |            |       |       |             |     |     |       |     |
|                | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                | VIH        |       | 1     | 03:02:55.60 |     | 2   | 58.40 |     |
|                | SALF       | C     | 0     | 56.31       |     |     |       |     |
|                | SOR        | C     | 0     | 56.36       |     | 1   | 59.71 |     |
|                | PON        |       | 1     | 57.21       |     |     |       |     |

# III. La sismicitat de Catalunya i de les regions veïnes

## III.2 Determinacions epicentrals

| 21 juliol 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                | 04:25:12.6 | 42.66 | 1.06        | 5   | 0.5   | 0.8 | 2.1 | 2.9 |
| Esterrí d'Àneu |            |       |             |     |       |     |     |     |
| EST            | C/D        | W     | TP          | W   | TS    |     |     |     |
| SALF           | —          | 0     | 04:25:15.05 | 2   | 17.39 |     |     |     |
| VIH            | D          | 1     | 17.20       |     |       |     |     |     |
| SOR            | D          | 0     | 19.00       | 3   | 22.70 |     |     |     |
| MLS            | —          | 0     | 18.66       | 2   | 22.70 |     |     |     |
| PON            | C          | 0     | 19.28       |     |       |     |     |     |
| GRBF           | +          | 0     | 20.32       |     |       |     |     |     |
| LESF           | —          | 0     | 20.68       |     |       |     |     |     |
| ENSF           | +          | 1     | 22.99       | 3   | 29.10 |     |     |     |
| EPF            |            | 1     | 24.60       | 2   | 32.80 |     |     |     |
| CAD            | —          | 3     | 24.70       | 3   | 33.50 |     |     |     |
| LSPF           | +          | 0     | 25.80       |     |       |     |     |     |
| TRGS           | +          | 1     | 25.06       | 3   | 35.15 |     |     |     |
| EGRA           | C          | 0     | 26.45       | 1   | 36.40 |     |     |     |
| AVN            | C          | 0     | 28.01       | 3   | 40.43 |     |     |     |
| VIL            | D          | 0     | 27.87       |     |       |     |     |     |
| BRU            | D          | 0     | 29.42       |     |       |     |     |     |
| VDCF           | —          | 1     | 30.49       | 2   | 43.95 |     |     |     |
| BTH            |            | 3     | 31.90       | 3   | 45.00 |     |     |     |
| MTHF           | —          | 1     | 33.43       | 3   | 48.68 |     |     |     |
| OLT            | —          | 0     | 34.20       | 1   | 50.94 |     |     |     |
| MRB            | —          | 9     | 35.64       | 3   | 51.72 |     |     |     |
| ALB            |            | 1     | 35.40       | 2   | 53.34 |     |     |     |
| SQD            |            | 9     | 36.60       | 3   | 54.20 |     |     |     |
| PERF           | —          | 2     | 37.57       | 3   | 54.96 |     |     |     |
| FONT           | —          | 2     | 37.60       | 3   | 55.70 |     |     |     |
| ETER           |            | 9     | 38.95       | 2   | 57.30 |     |     |     |
| EROQ           |            | 1     | 45.31       | 3   | 68.30 |     |     |     |
| ELIZ           |            | 9     | 49.79       | 3   | 74.80 |     |     |     |
| LPO            |            | 2     | 45.80       |     |       |     |     |     |

| 22 juliol 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                | 03:52:44.5 | 42.63 | 2.28        |     | 0.4   | 1.9 |     |     |
| Prada          |            |       |             |     |       |     |     |     |
| EST            | C/D        | W     | TP          | W   | TS    |     |     |     |
| VDCF           | D          | 0     | 03:52:46.61 | 1   | 48.47 |     |     |     |
| TRGS           | C          | 0     | 49.87       |     |       |     |     |     |
| BRU            | D          | 0     | 51.58       |     | 55.83 |     |     |     |
| MTHF           |            | 3     | 52.30       | 2   | 56.47 |     |     |     |
| PERF           |            | 1     | 53.00       | 2   | 59.63 |     |     |     |
| FONT           |            | 1     | 03:53:01.30 | 2   | 13.30 |     |     |     |

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 III.2 Determinacions epicentrals

| 24 juliol 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|----------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                | 00:13:26.2 | 42.95 | 0.29  | 3           | 0.8 | 1.5 | 2.2   | 2.9 |
| Campan         |            |       |       |             |     |     |       |     |
|                | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                | EPF        |       | 0     | 00:13:28.60 |     | 2   | 30.80 |     |
|                | VIH        |       | 2     | 35.10       |     |     |       |     |
|                | JAU        |       | 1     | 35.49       |     | 2   | 42.68 |     |
|                | MLS        | +     | 1     | 36.10       |     | 3   | 46.00 |     |
|                | OGE        |       | 2     | 37.26       |     | 2   | 46.19 |     |
|                | PON        |       | 1     | 38.36       |     |     |       |     |
|                | LHE        | +     | 1     | 38.56       |     | 2   | 47.50 |     |
|                | SALF       | -     | 1     | 38.07       |     | 2   | 47.56 |     |
|                | EGRA       |       | 1     | 41.00       |     | 2   | 51.70 |     |
|                | SOR        | D     | 9     | 45.30       |     | 3   | 56.50 |     |
|                | GRBF       |       | 2     | 42.32       |     | 2   | 55.13 |     |
|                | ELY        |       | 1     | 44.70       |     | 2   | 57.44 |     |
|                | AVN        |       | 2     | 47.10       |     | 3   | 62.90 |     |
|                | LSPF       |       | 2     | 47.99       |     | 3   | 66.84 |     |
|                | CAD        |       | 3     | 51.50       |     | 4   | 67.70 |     |
|                | TRGS       | -     | 1     | 50.54       |     | 2   | 68.24 |     |
|                | ELIZ       |       | 1     | 50.90       |     | 2   | 68.30 |     |
|                | VIL        |       | 1     | 53.14       |     |     |       |     |
|                | BRU        | D     | 0     | 54.87       |     | 2   | 77.25 |     |
|                | VDCF       |       | 2     | 54.93       |     | 3   | 75.45 |     |
|                | MTHF       |       | 2     | 56.29       |     | 3   | 78.68 |     |
|                | MRB        |       | 9     | 59.59       |     | 3   | 82.87 |     |
|                | OLT        |       | 2     | 59.60       |     | 3   | 83.03 |     |
|                | LPO        |       | 3     | 57.40       |     |     |       |     |
|                | ALB        |       | 1     | 59.10       |     | 2   | 85.23 |     |
|                | PERF       |       | 2     | 00:14:00.92 |     | 3   | 28.13 |     |
|                | FONT       |       | 9     | 01.00       |     | 3   | 28.60 |     |
|                | ETER       |       | 9     | 03.58       |     | 2   | 29.00 |     |
|                | EROQ       |       | 1     | 02.11       |     | 2   | 28.60 |     |
|                | ETOR       |       | 2     | 11.05       |     | 3   | 42.50 |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 28 juliol 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|----------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                | 20:24:18.9 | 42.91 | 2.63  | 2           | 0.4 | 1.6 | 1.8   | 2.6 |
| Tuchan         |            |       |       |             |     |     |       |     |
|                | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                | MTHF       | +     | 0     | 20:24:20.56 |     | 2   | 22.18 |     |
|                | VDCF       | +     | 0     | 26.25       |     |     |       |     |
|                | PERF       | -     | 0     | 27.75       |     | 1   | 34.27 |     |
|                | LSPF       | +     | 0     | 28.82       |     | 3   | 36.91 |     |
|                | TRGS       | +     | 0     | 30.86       |     | 1   | 39.75 |     |
|                | ETER       | D     | 0     | 31.00       |     | 2   | 39.50 |     |
|                | BRU        | C     | 0     | 32.63       |     | 2   | 42.69 |     |
|                | OLT        |       | 0     | 33.88       |     | 3   | 44.30 |     |
|                | GRBF       | -     | 0     | 33.79       |     | 3   | 46.60 |     |
|                | PAND       | -     | 1     | 35.45       |     |     |       |     |
|                | SQD        |       | 3     | 36.50       |     | 3   | 50.40 |     |
|                | VIL        |       | 1     | 37.24       |     | 2   | 49.96 |     |
|                | LESF       | -     | 1     | 37.28       |     | 3   | 50.45 |     |
|                | SALF       | -     | 0     | 38.42       |     | 3   | 52.83 |     |
|                | MLS        | +     | 0     | 39.69       |     | 3   | 56.50 |     |
|                | FONT       | +     | 2     | 40.50       |     | 3   | 56.70 |     |
|                | SOR        |       | 9     | 48.20       |     | 3   | 65.90 |     |
|                | VIH        | C     | 1     | 44.70       |     | 2   | 63.30 |     |
|                | MRB        |       | 9     | 46.37       |     | 2   | 65.54 |     |
|                | PON        | C     | 0     | 46.36       |     |     |       |     |
|                | ENSF       |       | 1     | 49.67       |     | 3   | 73.65 |     |
|                | AVN        |       | 9     | 51.08       |     | 3   | 75.22 |     |
|                | EGRA       |       | 9     | 53.50       |     | 3   | 79.50 |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 1 agost 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|--------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|              | 04:35:58.0 | 40.77 | 1.50        | 6   | 0.5   | 2.6 | 4.1 | 3.0 |
| Mediterrània |            |       |             |     |       |     |     |     |
| EST          | C/D        | W     | TP          | W   | TS    |     |     |     |
| FBR          |            | 2     | 04:36:13.75 | 3   | 24.19 |     |     |     |
| EROQ         |            | 1     | 13.85       | 3   | 24.30 |     |     |     |
| MRB          |            | 1     | 14.02       | 3   | 26.50 |     |     |     |
| FONT         |            | 2     | 19.70       | 3   | 37.00 |     |     |     |
| AVN          |            | 1     | 20.52       | 3   | 38.00 |     |     |     |
| VIL          |            | 1     | 22.54       | 3   | 41.59 |     |     |     |
| SQD          |            | 9     | 25.50       | 3   | 43.50 |     |     |     |
| ESEL         |            | 9     | 17.88       | 3   | 37.40 |     |     |     |
| CAD          |            | 9     | 28.00       | 3   | 49.50 |     |     |     |
| BRU          |            | 2     | 26.35       |     |       |     |     |     |
| SOR          |            | 2     | 27.26       |     |       |     |     |     |
| EGRA         |            | 9     | 28.32       | 3   | 52.50 |     |     |     |
| ALB          |            | 9     | 30.97       | 3   | 54.43 |     |     |     |
| ETER         |            | 9     | 32.06       | 3   | 56.80 |     |     |     |
| VIH          |            | 9     | 35.20       | 3   | 60.50 |     |     |     |

| 2 agost 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|--------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|              | 21:54:58.8 | 42.04 | 2.74        |     | 0.2   | 2.0 |     |     |
| Banyoles     |            |       |             |     |       |     |     |     |
| EST          | C/D        | W     | TP          | W   | TS    |     |     |     |
| SQD          |            | 3     | 21:55:02.50 | 3   | 05.50 |     |     |     |
| OLT          |            | 3     | 03.48       | 3   | 06.42 |     |     |     |
| FONT         |            | 1     | 05.90       | 2   | 11.00 |     |     |     |
| VIL          |            | 1     | 10.70       | 2   | 19.82 |     |     |     |
| TRGS         |            |       |             | 3   | 22.37 |     |     |     |

# III. La sismicitat de Catalunya i de les regions veïnes

## III.2 Determinacions epicentrals

| 6 agost 1993        | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|---------------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                     | 00:50:34.3 | 43.03 | 0.31        | 15  | 0.4   | 2.3 | 1.9 | 2.3 |
| Bagnères de Bigorre |            |       |             |     |       |     |     |     |
| EST                 | C/D        | W     | TP          | W   | TS    |     |     |     |
| EPF                 |            | 0     | 00:50:37.10 | 2   | 39.40 |     |     |     |
| BDBF                | +          | 0     | 37.52       | 2   | 40.02 |     |     |     |
| BTH                 |            | 2     | 42.50       | 3   | 47.50 |     |     |     |
| VIH                 |            | 2     | 44.00       | 3   | 50.70 |     |     |     |
| SALF                |            | 1     | 47.77       | 3   | 56.94 |     |     |     |
| PON                 | D          | 0     | 47.51       |     |       |     |     |     |
| EGRA                |            | 0     | 49.30       | 2   | 62.00 |     |     |     |
| AVN                 |            | 1     | 56.25       | 3   | 72.21 |     |     |     |
| VIL                 |            | 9     | 00:51:04.24 | 3   | 24.04 |     |     |     |
| LPO                 |            | 9     | 08.50       | 3   | 31.60 |     |     |     |

| 6 agost 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ  | MAG |
|--------------|------------|-------|-------------|-----|-------|-----|------|-----|
|              | 10:54:47.2 | 42.78 | 1.17        | 5   | 0.4   | 1.2 | 11.8 | 1.8 |
| Noarre       |            |       |             |     |       |     |      |     |
| EST          | C/D        | W     | TP          | W   | TS    |     |      |     |
| MLS          | +          | 1     | 10:54:51.12 | 2   | 54.05 |     |      |     |
| LESF         | +          | 0     | 52.61       | 2   | 55.81 |     |      |     |
| GRBF         | -          | 0     | 52.95       | 2   | 56.12 |     |      |     |
| VIH          | D          | 1     | 53.60       | 3   | 58.00 |     |      |     |
| PAND         |            |       |             | 3   | 60.09 |     |      |     |
| SOR          | +          | 9     | 56.80       | 3   | 63.00 |     |      |     |
| PON          |            | 1     | 56.64       |     |       |     |      |     |
| LSPF         | +          | 1     | 58.38       | 3   | 66.55 |     |      |     |
| AVN          |            | 3     | 10:55:05.40 | 4   | 22.00 |     |      |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 9 agost 1993 |     | Ho         | LAT N       | LON E | PRO   | RMS | ERH | ERZ | MAG |
|--------------|-----|------------|-------------|-------|-------|-----|-----|-----|-----|
|              |     | 23:00:09.6 | 42.65       | 2.62  | 3     | 0.4 | 1.0 | 2.2 | 2.6 |
| Ceret        |     |            |             |       |       |     |     |     |     |
| EST          | C/D | W          | TP          | W     | TS    |     |     |     |     |
| VDCF         | +   | 0          | 23:00:13.86 |       |       |     |     |     |     |
| PERF         | +   | 0          | 14.91       | 2     | 18.52 |     |     |     |     |
| MTHF         | -   | 0          | 15.18       | 3     | 19.72 |     |     |     |     |
| ALB          | D   | 9          | 14.88       | 1     | 19.93 |     |     |     |     |
| ETER         |     | 0          | 17.00       | 1     | 22.00 |     |     |     |     |
| BRU          | D   | 0          | 19.26       | 2     | 26.14 |     |     |     |     |
| TRGS         | +   | 1          | 19.24       | 3     | 26.28 |     |     |     |     |
| LSPF         | +   | 1          | 21.00       | 2     | 29.56 |     |     |     |     |
| SQD          |     | 3          | 22.90       |       |       |     |     |     |     |
| VIL          | C   | 0          | 24.10       |       |       |     |     |     |     |
| PAND         |     | 4          | 25.00       | 3     | 36.55 |     |     |     |     |
| GRBF         | +   | 1          | 24.79       | 3     | 36.54 |     |     |     |     |
| FONT         |     | 2          | 26.90       | 3     | 39.60 |     |     |     |     |
| LESF         |     | 2          | 29.04       | 3     | 44.92 |     |     |     |     |
| SALF         |     | 2          | 28.66       | 3     | 43.87 |     |     |     |     |
| SOR          |     | 9          | 35.50       | 3     | 50.60 |     |     |     |     |
| MLS          |     | 1          | 31.00       | 3     | 46.00 |     |     |     |     |
| VIH          | C   | 1          | 35.00       | 3     | 52.70 |     |     |     |     |
| AVN          |     | 3          | 38.70       | 3     | 61.30 |     |     |     |     |
| EPF          |     | 9          | 41.30       | 3     | 64.40 |     |     |     |     |
| EGRA         |     | 9          | 44.00       | 1     | 68.00 |     |     |     |     |
| LPO          |     | 9          | 52.00       | 3     | 81.50 |     |     |     |     |

| 14 agost 1993 |     | Ho         | LAT N       | LON E | PRO   | RMS | ERH | ERZ | MAG |
|---------------|-----|------------|-------------|-------|-------|-----|-----|-----|-----|
|               |     | 11:01:16.0 | 42.61       | 1.38  |       | 0.1 | 0.6 |     | 1.6 |
| Tírvia        |     |            |             |       |       |     |     |     |     |
| EST           | C/D | W          | TP          | W     | TS    |     |     |     |     |
| PAND          | -   | 0          | 11:01:19.29 | 2     | 21.94 |     |     |     |     |
| SALF          | -   | 0          | 20.25       | 2     | 23.20 |     |     |     |     |
| SOR           |     | 1          | 21.88       | 2     | 26.26 |     |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 14 agost 1993         |     | Ho         | LAT N       | LON E | PRO   | RMS | ERH | ERZ | MAG |
|-----------------------|-----|------------|-------------|-------|-------|-----|-----|-----|-----|
|                       |     | 20:18:41.7 | 41.79       | 2.93  | 0     | 0.5 | 2.3 | 2.8 | 2.7 |
| Sant Feliu de Guixols |     |            |             |       |       |     |     |     |     |
| EST                   | C/D | W          | TP          | W     | TS    |     |     |     |     |
| SQD                   | +   | 2          | 20:18:48.40 |       |       |     |     |     |     |
| FONT                  |     | 2          | 48.50       | 4     | 53.70 |     |     |     |     |
| OLT                   | D   | 0          | 51.28       | 1     | 58.70 |     |     |     |     |
| ETER                  |     | 0          | 51.70       | 1     | 59.00 |     |     |     |     |
| ALB                   | D   | 9          | 50.20       | 2     | 58.82 |     |     |     |     |
| PERF                  | C   | 0          | 55.04       |       |       |     |     |     |     |
| BRU                   |     | 2          | 54.86       |       |       |     |     |     |     |
| VIL                   | D   | 0          | 57.44       | 3     | 71.24 |     |     |     |     |
| VDCF                  |     | 1          | 59.15       |       |       |     |     |     |     |
| CAD                   |     | 3          | 20:19:00.20 | 3     | 15.00 |     |     |     |     |
| TRGS                  |     | 1          | 01.52       |       |       |     |     |     |     |
| PAND                  |     | 1          | 05.24       |       |       |     |     |     |     |
| SOR                   |     | 9          | 10.60       | 3     | 31.00 |     |     |     |     |
| GRBF                  |     | 1          | 08.61       |       |       |     |     |     |     |
| SALF                  |     | 1          | 10.94       |       |       |     |     |     |     |
| AVN                   |     | 3          | 11.80       | 3     | 32.80 |     |     |     |     |
| PON                   |     | 1          | 13.52       | 2     | 36.54 |     |     |     |     |
| VIH                   |     | 9          | 14.60       | 2     | 39.20 |     |     |     |     |
| EGRA                  |     | 0          | 17.30       | 1     | 44.00 |     |     |     |     |
| ESEL                  |     | 4          | 13.20       | 4     | 34.00 |     |     |     |     |
| EROQ                  |     | 0          | 19.00       | 4     | 49.00 |     |     |     |     |
| EPF                   |     | 9          | 22.00       | 3     | 53.00 |     |     |     |     |

| 15 agost 1993       |     | Ho         | LAT N       | LON E | PRO   | RMS | ERH | ERZ | MAG |
|---------------------|-----|------------|-------------|-------|-------|-----|-----|-----|-----|
|                     |     | 20:56:22.0 | 43.03       | 0.19  | 9     | 0.4 | 3.5 | 3.6 | 2.0 |
| Bagnères de Bigorre |     |            |             |       |       |     |     |     |     |
| EST                 | C/D | W          | TP          | W     | TS    |     |     |     |     |
| BDBF                | +   | 0          | 20:56:23.66 | 2     | 25.76 |     |     |     |     |
| EPF                 |     | 0          | 24.60       | 2     | 27.00 |     |     |     |     |
| ENSF                | +   | 1          | 26.82       | 3     | 30.98 |     |     |     |     |
| AVN                 |     | 1          | 44.87       |       |       |     |     |     |     |
| LPO                 |     | 9          | 54.70       | 3     | 78.10 |     |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 16 agost 1993  | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                | 02:38:30.8 | 42.58 | 0.90        |     | 0.1   | 2.1 |     |     |
| Esterri d'Àneu |            |       |             |     |       |     |     |     |
| EST            | C/D        | W     | TP          | W   | TS    |     |     |     |
| VIH            | D          | 2     | 02:38:33.60 | 3   | 35.70 |     |     |     |
| PON            | C          | 0     | 35.12       |     |       |     |     |     |
| SALF           | C          | 0     | 36.55       | 1   | 40.40 |     |     |     |

| 22 agost 1993  | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                | 04:36:02.9 | 42.50 | 0.93        | 9   | 0.2   | 1.5 | 4.8 | 1.4 |
| Esterri d'Àneu |            |       |             |     |       |     |     |     |
| EST            | C/D        | W     | TP          | W   | TS    |     |     |     |
| VIH            | C          | 1     | 04:36:06.90 | 2   | 09.60 |     |     |     |
| SOR            |            | 2     | 07.30       |     |       |     |     |     |
| SALF           |            |       |             | 2   | 14.30 |     |     |     |
| PAND           |            |       |             | 2   | 18.01 |     |     |     |
| ENSF           | +          | 1     | 13.21       | 2   | 20.66 |     |     |     |
| GRBF           |            |       |             | 3   | 21.53 |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 22 agost 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|---------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|               | 11:35:21.4 | 41.48 | 0.46        | 4   | 0.4   | 1.6 | 3.3 | 2.7 |
| Mequinensa    |            |       |             |     |       |     |     |     |
| EST           | C/D        | W     | TP          | W   | TS    |     |     |     |
| AVN           | D          | 0     | 11:35:29.94 | 1   | 36.50 |     |     |     |
| EROQ          |            | 0     | 33.40       | 2   | 43.80 |     |     |     |
| EGRA          |            | 0     | 34.60       | 2   | 45.00 |     |     |     |
| PON           | -          | 0     | 39.21       |     |       |     |     |     |
| SOR           |            | 1     | 40.70       | 2   | 54.90 |     |     |     |
| MRB           |            | 1     | 40.44       | 3   | 53.94 |     |     |     |
| VIH           |            | 1     | 42.60       | 3   | 59.00 |     |     |     |
| VIL           |            | 1     | 44.75       | 2   | 61.11 |     |     |     |
| SALF          | C          | 0     | 47.00       |     |       |     |     |     |
| BRU           |            | 1     | 49.30       | 2   | 69.80 |     |     |     |
| EPF           |            | 9     | 50.10       | 2   | 70.50 |     |     |     |
| GRBF          | C          | 0     | 50.51       |     |       |     |     |     |
| OLT           |            | 9     | 51.50       | 3   | 72.70 |     |     |     |

| 22 agost 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|---------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|               | 20:06:12.8 | 42.07 | 2.73        |     | 0.3   | 2.2 |     | 1.7 |
| Banyoles      |            |       |             |     |       |     |     |     |
| EST           | C/D        | W     | TP          | W   | TS    |     |     |     |
| SQD           |            | 1     | 20:06:16.50 | 2   | 19.50 |     |     |     |
| OLT           |            | 0     | 17.20       | 1   | 20.00 |     |     |     |
| BRU           |            | 2     | 21.61       |     |       |     |     |     |
| VDCF          | -          | 0     | 23.73       | 2   | 33.86 |     |     |     |
| TRGS          |            |       |             | 3   | 36.08 |     |     |     |
| PAND          |            |       |             | 3   | 44.48 |     |     |     |
| SALF          |            |       |             | 3   | 55.69 |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 30 agost 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|---------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|               | 16:33:53.1 | 42.47 | 0.76        |     | 0.3   | 1.8 |     | 2.4 |
| Pont de Suert |            |       |             |     |       |     |     |     |
| EST           | C/D        | W     | TP          | W   | TS    |     |     |     |
| SOR           | D          | 9     | 16:33:58.30 | 2   | 62.70 |     |     |     |
| SALF          | —          | 1     | 16:34:01.53 | 3   | 7.53  |     |     |     |
| PAND          |            |       |             | 3   | 12.63 |     |     |     |
| AVN           | C          | 0     | 04.33       |     |       |     |     |     |
| GRBF          |            | 1     | 06.26       | 3   | 16.07 |     |     |     |
| TRGS          |            | 2     | 09.73       |     |       |     |     |     |
| VIL           | D          | 0     | 09.62       |     |       |     |     |     |
| BRU           |            | 1     | 12.64       |     |       |     |     |     |
| OLT           |            | 9     | 17.80       | 3   | 36.80 |     |     |     |

| 1 setembre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                 | 13:15:23.0 | 42.51 | 1.20        |     | 0.4   | 3.8 |     | 1.9 |
| Tírvia          |            |       |             |     |       |     |     |     |
| EST             | C/D        | W     | TP          | W   | TS    |     |     |     |
| SOR             |            | 1     | 13:15:25.50 | 2   | 29.00 |     |     |     |
| SALF            | C          | 0     | 27.76       |     |       |     |     |     |
| VIH             |            | 2     | 29.70       | 3   | 35.00 |     |     |     |
| GRBF            |            | 1     | 30.67       | 3   | 36.92 |     |     |     |
| LSPF            | D          | 0     | 36.40       |     |       |     |     |     |

| 1 setembre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                 | 20:38:04.1 | 43.13 | 0.12        |     | 0.7   | 6.5 |     | 2.6 |
| Tarbes          |            |       |             |     |       |     |     |     |
| EST             | C/D        | W     | TP          | W   | TS    |     |     |     |
| BDBF            | D          | 0     | 20:38:05.43 | 2   | 07.80 |     |     |     |
| EPF             |            | 1     | 08.00       | 2   | 11.90 |     |     |     |
| VIH             |            | 3     | 16.20       | 3   | 25.80 |     |     |     |
| EGRA            |            | 0     | 23.00       | 2   | 35.00 |     |     |     |
| AVN             |            | 0     | 27.89       | 2   | 46.19 |     |     |     |
| LPO             |            | 9     | 36.70       | 3   | 60.50 |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 2 setembre 1993         |     | Ho         | LAT N       | LON E | PRO   | RMS | ERH | ERZ | MAG |
|-------------------------|-----|------------|-------------|-------|-------|-----|-----|-----|-----|
|                         |     | 06:26:51.5 | 41.85       | 2.59  | 1     | 0.5 | 1.7 | 2.9 | 2.5 |
| Santa Coloma de Farners |     |            |             |       |       |     |     |     |     |
| EST                     | C/D | W          | TP          | W     | TS    |     |     |     |     |
| SQD                     | C   | 1          | 06:26:54.00 | 2     | 56.40 |     |     |     |     |
| OLT                     | D   | 0          | 57.72       | 1     | 62.14 |     |     |     |     |
| ALB                     | D   | 9          | 57.93       | 1     | 65.04 |     |     |     |     |
| ETER                    |     | 0          | 06:27:01.00 | 1     | 07.50 |     |     |     |     |
| BRU                     |     | 0          | 01.95       | 2     | 09.26 |     |     |     |     |
| VIL                     | C   | 0          | 02.63       | 1     | 11.35 |     |     |     |     |
| MRB                     |     | 0          | 02.83       |       |       |     |     |     |     |
| CAD                     |     | 2          | 05.40       | 3     | 15.90 |     |     |     |     |
| VDCF                    |     | 1          | 06.74       |       |       |     |     |     |     |
| TRGS                    |     | 1          | 06.73       |       |       |     |     |     |     |
| MTHF                    | D   | 0          | 12.34       |       |       |     |     |     |     |
| SOR                     |     | 9          | 13.70       | 3     | 29.80 |     |     |     |     |
| GRBF                    | D   | 0          | 15.63       |       |       |     |     |     |     |
| AVN                     |     | 1          | 16.88       | 2     | 34.83 |     |     |     |     |
| SALF                    | C   | 0          | 17.38       |       |       |     |     |     |     |
| VIH                     |     | 9          | 20.40       | 3     | 41.70 |     |     |     |     |
| EGRA                    |     | 1          | 23.50       | 3     | 46.80 |     |     |     |     |
| EROQ                    |     | 1          | 26.50       | 3     | 52.00 |     |     |     |     |
| EPF                     |     | 2          | 27.60       |       |       |     |     |     |     |
| LPO                     |     | 9          | 49.90       | 3     | 85.70 |     |     |     |     |

| 2 setembre 1993 |     | Ho         | LAT N       | LON E | PRO   | RMS | ERH  | ERZ | MAG |
|-----------------|-----|------------|-------------|-------|-------|-----|------|-----|-----|
|                 |     | 12:39:22.5 | 42.15       | 2.47  |       | 0.3 | 14.0 |     | 1.8 |
| Manlleu         |     |            |             |       |       |     |      |     |     |
| EST             | C/D | W          | TP          | W     | TS    |     |      |     |     |
| OLT             |     | 1          | 12:39:26.53 | 2     | 28.38 |     |      |     |     |
| SQD             | D   | 4          | 27.30       | 4     | 27.60 |     |      |     |     |
| ALB             | C   | 0          | 27.87       | 1     | 32.69 |     |      |     |     |
| EROQ            |     | 4          | 38.00       | 4     | 42.50 |     |      |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 6 setembre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                 | 13:15:13.5 | 42.51 | 1.22        | 20  | 0.3   | 2.9 | 6.7 | 2.3 |
| Tírvia          |            |       |             |     |       |     |     |     |
| EST             | C/D        | W     | TP          | W   | TS    |     |     |     |
| SOR             |            | 2     | 13:15:17.90 | 3   | 21.50 |     |     |     |
| PAND            |            | 1     | 18.78       |     |       |     |     |     |
| SALF            | C          | 0     | 19.16       |     |       |     |     |     |
| VIH             |            | 2     | 21.00       | 3   | 25.90 |     |     |     |
| GRBF            | +          | 1     | 22.10       | 3   | 28.33 |     |     |     |

| 9 setembre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                 | 15:51:18.6 | 42.48 | 2.07        | 8   | 0.5   | 1.1 | 1.7 | 2.1 |
| Puigcerdà       |            |       |             |     |       |     |     |     |
| EST             | C/D        | W     | TP          | W   | TS    |     |     |     |
| TRGS            | -          | 0     | 15:51:21.04 | 3   | 22.96 |     |     |     |
| BRU             | D          | 0     | 22.95       | 3   | 26.41 |     |     |     |
| CAD             | C          | 2     | 23.10       | 3   | 26.50 |     |     |     |
| VDCF            |            | 1     | 23.84       | 3   | 27.55 |     |     |     |
| VIL             |            | 1     | 25.89       | 2   | 32.09 |     |     |     |
| PAND            | +          | 1     | 25.63       | 3   | 30.79 |     |     |     |
| LSPF            | +          | 1     | 28.12       |     |       |     |     |     |
| ALB             |            | 9     | 24.92       | 2   | 32.03 |     |     |     |
| MTHF            |            | 1     | 29.43       |     |       |     |     |     |
| PERF            | +          | 1     | 29.85       | 3   | 38.04 |     |     |     |
| SQD             |            | 2     | 29.70       | 3   | 37.90 |     |     |     |
| SOR             | D          | 0     | 31.27       | 1   | 42.03 |     |     |     |
| SALF            |            | 1     | 31.26       |     |       |     |     |     |
| LESF            |            | 1     | 33.46       |     |       |     |     |     |
| MLS             |            | 2     | 34.70       | 3   | 45.80 |     |     |     |
| VIH             |            | 3     | 37.10       |     |       |     |     |     |
| AVN             | D          | 0     | 39.87       | 3   | 56.53 |     |     |     |
| ENSF            |            | 1     | 43.69       | 3   | 62.18 |     |     |     |
| EGRA            |            | 9     | 44.90       | 3   | 61.70 |     |     |     |
| EPF             |            | 9     | 44.70       | 3   | 60.30 |     |     |     |
| LPO             |            | 9     | 15:52:02.80 | 3   | 31.70 |     |     |     |

# III. La sismicitat de Catalunya i de les regions veïnes

## III.2 Determinacions epicentrals

| 10 setembre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|------------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                  | 03:52:53.7 | 43.03 | -0.24       |     | 0.4   | 7.4 |     | 2.3 |
| Oest de Lourdes  |            |       |             |     |       |     |     |     |
| EST              | C/D        | W     | TP          | W   | TS    |     |     |     |
| BTH              |            | 3     | 03:52:56.00 |     |       |     |     |     |
| EPF              |            | 9     | 03:53:01.70 | 2   | 08.10 |     |     |     |
| VIH              |            | 3     | 10.00       | 3   | 20.70 |     |     |     |
| AVN              |            | 9     | 21.40       | 3   | 40.60 |     |     |     |
| LPO              |            | 9     | 29.30       | 3   | 54.50 |     |     |     |

| 10 setembre 1993 | Ho        | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|------------------|-----------|-------|-------------|-----|-------|-----|-----|-----|
|                  | 5:59:23.4 | 42.78 | 2.53        | 8   | 0.3   | 3.2 | 6.0 | 2.1 |
| Ribesaltes       |           |       |             |     |       |     |     |     |
| EST              | C/D       | W     | TP          | W   | TS    |     |     |     |
| VDCF             | —         | 1     | 05:59:28.00 | 3   | 31.78 |     |     |     |
| PERF             | —         | 1     | 30.80       | 2   | 36.36 |     |     |     |
| ALB              | D         | 9     | 29.43       | 1   | 36.71 |     |     |     |
| TRGS             | —         | 1     | 32.83       | 3   | 40.49 |     |     |     |
| BRU              | D         | 0     | 34.23       | 3   | 42.59 |     |     |     |
| GRBF             |           | 3     | 37.68       |     |       |     |     |     |
| LESF             |           |       |             | 3   | 53.41 |     |     |     |
| SALF             |           | 1     | 41.72       | 3   | 55.14 |     |     |     |
| VIH              |           | 9     | 48.60       | 3   | 66.30 |     |     |     |
| EPF              |           | 9     | 54.60       | 3   | 74.70 |     |     |     |

| 10 setembre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|------------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                  | 10:56:27.6 | 42.87 | 2.21        |     | 0.5   | 2.7 |     |     |
| Quillan          |            |       |             |     |       |     |     |     |
| EST              | C/D        | W     | TP          | W   | TS    |     |     |     |
| MTHF             | +          | 2     | 10:56:32.41 | 3   | 37.00 |     |     |     |
| TRGS             |            | 2     | 35.35       | 3   | 42.45 |     |     |     |
| GRBF             |            | 2     | 37.44       | 3   | 44.76 |     |     |     |
| BRU              |            | 2     | 38.97       |     |       |     |     |     |
| SALF             |            | 1     | 41.86       | 3   | 52.60 |     |     |     |
| MLS              |            | 3     | 45.00       | 3   | 58.00 |     |     |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 12 setembre 1993 | Ho        | LAT N | LON E | PRO         | RMS | ERH | ERZ | MAG   |
|------------------|-----------|-------|-------|-------------|-----|-----|-----|-------|
|                  | 0:24:25.1 | 43.04 | 0.00  |             | 0.2 | 4.3 |     | 2.2   |
| Lourdes          |           |       |       |             |     |     |     |       |
|                  | EST       | C/D   | W     | TP          |     | W   | TS  |       |
|                  | BTH       |       | 3     | 00:24:28.50 |     |     |     |       |
|                  | EPF       |       | 1     | 30.10       |     |     |     |       |
|                  | VIH       |       | 2     | 38.60       |     | 3   |     | 48.10 |
|                  | AVN       |       | 4     | 50.30       |     | 4   |     | 69.60 |
|                  | LPO       |       | 9     | 59.40       |     | 3   |     | 82.90 |

| 13 setembre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ | MAG   |
|------------------|------------|-------|-------|-------------|-----|-----|-----|-------|
|                  | 03:29:11.2 | 42.54 | 0.88  |             | 0.3 | 2.9 |     |       |
| Esterri d'Àneu   |            |       |       |             |     |     |     |       |
|                  | EST        | C/D   | W     | TP          |     | W   | TS  |       |
|                  | VIH        | D     | 1     | 03:29:15.00 |     |     |     |       |
|                  | SOR        |       | 1     | 16.70       |     | 2   |     | 20.00 |
|                  | ENSF       |       | 1     | 20.14       |     | 3   |     | 27.39 |
|                  | GRBF       |       | 1     | 22.24       |     | 3   |     | 29.52 |

| 13 setembre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ | MAG   |
|------------------|------------|-------|-------|-------------|-----|-----|-----|-------|
|                  | 08:49:55.8 | 42.56 | 1.26  |             | 0.2 | 3.4 |     |       |
| Tírvia           |            |       |       |             |     |     |     |       |
|                  | EST        | C/D   | W     | TP          |     | W   | TS  |       |
|                  | SOR        | D     | 0     | 08:50:00.77 |     |     |     |       |
|                  | SALF       | C     | 0     | 00.93       |     | 2   |     | 04.38 |
|                  | VIH        |       | 1     | 03.20       |     | 3   |     | 09.50 |

# III. La sismicitat de Catalunya i de les regions veïnes

## III.2 Determinacions epicentrals

| 13 setembre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|------------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                  | 21:53:19.8 | 42.64 | 0.96        |     | 0.1   | 0.1 |     | 2.1 |
| Esterri d'Aneu   |            |       |             |     |       |     |     |     |
| EST              | C/D        | W     | TP          | W   | TS    |     |     |     |
| VIH              |            | 1     | 21:53:23.00 | 2   | 25.00 |     |     |     |
| SALF             | C          | 0     | 24.20       | 2   | 27.13 |     |     |     |
| SOR              |            | 3     | 25.80       |     |       |     |     |     |

| 15 setembre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|------------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                  | 15:54:25.3 | 42.83 | 2.06        | 7   | 0.4   | 0.9 | 1.9 | 2.4 |
| Ax-les-Thermes   |            |       |             |     |       |     |     |     |
| EST              | C/D        | W     | TP          | W   | TS    |     |     |     |
| LSPF             | +          | 0     | 15:54:28.65 | 2   | 31.48 |     |     |     |
| TRGS             | -          | 0     | 31.83       | 2   | 36.68 |     |     |     |
| VDCF             | -          | 1     | 31.69       | 3   | 36.27 |     |     |     |
| MTHF             |            | 1     | 32.09       | 3   | 37.38 |     |     |     |
| GRBF             | C          | 1     | 32.32       | 2   | 38.33 |     |     |     |
| CAD              |            | 3     | 35.00       | 3   | 43.00 |     |     |     |
| BRU              |            | 0     | 36.28       | 3   | 44.20 |     |     |     |
| LESF             |            | 3     | 36.68       | 3   | 45.11 |     |     |     |
| SALF             |            | 2     | 37.00       | 3   | 46.39 |     |     |     |
| PERF             |            |       |             | 3   | 48.18 |     |     |     |
| MLS              |            | 1     | 39.00       | 2   | 48.50 |     |     |     |
| ETER             |            | 0     | 40.50       | 2   | 51.20 |     |     |     |
| SOR              |            | 9     | 43.60       | 3   | 53.00 |     |     |     |
| VIH              |            | 2     | 43.50       | 3   | 56.70 |     |     |     |
| PON              |            | 1     | 45.15       |     |       |     |     |     |
| EPF              |            | 2     | 47.80       |     |       |     |     |     |
| AVN              |            | 9     | 52.60       | 3   | 71.30 |     |     |     |
| EGRA             |            | 9     | 55.00       | 3   | 74.00 |     |     |     |
| LPO              |            | 9     | 15:55:03.00 | 3   | 28.20 |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes

III.2 Determinacions epicentrals

| 16 setembre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|------------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                  | 21:05:43.5 | 42.98 | -0.08 |             | 0.2 | 2.6 |       |     |
| Argelès Gazost   |            |       |       |             |     |     |       |     |
|                  | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                  | BDBF       |       | 1     | 21:05:47.50 |     | 2   | 50.40 |     |
|                  | EPF        |       | 1     | 49.70       |     | 2   | 54.60 |     |
|                  | VIH        |       | 2     | 57.60       |     | 3   | 67.70 |     |
|                  | LPO        |       | 9     | 21:06:18.10 |     | 3   | 43.90 |     |

| 20 setembre 1993        | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|-------------------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                         | 04:22:59.4 | 41.84 | 2.58  | 0           | 0.4 | 1.2 | 2.2   | 2.8 |
| Santa Coloma de Farners |            |       |       |             |     |     |       |     |
|                         | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                         | SQD        | C     | 1     | 04:23:02.40 |     | 2   | 04.90 |     |
|                         | OLT        | D     | 0     | 05.73       |     | 1   | 10.09 |     |
|                         | ALB        | D     | 9     | 05.13       |     | 3   | 12.35 |     |
|                         | ETER       |       | 0     | 09.10       |     | 1   | 16.90 |     |
|                         | BRU        |       | 1     | 09.69       |     | 2   | 17.23 |     |
|                         | FBR        | C     | 0     | 09.54       |     |     |       |     |
|                         | VIL        | C     | 0     | 10.70       |     | 1   | 19.30 |     |
|                         | MRB        | C     | 0     | 10.75       |     |     |       |     |
|                         | PERF       | C     | 0     | 12.46       |     |     |       |     |
|                         | VDCF       |       | 1     | 14.06       |     |     |       |     |
|                         | TRGS       |       | 1     | 14.55       |     |     |       |     |
|                         | PAND       | C     | 0     | 19.27       |     |     |       |     |
|                         | MTHF       | +     | 0     | 20.44       |     |     |       |     |
|                         | SOR        | D     | 2     | 22.20       |     | 3   | 39.00 |     |
|                         | GRBF       | C     | 0     | 22.74       |     |     |       |     |
|                         | AVN        | C     | 9     | 24.87       |     | 2   | 44.56 |     |
|                         | SALF       | C     | 0     | 25.41       |     |     |       |     |
|                         | PON        |       | 1     | 26.77       |     |     |       |     |
|                         | LESF       |       | 1     | 28.01       |     |     |       |     |
|                         | VIH        |       | 2     | 28.30       |     | 3   | 48.80 |     |
|                         | EGRA       |       | 9     | 32.30       |     | 1   | 56.50 |     |
|                         | EROQ       |       | 9     | 35.50       |     | 2   | 61.30 |     |
|                         | EPF        |       | 9     | 35.60       |     | 3   | 62.90 |     |
|                         | LPO        |       | 2     | 47.10       |     |     |       |     |

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 III.2 Determinacions epicentrals

| 20 setembre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|------------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                  | 10:55:22.0 | 42.59 | 1.32  |             | 0.1 | 1.2 |       | 1.8 |
| Tirvia           |            |       |       |             |     |     |       |     |
|                  | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                  | SALF       | C     | 0     | 10:55:26.49 |     | 1   | 29.76 |     |
|                  | SOR        |       | 2     | 27.20       |     | 3   | 31.50 |     |
|                  | VIH        |       | 2     | 30.10       |     | 3   | 36.00 |     |

| 24 setembre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|------------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                  | 19:03:31.9 | 42.41 | 2.30  |             | 1.1 | 7.4 |       | 2.0 |
| Molló            |            |       |       |             |     |     |       |     |
|                  | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                  | VDCF       |       | 2     | 19:03:36.06 |     | 3   | 37.68 |     |
|                  | GRBF       |       |       |             |     | 3   | 56.04 |     |
|                  | MLS        |       | 3     | 53.00       |     | 3   | 65.00 |     |
|                  | EPF        |       | 3     | 58.50       |     | 3   | 78.70 |     |

# III. La sismicitat de Catalunya i de les regions veïnes

## III.2 Determinacions epicentrals

| 25 setembre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|------------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                  | 23:24:09.9 | 42.86 | 2.07        | 3   | 0.4   | 2.4 | 2.9 | 2.0 |
| Puig-reig        |            |       |             |     |       |     |     |     |
| EST              | C/D        | W     | TP          | W   | TS    |     |     |     |
| LSPF             | +          | 0     | 23:24:12.97 | 1   | 15.82 |     |     |     |
| VDCF             | -          | 1     | 16.03       |     |       |     |     |     |
| TRGS             | -          | 1     | 17.02       | 3   | 22.83 |     |     |     |
| GRBF             | +          | 1     | 17.51       | 3   | 22.70 |     |     |     |
| BRU              | D          | 0     | 21.04       |     |       |     |     |     |
| LESF             |            | 2     | 21.56       |     |       |     |     |     |
| SALF             |            | 2     | 22.08       | 3   | 32.06 |     |     |     |
| MLS              |            | 1     | 23.50       | 2   | 33.00 |     |     |     |
| VIL              | +          | 1     | 24.67       |     |       |     |     |     |
| SOR              | C          | 0     | 26.21       |     |       |     |     |     |
| VIH              |            | 3     | 28.60       | 3   | 42.90 |     |     |     |
| EPF              |            | 9     | 33.60       | 3   | 51.10 |     |     |     |
| LPO              |            | 9     | 45.50       | 3   | 69.90 |     |     |     |

| 26 setembre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|------------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                  | 02:35:45.4 | 42.73 | 1.92        |     | 0.3   | 1.4 |     | 1.6 |
| Ax-les-Thermes   |            |       |             |     |       |     |     |     |
| EST              | C/D        | W     | TP          | W   | TS    |     |     |     |
| TRGS             | -          | 0     | 02:35:50.41 | 3   | 53.04 |     |     |     |
| GRBF             | -          | 1     | 51.36       | 2   | 55.77 |     |     |     |
| VDCF             |            | 1     | 52.11       |     |       |     |     |     |
| BRU              | D          | 0     | 54.92       | 2   | 62.02 |     |     |     |
| MTHF             |            | 2     | 54.54       |     |       |     |     |     |
| SALF             |            |       |             | 3   | 62.51 |     |     |     |
| SOR              |            | 1     | 58.49       |     |       |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 28 setembre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|------------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                  | 18:50:31.1 | 42.58 | 0.82  | 0.1         | 2.9 |     |       |     |
| Benasc           |            |       |       |             |     |     |       |     |
|                  | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                  | VIH        | C     | 1     | 18:50:32.90 |     |     |       |     |
|                  | PON        | C     | 1     | 34.76       |     | 2   | 37.76 |     |
|                  | SALF       | C     | 0     | 37.54       |     | 2   | 42.07 |     |

| 8 octubre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|----------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                | 22:09:35.0 | 42.43 | 2.13  | 3           | 0.4 | 0.6 | 1.5   | 3.3 |
| Puigcerdà      |            |       |       |             |     |     |       |     |
|                | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                | TRGS       | +     | 9     | 22:09:39.28 |     | 1   | 41.36 |     |
|                | BRU        | C     | 0     | 38.28       |     | 2   | 40.50 |     |
|                | CAD        | C     | 0     | 39.61       |     | 2   | 42.88 |     |
|                | VDCF       | +     | 9     | 41.17       |     | 1   | 44.57 |     |
|                | VIL        | C     | 0     | 41.73       |     | 2   | 47.31 |     |
|                | OLT        | D     | 0     | 42.38       |     | 2   | 48.02 |     |
|                | PAND       | +     | 0     | 43.33       |     |     |       |     |
|                | ALB        | C     | 0     | 43.27       |     | 2   | 50.07 |     |
|                | SQD        | D     | 2     | 45.10       |     | 3   | 52.60 |     |
|                | LSPF       | +     | 0     | 45.92       |     | 2   | 53.81 |     |
|                | ETER       | C     | 0     | 45.22       |     | 2   | 52.80 |     |
|                | PERF       | +     | 0     | 45.27       |     |     |       |     |
|                | MTHF       | +     | 0     | 46.18       |     |     |       |     |
|                | GRBF       | -     | 1     | 46.57       |     | 3   | 55.13 |     |
|                | FONT       | -     | 1     | 48.50       |     | 3   | 57.10 |     |
|                | SOR        | C     | 1     | 48.68       |     | 2   | 59.76 |     |
|                | SALF       | +     | 1     | 49.20       |     | 2   | 59.44 |     |
|                | MRB        | C     | 0     | 51.30       |     | 2   | 62.96 |     |
|                | LESF       | -     | 0     | 51.47       |     | 2   | 63.38 |     |
|                | MLS        |       | 1     | 52.58       |     | 3   | 65.00 |     |
|                | FBR        |       | 1     | 54.30       |     | 2   | 67.50 |     |
|                | PON        | D     | 0     | 54.13       |     |     |       |     |
|                | AVN        | C     | 0     | 57.07       |     | 3   | 72.05 |     |
|                | POB        | C     | 1     | 59.54       |     | 2   | 76.77 |     |
|                | EGRA       | D     | 0     | 22:10:00.93 |     | 3   | 18.90 |     |
|                | ENSF       |       | 2     | 01.00       |     |     |       |     |
|                | EPF        |       | 2     | 01.40       |     |     |       |     |
|                | VAN        |       |       |             |     | 3   | 30.67 |     |
|                | EROQ       | C     | 9     | 12.43       |     | 2   | 38.20 |     |
|                | LPO        |       | 2     | 14.40       |     |     |       |     |
|                | ECRI       | C     | 9     | 28.95       |     | 3   | 69.10 |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 8 octubre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|----------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                | 22:33:12.5 | 42.44 | 2.13  |             | 0.3 | 1.8 |       | 1.9 |
| Puigcerdà      |            |       |       |             |     |     |       |     |
|                | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                | TRGS       | +     | 9     | 22:33:16.48 |     | 2   | 18.62 |     |
|                | VIL        | C     | 0     | 19.36       |     | 2   | 24.68 |     |
|                | OLT        |       | 2     | 20.20       |     | 3   | 25.20 |     |
|                | MTHF       |       | 1     | 23.53       |     |     |       |     |
|                | FONT       |       | 1     | 26.30       |     | 3   | 35.00 |     |
|                | SOR        | +     | 0     | 26.29       |     |     |       |     |

| 8 octubre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|----------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                | 23:21:38.3 | 42.43 | 2.13  |             | 0.3 | 1.2 |       | 1.7 |
| Puigcerdà      |            |       |       |             |     |     |       |     |
|                | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                | TRGS       |       | 9     | 23:21:42.24 |     | 2   | 44.37 |     |
|                | CAD        |       | 9     | 43.00       |     | 3   | 46.50 |     |
|                | VDCF       |       | 9     | 44.13       |     | 2   | 47.57 |     |
|                | VIL        |       | 0     | 44.95       |     | 2   | 50.27 |     |
|                | OLT        |       | 3     | 46.20       |     | 3   | 51.00 |     |
|                | PAND       |       |       |             |     | 3   | 53.07 |     |
|                | MTHF       | +     | 0     | 49.38       |     | 2   | 58.00 |     |
|                | FONT       |       | 1     | 51.60       |     | 2   | 60.70 |     |
|                | SOR        |       | 2     | 51.97       |     |     |       |     |

| 8 octubre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|----------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                | 23:24:39.1 | 42.43 | 2.12  |             | 0.4 | 1.6 |       | 1.6 |
| Puigcerdà      |            |       |       |             |     |     |       |     |
|                | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                | TRGS       | +     | 9     | 23:24:42.93 |     | 2   | 45.03 |     |
|                | CAD        | C     | 9     | 43.29       |     | 2   | 46.58 |     |
|                | VDCF       | +     | 9     | 44.80       |     | 2   | 48.22 |     |
|                | PAND       |       |       |             |     | 3   | 54.19 |     |
|                | MTHF       | +     | 1     | 50.04       |     | 1   | 58.58 |     |
|                | FONT       |       | 1     | 53.00       |     | 3   | 61.30 |     |
|                | SOR        |       | 2     | 52.73       |     | 3   | 63.50 |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 8 octubre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                | 23:52:42.3 | 42.43 | 2.12        | 7   | 0.4   | 1.3 | 3.6 | 2.2 |
| Puigcerdà      |            |       |             |     |       |     |     |     |
| EST            | C/D        | W     | TP          | W   | TS    |     |     |     |
| CAD            | C          | 0     | 23:52:46.82 | 2   | 50.11 |     |     |     |
| OLT            |            | 3     | 50.50       | 2   | 55.00 |     |     |     |
| PAND           |            |       |             | 3   | 56.66 |     |     |     |
| MTHF           | C          | 0     | 53.60       | 2   | 61.88 |     |     |     |
| FONT           |            | 1     | 55.90       | 2   | 65.30 |     |     |     |
| SOR            | C          | 0     | 56.02       | 2   | 67.58 |     |     |     |
| SALF           |            |       |             | 3   | 66.76 |     |     |     |

| 9 octubre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                | 11:04:10.0 | 42.41 | 2.11        | 12  | 0.5   | 2.1 | 5.5 | 2.2 |
| Puigcerdà      |            |       |             |     |       |     |     |     |
| EST            | C/D        | W     | TP          | W   | TS    |     |     |     |
| TRGS           | +          | 0     | 11:04:13.96 | 2   | 15.90 |     |     |     |
| CAD            | +          | 0     | 14.31       | 2   | 17.60 |     |     |     |
| OLT            |            | 3     | 18.50       | 3   | 22.50 |     |     |     |
| PAND           |            |       |             | 3   | 24.60 |     |     |     |
| ETER           |            | 0     | 21.00       | 2   | 28.00 |     |     |     |
| MTHF           |            | 1     | 21.03       | 2   | 29.60 |     |     |     |
| SOR            | C          | 9     | 22.50       | 3   | 33.50 |     |     |     |

| 9 octubre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                | 12:28:09.9 | 42.43 | 2.12        |     | 0.4   | 1.4 |     | 2.0 |
| Puigcerdà      |            |       |             |     |       |     |     |     |
| EST            | C/D        | W     | TP          | W   | TS    |     |     |     |
| TRGS           |            | 9     | 12:28:14.07 | 2   | 16.15 |     |     |     |
| CAD            |            | 0     | 14.40       | 2   | 17.70 |     |     |     |
| VIL            |            | 1     | 16.89       |     |       |     |     |     |
| OLT            |            | 0     | 17.99       | 3   | 22.75 |     |     |     |
| PAND           |            |       |             | 2   | 24.15 |     |     |     |
| ALB            |            | 1     | 18.30       | 3   | 24.28 |     |     |     |
| MTHF           |            | 1     | 21.18       | 2   | 29.70 |     |     |     |
| FONT           |            | 1     | 23.50       | 2   | 32.70 |     |     |     |
| SOR            | +          | 1     | 23.91       |     |       |     |     |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 9 octubre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                | 14:48:50.0 | 42.40 | 2.10        | 15  | 0.4   | 2.5 | 5.9 | 2.0 |
| Puigcerdà      |            |       |             |     |       |     |     |     |
| EST            | C/D        | W     | TP          | W   | TS    |     |     |     |
| CAD            | +          | 1     | 14:48:54.67 | 2   | 57.97 |     |     |     |
| VDCF           | C          | 0     | 56.27       | 1   | 59.72 |     |     |     |
| OLT            |            | 3     | 57.80       | 3   | 62.60 |     |     |     |
| MTHF           | —          | 1     | 14:49:01.51 | 2   | 09.99 |     |     |     |

| 9 octubre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                | 14:56:31.5 | 42.45 | 2.09        | 1   | 0.2   | 0.8 | 2.5 | 1.9 |
| Puigcerdà      |            |       |             |     |       |     |     |     |
| EST            | C/D        | W     | TP          | W   | TS    |     |     |     |
| CAD            |            | 1     | 14:56:36.08 | 2   | 39.36 |     |     |     |
| VIL            |            | 1     | 38.58       |     |       |     |     |     |
| OLT            |            | 3     | 40.00       | 3   | 45.60 |     |     |     |
| MTHF           |            | 1     | 42.88       | 2   | 51.44 |     |     |     |
| SOR            |            | 2     | 45.00       | 3   | 55.80 |     |     |     |
| FONT           |            | 1     | 45.70       |     |       |     |     |     |

| 10 octubre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                 | 05:49:26.1 | 42.45 | 2.13        |     | 0.2   | 2.0 |     |     |
| Puigcerdà       |            |       |             |     |       |     |     |     |
| EST             | C/D        | W     | TP          | W   | TS    |     |     |     |
| TRGS            | C          | 9     | 05:49:29.92 | 2   | 32.02 |     |     |     |
| VDCF            | C          | 9     | 31.79       | 2   | 35.24 |     |     |     |
| VIL             | +          | 1     | 32.62       | 2   | 38.30 |     |     |     |
| FONT            |            | 1     | 40.00       | 4   | 48.30 |     |     |     |
| SOR             |            | 2     | 40.00       | 3   | 50.70 |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 10 octubre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                 | 11:32:13.4 | 42.44 | 2.14        | 0   | 0.5   | 1.1 | 3.4 | 2.2 |
| Puigcerdà       |            |       |             |     |       |     |     |     |
| EST             | C/D        | W     | TP          | W   | TS    |     |     |     |
| TRGS            | +          | 9     | 11:32:17.87 | 1   | 20.01 |     |     |     |
| VDCF            | +          | 9     | 19.73       | 1   | 23.17 |     |     |     |
| CAD             | C          | 1     | 17.97       | 2   | 21.47 |     |     |     |
| VIL             |            | 1     | 20.65       | 2   | 25.99 |     |     |     |
| OLT             | -          | 0     | 21.78       | 1   | 26.53 |     |     |     |
| PAND            |            |       |             | 3   | 27.99 |     |     |     |
| ALB             | D          | 0     | 21.98       | 2   | 28.00 |     |     |     |
| PERF            | -          | 1     | 23.86       | 3   | 30.89 |     |     |     |
| ETER            |            | 1     | 24.50       | 3   | 31.90 |     |     |     |
| MTHF            | -          | 1     | 24.80       | 2   | 33.49 |     |     |     |
| FONT            |            | 1     | 27.10       | 4   | 41.00 |     |     |     |
| SOR             | -          | 9     | 26.10       | 3   | 37.20 |     |     |     |
| SALF            |            | 1     | 27.82       | 3   | 37.78 |     |     |     |
| LESF            |            | 2     | 30.18       | 3   | 42.28 |     |     |     |
| AVN             | C          | 1     | 35.94       | 2   | 52.59 |     |     |     |
| EGRA            |            | 9     | 40.70       | 3   | 58.70 |     |     |     |
| EPF             |            | 9     | 42.60       | 3   | 60.30 |     |     |     |

| 11 octubre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                 | 22:19:00.2 | 41.69 | 2.61        | 1   | 0.5   | 2.0 | 3.2 | 2.6 |
| Blanes          |            |       |             |     |       |     |     |     |
| EST             | C/D        | W     | TP          | W   | TS    |     |     |     |
| FONT            | C          | 1     | 22:19:03.30 |     |       |     |     |     |
| SQD             | C          | 2     | 05.50       | 4   | 09.70 |     |     |     |
| FBR             | C          | 1     | 08.90       | 2   | 15.10 |     |     |     |
| OLT             | -          | 0     | 08.81       | 3   | 15.36 |     |     |     |
| ETER            |            | 1     | 12.59       | 3   | 21.00 |     |     |     |
| BRU             |            | 1     | 12.92       | 3   | 22.09 |     |     |     |
| VIL             | -          | 0     | 13.15       |     |       |     |     |     |
| CAD             |            | 3     | 16.70       | 3   | 28.10 |     |     |     |
| VDCF            | +          | 1     | 18.46       |     |       |     |     |     |
| MTHF            | -          | 1     | 22.92       |     |       |     |     |     |
| SOR             | C          | 0     | 24.43       | 2   | 42.75 |     |     |     |
| LSPF            | +          | 1     | 25.57       |     |       |     |     |     |
| GRBF            | -          | 1     | 26.14       |     |       |     |     |     |
| AVN             | C          | 0     | 26.36       | 2   | 45.69 |     |     |     |
| SALF            | -          | 1     | 27.79       |     |       |     |     |     |
| PON             |            | 1     | 28.79       | 2   | 50.45 |     |     |     |
| LESF            | +          | 1     | 30.94       |     |       |     |     |     |
| EGRA            |            | 1     | 32.93       | 3   | 57.30 |     |     |     |
| EROQ            | C          | 9     | 35.60       | 3   | 61.10 |     |     |     |
| EPF             |            | 2     | 37.30       |     |       |     |     |     |

# III. La sismicitat de Catalunya i de les regions veïnes

## III.2 Determinacions epicentrals

| 13 octubre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                 | 01:26:20.3 | 42.43 | 2.15        | 3   | 0.4   | 0.7 | 2.3 | 2.7 |
| Puigcerdà       |            |       |             |     |       |     |     |     |
| EST             | C/D        | W     | TP          | W   | TS    |     |     |     |
| CAD             | C          | 9     | 01:26:25.30 | 2   | 28.66 |     |     |     |
| VIL             | C          | 0     | 27.02       | 2   | 32.67 |     |     |     |
| OLT             | C          | 1     | 27.66       | 2   | 33.22 |     |     |     |
| ALB             | C          | 0     | 28.56       | 2   | 34.67 |     |     |     |
| PAND            |            | 1     | 28.65       | 3   | 34.61 |     |     |     |
| SQD             |            | 2     | 30.80       | 3   | 38.00 |     |     |     |
| PERF            | +          | 0     | 30.52       | 2   | 37.52 |     |     |     |
| ETER            |            | 1     | 30.52       | 2   | 38.10 |     |     |     |
| LSPF            | +          | 0     | 31.18       | 3   | 39.24 |     |     |     |
| MTHF            | +          | 1     | 31.41       | 2   | 40.21 |     |     |     |
| GRBF            | +          | 1     | 31.88       | 3   | 38.22 |     |     |     |
| FONT            | -          | 1     | 33.70       |     |       |     |     |     |
| SOR             |            | 1     | 34.09       | 2   | 45.06 |     |     |     |
| SALF            | +          | 1     | 34.49       | 2   | 44.50 |     |     |     |
| MRB             | -          | 0     | 36.53       | 2   | 48.89 |     |     |     |
| LESF            | +          | 1     | 36.84       | 3   | 49.05 |     |     |     |
| MLS             |            | 2     | 38.00       | 3   | 50.42 |     |     |     |
| FBR             |            | 4     | 33.70       | 4   | 53.20 |     |     |     |
| PON             | D          | 0     | 39.49       |     |       |     |     |     |
| VIH             |            | 2     | 39.60       | 3   | 53.20 |     |     |     |
| AVN             | C          | 0     | 42.32       | 3   | 58.95 |     |     |     |
| EGRA            |            | 9     | 46.80       | 3   | 66.50 |     |     |     |
| ENSF            |            |       |             | 3   | 65.74 |     |     |     |
| EPF             |            | 2     | 47.00       |     |       |     |     |     |
| EROQ            | D          | 9     | 58.36       | 3   | 84.00 |     |     |     |
| LPO             |            | 9     | 01:27:04.90 | 3   | 33.90 |     |     |     |
| ECRI            | C          | 9     | 16.62       | 3   | 56.60 |     |     |     |

| 13 octubre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                 | 01:30:56.9 | 42.44 | 2.13        |     | 0.1   | 0.5 |     |     |
| Puigcerdà       |            |       |             |     |       |     |     |     |
| EST             | C/D        | W     | TP          | W   | TS    |     |     |     |
| TRGS            | C          | 9     | 01:30:59.73 | 2   | 61.87 |     |     |     |
| VDCF            | C          | 9     | 01:31:02.73 | 2   | 06.11 |     |     |     |
| MTHF            | +          | 1     | 07.89       | 2   | 16.44 |     |     |     |
| SOR             |            | 3     | 10.90       | 3   | 21.80 |     |     |     |

# III. La sismicitat de Catalunya i de les regions veïnes

## III.2 Determinacions epicentrals

| 13 octubre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                 | 01:38:04.5 | 42.45 | 2.12        |     | 0.1   | 2.7 |     |     |
| Puigcerdà       |            |       |             |     |       |     |     |     |
| EST             | C/D        | W     | TP          | W   | TS    |     |     |     |
| TRGS            | C          | 9     | 01:38:07.17 | 2   | 09.28 |     |     |     |
| VDCF            | C          | 9     | 10.19       | 2   | 13.61 |     |     |     |
| MTHF            | C          | 0     | 15.37       | 2   | 23.90 |     |     |     |
| FONT            |            | 3     | 18.30       |     |       |     |     |     |

| 13 octubre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                 | 03:53:05.0 | 42.44 | 2.13        | 0   | 0.3   | 1.4 | 3.0 |     |
| Puigcerdà       |            |       |             |     |       |     |     |     |
| EST             | C/D        | W     | TP          | W   | TS    |     |     |     |
| TRGS            |            | 1     | 03:53:08.01 | 2   | 10.17 |     |     |     |
| CAD             |            | 9     | 09.50       | 3   | 13.00 |     |     |     |
| VIL             |            | 1     | 12.00       | 2   | 17.17 |     |     |     |
| MTHF            |            | 1     | 16.21       | 2   | 24.67 |     |     |     |
| FONT            |            | 1     | 19.20       | 3   | 27.70 |     |     |     |
| SOR             |            | 3     | 19.50       | 3   | 30.30 |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 13 octubre 1993 |      | Ho         | LAT N | LON E       | PRO | RMS | ERH   | ERZ | MAG |
|-----------------|------|------------|-------|-------------|-----|-----|-------|-----|-----|
|                 |      | 15:49:00.2 | 42.43 | 2.13        | 2   | 0.4 | 0.7   | 1.4 | 2.7 |
| Puigcerdà       |      |            |       |             |     |     |       |     |     |
|                 | EST  | C/D        | W     | TP          |     | W   | TS    |     |     |
|                 | TRGS | +          | 1     | 15:49:03.40 |     | 2   | 05.50 |     |     |
|                 | VDCF | +          | 0     | 05.10       |     | 1   | 08.56 |     |     |
|                 | CAD  | C          | 0     | 04.93       |     | 1   | 08.20 |     |     |
|                 | VIL  |            | 1     | 06.96       |     | 2   | 12.58 |     |     |
|                 | OLT  | +          | 0     | 07.76       |     | 2   | 13.18 |     |     |
|                 | PAND |            | 1     | 08.60       |     | 2   | 14.63 |     |     |
|                 | ALB  | C          | 0     | 08.62       |     | 3   | 14.63 |     |     |
|                 | SQD  |            | 3     | 11.00       |     | 3   | 18.40 |     |     |
|                 | LSPF | +          | 1     | 11.16       |     | 3   | 19.46 |     |     |
|                 | PERF | +          | 1     | 10.54       |     | 2   | 17.38 |     |     |
|                 | ETER | D          | 0     | 10.61       |     | 2   | 18.10 |     |     |
|                 | MTHF | -          | 1     | 11.55       |     |     |       |     |     |
|                 | GRBF |            | 2     | 11.81       |     | 3   | 19.23 |     |     |
|                 | FONT | -          | 0     | 13.70       |     |     |       |     |     |
|                 | SOR  | +          | 0     | 14.08       |     | 2   | 25.52 |     |     |
|                 | SALF |            | 3     | 14.40       |     | 2   | 24.60 |     |     |
|                 | LESF |            | 1     | 16.86       |     | 3   | 28.85 |     |     |
|                 | MRB  | -          | 1     | 16.82       |     | 2   | 29.35 |     |     |
|                 | MLS  |            | 3     | 18.00       |     | 3   | 30.34 |     |     |
|                 | FBR  |            | 3     | 20.00       |     | 3   | 33.00 |     |     |
|                 | PON  |            | 1     | 19.61       |     |     |       |     |     |
|                 | AVN  | C          | 0     | 22.29       |     | 3   | 38.60 |     |     |
|                 | POB  |            |       |             |     | 3   | 41.16 |     |     |
|                 | EGRA | C          | 9     | 26.67       |     | 3   | 46.00 |     |     |
|                 | ENSF |            | 3     | 27.14       |     | 3   | 46.00 |     |     |
|                 | EPF  |            | 2     | 26.70       |     |     |       |     |     |
|                 | EROQ | D          | 9     | 38.38       |     | 3   | 65.20 |     |     |
|                 | LPO  |            | 9     | 45.20       |     | 3   | 74.40 |     |     |
|                 | ECRI |            | 9     | 56.50       |     | 3   | 95.00 |     |     |

| 16 octubre 1993 |     | Ho         | LAT N | LON E       | PRO | RMS | ERH   | ERZ | MAG |
|-----------------|-----|------------|-------|-------------|-----|-----|-------|-----|-----|
|                 |     | 02:50:33.9 | 42.47 | 0.95        |     | 0.1 | 1.2   |     |     |
| Sort            |     |            |       |             |     |     |       |     |     |
|                 | EST | C/D        | W     | TP          |     | W   | TS    |     |     |
|                 | PON | C          | 0     | 02:50:37.25 |     |     |       |     |     |
|                 | SOR |            | 3     | 37.70       |     | 3   | 40.00 |     |     |
|                 | VIH | C          | 1     | 38.40       |     | 3   | 41.40 |     |     |

III. La sismicitat de Catalunya i de les regions veïnes

III.2 Determinacions epicentrals

| 17 octubre 1993 |     | Ho         | LAT N       | LON E | PRO   | RMS | ERH | ERZ | MAG |
|-----------------|-----|------------|-------------|-------|-------|-----|-----|-----|-----|
|                 |     | 05:24:08.6 | 43.04       | -0.21 | 1     | 0.5 | 1.9 | 3.0 | 2.0 |
| Oest de Lourdes |     |            |             |       |       |     |     |     |     |
| EST             | C/D | W          | TP          | W     | TS    |     |     |     |     |
| BTH             |     | 2          | 05:24:10.50 |       |       |     |     |     |     |
| OGE             |     | 1          | 13.30       | 1     | 17.03 |     |     |     |     |
| BDBF            |     | 1          | 13.77       | 3     | 18.00 |     |     |     |     |
| LHE             |     | 1          | 15.34       |       |       |     |     |     |     |
| ATE             |     | 1          | 15.47       | 1     | 20.89 |     |     |     |     |
| EPF             |     | 1          | 16.40       | 2     | 22.60 |     |     |     |     |
| ENSF            |     | 3          | 17.60       | 2     | 24.32 |     |     |     |     |
| VIH             |     | 2          | 24.40       | 3     | 35.50 |     |     |     |     |
| EGRA            |     | 9          | 27.50       | 3     | 41.60 |     |     |     |     |
| PON             |     | 2          | 27.11       |       |       |     |     |     |     |
| SALF            |     | 3          | 29.06       | 3     | 43.36 |     |     |     |     |
| SOR             |     | 2          | 31.37       |       |       |     |     |     |     |
| GRBF            |     | 3          | 33.36       | 3     | 51.53 |     |     |     |     |
| AVN             |     | 9          | 35.12       | 3     | 54.41 |     |     |     |     |
| BRU             |     | 2          | 44.86       |       |       |     |     |     |     |
| LPO             |     | 9          | 44.10       | 3     | 69.10 |     |     |     |     |

| 17 octubre 1993 |     | Ho         | LAT N       | LON E | PRO   | RMS | ERH | ERZ | MAG |
|-----------------|-----|------------|-------------|-------|-------|-----|-----|-----|-----|
|                 |     | 15:45:08.3 | 42.61       | 0.86  | 11    | 0.1 | 0.7 | 0.9 | 2.0 |
| Esterri d'Àneu  |     |            |             |       |       |     |     |     |     |
| EST             | C/D | W          | TP          | W     | TS    |     |     |     |     |
| VIH             | C   | 1          | 15:45:10.90 | 3     | 12.60 |     |     |     |     |
| SALF            | C   | 0          | 14.17       | 2     | 18.05 |     |     |     |     |
| SOR             | D   | 1          | 14.54       | 2     | 19.22 |     |     |     |     |
| ENSF            |     | 1          | 16.67       | 3     | 23.02 |     |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 18 octubre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                 | 00:06:14.9 | 42.31 | 1.09        | 1   | 0.5   | 1.0 | 2.0 | 2.0 |
| Trepç           |            |       |             |     |       |     |     |     |
| EST             | C/D        | W     | TP          | W   | TS    |     |     |     |
| SOR             | C          | 0     | 00:06:16.47 |     |       |     |     |     |
| PON             | D          | 0     | 20.21       | 3   | 24.40 |     |     |     |
| VIH             | D          | 1     | 23.00       | 2   | 29.30 |     |     |     |
| PAND            |            | 1     | 22.32       | 2   | 28.86 |     |     |     |
| SALF            | -          | 1     | 23.96       | 3   | 31.13 |     |     |     |
| AVN             | +          | 1     | 23.57       | 3   | 32.28 |     |     |     |
| CAD             |            | 9     | 26.40       | 3   | 34.70 |     |     |     |
| EGRA            |            | 1     | 26.10       | 3   | 35.80 |     |     |     |
| VIL             |            | 1     | 26.28       | 2   | 36.23 |     |     |     |
| GRBF            | +          | 1     | 27.03       | 3   | 36.47 |     |     |     |
| ENSF            | +          | 1     | 29.19       | 3   | 38.85 |     |     |     |
| BRU             |            | 1     | 29.89       |     |       |     |     |     |
| EPF             |            | 2     | 32.20       | 3   | 46.10 |     |     |     |
| OLT             |            | 3     | 35.10       | 3   | 49.39 |     |     |     |
| FONT            |            | 2     | 35.70       | 3   | 50.80 |     |     |     |
| ALB             |            | 1     | 37.87       |     |       |     |     |     |
| ETER            |            | 1     | 39.60       | 3   | 56.80 |     |     |     |
| PERF            | +          | 1     | 40.39       | 3   | 58.88 |     |     |     |
| EROQ            |            | 1     | 44.60       | 3   | 64.40 |     |     |     |
| LPO             |            | 9     | 57.50       | 3   | 87.60 |     |     |     |

| 18 octubre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                 | 08:38:30.7 | 42.67 | 0.69        | 8   | 0.3   | 0.9 | 1.3 | 1.9 |
| Vielha          |            |       |             |     |       |     |     |     |
| EST             | C/D        | W     | TP          | W   | TS    |     |     |     |
| VIH             |            | 1     | 08:38:33.20 | 3   | 34.90 |     |     |     |
| PON             | C          | 0     | 35.98       |     |       |     |     |     |
| ENSF            | +          | 0     | 36.53       | 3   | 40.62 |     |     |     |
| SALF            | +          | 0     | 38.05       | 2   | 43.19 |     |     |     |
| MLS             | +          | 0     | 38.86       | 3   | 44.60 |     |     |     |
| SOR             | +          | 1     | 39.13       |     |       |     |     |     |
| EPF             |            | 2     | 39.40       | 3   | 45.30 |     |     |     |
| GRBF            | +          | 1     | 43.02       | 3   | 51.60 |     |     |     |
| AVN             |            | 2     | 45.56       |     |       |     |     |     |
| LSPF            | +          | 2     | 48.75       |     |       |     |     |     |
| TRGS            | +          | 1     | 48.62       | 3   | 62.42 |     |     |     |
| FONT            |            | 2     | 59.10       |     |       |     |     |     |
| LPO             |            | 9     | 08:39:08.50 | 3   | 34.20 |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 18 octubre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                 | 13:42:34.1 | 42.47 | 1.31        |     | 0.2   |     |     |     |
| La Seu d'Urgell |            |       |             |     |       |     |     |     |
| EST             | C/D        | W     | TP          | W   | TS    |     |     |     |
| SOR             |            | 3     | 13:42:37.20 | 3   | 40.00 |     |     |     |
| SALF            | C          | 0     | 40.25       |     |       |     |     |     |
| PON             |            | 1     | 42.59       |     |       |     |     |     |

| 18 octubre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                 | 13:58:57.6 | 42.90 | 2.11        | 3   | 0.5   | 1.6 | 4.4 | 2.1 |
| Lavelanet       |            |       |             |     |       |     |     |     |
| EST             | C/D        | W     | TP          | W   | TS    |     |     |     |
| MTHF            | +          | 0     | 13:59:03.60 |     |       |     |     |     |
| VDCF            | -          | 0     | 04.34       |     |       |     |     |     |
| TRGS            | -          | 0     | 05.26       | 3   | 10.84 |     |     |     |
| GRBF            |            | 2     | 05.64       |     |       |     |     |     |
| BRU             | D          | 0     | 09.33       |     |       |     |     |     |
| LESF            | -          | 1     | 09.67       |     |       |     |     |     |
| SALF            |            | 1     | 10.28       |     |       |     |     |     |
| ALB             |            | 0     | 11.61       | 2   | 21.60 |     |     |     |
| MLS             |            | 3     | 11.71       | 3   | 21.40 |     |     |     |
| VIL             |            | 1     | 12.94       |     |       |     |     |     |
| OLT             | +          | 0     | 12.76       |     |       |     |     |     |
| ETER            | C          | 0     | 13.20       | 2   | 23.90 |     |     |     |
| SOR             |            | 1     | 14.28       |     |       |     |     |     |
| PON             | C          | 0     | 18.64       |     |       |     |     |     |
| FONT            |            | 2     | 19.50       | 3   | 34.70 |     |     |     |
| EPF             |            | 2     | 22.40       | 3   | 38.90 |     |     |     |
| ENSF            | +          | 1     | 22.10       |     |       |     |     |     |
| AVN             |            | 9     | 25.41       | 3   | 45.91 |     |     |     |
| LPO             |            | 9     | 34.50       | 3   | 56.30 |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 18 octubre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                 | 22:33:13.2 | 42.61 | 2.10        |     | 0.1   | 0.3 |     | 1.4 |
| Montlluís       |            |       |             |     |       |     |     |     |
| EST             | C/D        | W     | TP          | W   | TS    |     |     |     |
| VDCF            | +          | 0     | 22:33:17.28 | 2   | 20.15 |     |     |     |
| BRU             | C          | 0     | 19.84       | 3   | 24.60 |     |     |     |
| PAND            |            |       |             | 3   | 27.37 |     |     |     |
| MTHF            |            |       |             | 3   | 28.66 |     |     |     |

| 24 octubre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                 | 15:18:35.2 | 43.01 | 0.17        |     | 0.0   | 0.3 |     | 1.7 |
| Lourdes         |            |       |             |     |       |     |     |     |
| EST             | C/D        | W     | TP          | W   | TS    |     |     |     |
| BDBF            | +          | 0     | 15:18:37.29 | 2   | 38.79 |     |     |     |
| EPF             |            | 1     | 38.30       | 2   | 40.70 |     |     |     |
| ENSF            |            | 1     | 40.36       | 3   | 44.16 |     |     |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 24 octubre 1993 |      | Ho         | LAT N | LON E       | PRO | RMS | ERH   | ERZ | MAG |
|-----------------|------|------------|-------|-------------|-----|-----|-------|-----|-----|
|                 |      | 18:19:54.4 | 42.69 | 0.15        |     | 0.5 | 2.5   |     | 2.0 |
| Bujaruelo       |      |            |       |             |     |     |       |     |     |
|                 | EST  | C/D        | W     | TP          |     | W   | TS    |     |     |
|                 | ENSF | +          | 0     | 18:19:58.19 |     | 2   | 61.73 |     |     |
|                 | EPF  |            | 1     | 18:20:01.80 |     | 2   | 06.70 |     |     |
|                 | VIH  |            | 1     | 03.00       |     | 2   | 10.60 |     |     |
|                 | EGRA |            | 0     | 04.20       |     | 4   | 07.20 |     |     |
|                 | PON  | C          | 0     | 04.44       |     |     |       |     |     |
|                 | MLS  |            |       |             |     | 3   | 18.20 |     |     |
|                 | SOR  |            | 2     | 09.30       |     |     |       |     |     |
|                 | AVN  |            | 2     | 11.78       |     |     |       |     |     |
|                 | GRBF |            | 4     | 14.47       |     | 4   | 28.87 |     |     |
|                 | VIL  |            | 2     | 20.97       |     |     |       |     |     |
|                 | BRU  |            | 2     | 24.43       |     |     |       |     |     |
|                 | FONT |            | 9     | 30.50       |     | 4   | 57.70 |     |     |
|                 | LPO  |            | 9     | 33.80       |     | 3   | 60.80 |     |     |

| 25 octubre 1993 |      | Ho         | LAT N | LON E       | PRO | RMS | ERH   | ERZ | MAG |
|-----------------|------|------------|-------|-------------|-----|-----|-------|-----|-----|
|                 |      | 13:34:58.2 | 42.52 | 1.17        |     | 0.2 | 1.9   |     |     |
| Esterra d'Àneu  |      |            |       |             |     |     |       |     |     |
|                 | EST  | C/D        | W     | TP          |     | W   | TS    |     |     |
|                 | SOR  | C          | 0     | 13:35:01.25 |     |     |       |     |     |
|                 | SALF | C          | 0     | 03.27       |     |     |       |     |     |
|                 | VIH  |            | 3     | 04.70       |     | 3   | 09.80 |     |     |
|                 | GRBF |            | 1     | 06.22       |     |     |       |     |     |
|                 | VIL  |            | 2     | 11.15       |     |     |       |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 25 octubre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|-----------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                 | 15:48:37.5 | 42.44 | 1.03  |             | 0.1 | 1.4 |       | 2.0 |
| Sort            |            |       |       |             |     |     |       |     |
|                 | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                 | SOR        | +     | 2     | 15:48:39.70 |     | 3   | 41.50 |     |
|                 | PON        | D     | 0     | 41.99       |     | 2   | 45.15 |     |
|                 | VIH        |       | 3     | 43.40       |     | 3   | 47.20 |     |

| 26 octubre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|-----------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                 | 01:32:29.7 | 42.53 | 2.39  | 9           | 0.3 | 1.6 | 3.6   |     |
| Prada           |            |       |       |             |     |     |       |     |
|                 | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                 | TRGS       | +     | 0     | 01:32:35.96 |     | 2   | 40.45 |     |
|                 | ALB        |       | 0     | 36.06       |     | 2   | 40.65 |     |
|                 | PERF       |       |       |             |     | 3   | 41.72 |     |
|                 | ETER       | D     | 0     | 37.80       |     | 2   | 43.20 |     |
|                 | MTHF       | +     | 1     | 37.91       |     |     |       |     |
|                 | PAND       |       |       |             |     | 3   | 50.03 |     |
|                 | FONT       |       | 3     | 45.20       |     |     |       |     |
|                 | SALF       |       |       |             |     | 3   | 58.50 |     |

| 27 octubre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|-----------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                 | 09:09:31.7 | 42.98 | 0.18  | 14          | 0.2 | 2.0 | 1.8   |     |
| Campan          |            |       |       |             |     |     |       |     |
|                 | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                 | BDBF       | +     | 0     | 09:09:34.64 |     | 2   | 36.81 |     |
|                 | ENSF       | +     | 0     | 36.57       |     | 3   | 40.27 |     |
|                 | BTH        |       | 2     | 37.80       |     | 3   | 43.20 |     |
|                 | VIH        | C     | 1     | 42.70       |     | 2   | 50.20 |     |
|                 | SALF       | +     | 1     | 45.84       |     | 3   | 57.46 |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 28 octubre 1993 |     | Ho         | LAT N | LON E       | PRO | RMS | ERH   | ERZ | MAG |
|-----------------|-----|------------|-------|-------------|-----|-----|-------|-----|-----|
|                 |     | 08:28:26.6 | 43.31 | 0.87        |     | 0.3 | 6.4   |     |     |
| Le Fousseret    |     |            |       |             |     |     |       |     |     |
| EST             | C/D |            | W     | TP          |     | W   | TS    |     |     |
| MLS             |     |            | 2     | 08:28:34.50 |     | 3   | 41.00 |     |     |
| LESF            | -   |            | 1     | 35.20       |     | 3   | 42.00 |     |     |
| SALF            |     |            |       |             |     | 3   | 47.15 |     |     |
| GRBF            | +   |            | 1     | 39.63       |     | 3   | 48.46 |     |     |

| 3 novembre 1993 |     | Ho         | LAT N | LON E       | PRO | RMS | ERH   | ERZ | MAG |
|-----------------|-----|------------|-------|-------------|-----|-----|-------|-----|-----|
|                 |     | 13:35:16.8 | 42.52 | 1.24        | 1   | 0.4 | 1.6   | 4.1 | 1.6 |
| Tírvia          |     |            |       |             |     |     |       |     |     |
| EST             | C/D |            | W     | TP          |     | W   | TS    |     |     |
| SOR             |     |            | 2     | 13:35:20.40 |     |     |       |     |     |
| PAND            | +   |            | 0     | 21.56       |     | 1   | 24.98 |     |     |
| SALF            | +   |            | 0     | 22.02       |     | 2   | 25.57 |     |     |
| VIH             | D   |            | 1     | 23.90       |     | 3   | 28.00 |     |     |
| PON             | D   |            | 0     | 24.56       |     | 3   | 30.58 |     |     |
| MLS             |     |            | 2     | 26.00       |     | 3   | 32.00 |     |     |
| EPF             |     |            | 1     | 32.70       |     | 2   | 44.30 |     |     |
| FONT            |     |            | 9     | 40.50       |     | 3   | 58.20 |     |     |

| 3 novembre 1993 |     | Ho         | LAT N | LON E       | PRO | RMS | ERH   | ERZ | MAG |
|-----------------|-----|------------|-------|-------------|-----|-----|-------|-----|-----|
|                 |     | 13:55:49.9 | 42.48 | 1.31        |     | 0.1 |       |     |     |
| La Seu d'Urgell |     |            |       |             |     |     |       |     |     |
| EST             | C/D |            | W     | TP          |     | W   | TS    |     |     |
| SOR             |     |            | 1     | 13:55:53.40 |     | 2   | 56.00 |     |     |
| SALF            | +   |            | 0     | 55.93       |     |     |       |     |     |
| PON             |     |            | 0     | 58.43       |     |     |       |     |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 4 novembre 1993 | Ho         | LAT N | LON E  | PRO   | RMS | ERH   | ERZ | MAG |
|-----------------|------------|-------|--------|-------|-----|-------|-----|-----|
|                 | 10:56:08.7 | 42.53 | 1.45   | 5     | 0.3 | 1.0   | 3.0 | 1.8 |
| Tírvia          |            |       |        |       |     |       |     |     |
| EST             | C/D        | W     | TP     | W     | TS  |       |     |     |
| PAND            |            | 4     | 10:56: |       | 2   | 12.14 |     |     |
| SOR             | C          | 0     |        | 13.99 | 1   | 18.88 |     |     |
| SALF            | +          | 0     |        | 14.56 | 2   | 18.73 |     |     |
| TRGS            | +          | 0     |        | 16.32 | 3   | 21.85 |     |     |
| MLS             |            |       |        |       | 3   | 25.23 |     |     |
| LESF            | +          | 0     |        | 18.89 |     |       |     |     |
| PON             | D          | 0     |        | 18.86 |     |       |     |     |
| AVN             |            | 3     |        | 24.50 |     |       |     |     |
| FONT            |            | 9     |        | 30.00 | 3   | 44.00 |     |     |

| 5 novembre 1993 | Ho         | LAT N | LON E  | PRO   | RMS | ERH   | ERZ | MAG |
|-----------------|------------|-------|--------|-------|-----|-------|-----|-----|
|                 | 08:39:22.9 | 42.42 | 2.14   | 3     | 0.5 | 0.9   | 2.3 | 3.1 |
| Puigcerdà       |            |       |        |       |     |       |     |     |
| EST             | C/D        | W     | TP     | W     | TS  |       |     |     |
| TRGS            |            |       | 08:39: |       | 3   | 28.23 |     |     |
| CAD             | C          | 1     |        | 28.00 | 3   | 31.30 |     |     |
| VDCF            |            |       |        |       | 3   | 31.13 |     |     |
| VIL             |            | 1     |        | 28.78 |     |       |     |     |
| OLT             | C          | 0     |        | 30.42 | 2   | 35.78 |     |     |
| ALB             | C          | 0     |        | 31.30 | 2   | 37.56 |     |     |
| PAND            |            | 2     |        | 31.32 | 2   | 37.26 |     |     |
| SQD             |            | 3     |        | 32.80 | 3   | 39.50 |     |     |
| ETER            | D          | 0     |        | 33.32 | 2   | 40.80 |     |     |
| PERF            |            | 2     |        | 33.18 | 3   | 40.54 |     |     |
| LSPF            |            | 1     |        | 33.85 | 3   | 42.38 |     |     |
| MTHF            |            | 1     |        | 34.14 |     |       |     |     |
| GRBF            |            | 2     |        | 34.59 | 3   | 43.00 |     |     |
| FONT            |            | 2     |        | 36.70 |     |       |     |     |
| SOR             | D          | 0     |        | 36.73 |     |       |     |     |
| SALF            |            | 2     |        | 37.25 | 3   | 47.44 |     |     |
| LESF            |            | 3     |        | 39.37 | 3   | 51.56 |     |     |
| MLS             |            | 1     |        | 40.68 | 3   | 53.00 |     |     |
| PON             |            | 0     |        | 42.15 |     |       |     |     |
| VIH             | +          | 2     |        | 42.30 | 2   | 56.80 |     |     |
| AVN             |            | 1     |        | 45.03 | 3   | 62.20 |     |     |
| EGRA            |            | 9     |        | 49.10 | 3   | 68.20 |     |     |
| ENSF            |            | 2     |        | 49.03 | 3   | 68.15 |     |     |
| EPF             |            | 1     |        | 49.50 |     |       |     |     |
| BTH             |            | 9     | 08:40: | 01.20 | 3   | 25.00 |     |     |
| EROQ            | D          | 9     |        | 01.14 | 3   | 28.00 |     |     |
| LPO             |            | 9     |        | 07.20 | 3   | 36.70 |     |     |
| ECRI            |            | 9     |        | 19.32 | 3   | 59.80 |     |     |

# III. La sismicitat de Catalunya i de les regions veïnes

## III.2 Determinacions epicentrals

| 9 novembre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                 | 01:08:53.8 | 42.42 | 2.12        |     | 0.2   | 1.8 |     | 1.7 |
| Puigcerdà       |            |       |             |     |       |     |     |     |
| EST             | C/D        | W     | TP          | W   | TS    |     |     |     |
| TRGS            | +          | 0     | 01:08:57.12 | 1   | 59.26 |     |     |     |
| CAD             |            | 3     | 58.00       | 3   | 62.00 |     |     |     |
| VDCF            |            | 0     | 58.82       | 1   | 62.21 |     |     |     |
| PAND            |            |       | 01:09:00.00 | 1   | 08.37 |     |     |     |
| ALB             |            |       |             | 4   | 08.40 |     |     |     |
| MTHF            |            | 1     | 05.25       | 2   | 13.91 |     |     |     |
| FONT            |            | 4     | 09.50       |     |       |     |     |     |

| 9 novembre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|-----------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                 | 16:52:31.5 | 43.05 | -0.08       |     | 0.4   | 2.8 |     | 1.6 |
| Lourdes         |            |       |             |     |       |     |     |     |
| EST             | C/D        | W     | TP          | W   | TS    |     |     |     |
| BTH             |            | 1     | 16:52:33.80 | 3   | 36.10 |     |     |     |
| BDBF            |            | 0     | 35.04       | 2   | 38.28 |     |     |     |
| EPF             |            | 0     | 37.60       | 2   | 41.30 |     |     |     |
| ENSF            |            | 0     | 38.96       |     |       |     |     |     |
| EGRA            |            | 4     | 50.00       | 3   | 61.00 |     |     |     |
| SALF            |            | 2     | 49.53       | 3   | 62.74 |     |     |     |
| AVN             |            | 1     | 56.30       |     |       |     |     |     |
| LPO             |            | 9     | 16:53:07.00 | 3   | 31.70 |     |     |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 11 novembre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|------------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                  | 22:44:34.3 | 42.42 | 2.12  | 5           | 0.2 | 0.9 | 9.9   | 1.7 |
| Puigcerdà        |            |       |       |             |     |     |       |     |
|                  | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                  | TRGS       | +     | 0     | 22:44:37.50 |     | 2   | 39.64 |     |
|                  | CAD        |       | 3     | 39.00       |     | 2   | 42.40 |     |
|                  | VDCF       | +     | 0     | 39.16       |     | 1   | 42.59 |     |
|                  | OLT        |       | 3     | 42.50       |     | 2   | 46.80 |     |
|                  | PAND       |       |       |             |     | 3   | 48.74 |     |
|                  | MTHF       |       | 1     | 45.62       |     | 2   | 54.05 |     |
|                  | FONT       |       | 3     | 50.00       |     |     |       |     |
|                  | SOR        |       | 1     | 48.41       |     |     |       |     |
|                  | AVN        |       | 9     | 56.70       |     | 3   | 74.70 |     |

| 15 novembre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|------------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                  | 22:26:37.5 | 42.56 | 0.89  | 9           | 0.4 | 2.5 | 5.7   | 1.6 |
| Esterri d'Àneu   |            |       |       |             |     |     |       |     |
|                  | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                  | VIH        | D     | 2     | 22:26:40.60 |     | 3   | 42.30 |     |
|                  | SOR        |       | 3     | 42.30       |     | 3   | 46.60 |     |
|                  | SALF       |       |       |             |     | 3   | 47.27 |     |
|                  | MLS        | -     | 0     | 45.70       |     |     |       |     |
|                  | ENSF       |       |       |             |     | 3   | 52.77 |     |
|                  | GRBF       | +     | 1     | 48.39       |     |     |       |     |

| 17 novembre 1993    |     | Ho         | LAT N       | LON E | PRO   | RMS | ERH | ERZ | MAG |
|---------------------|-----|------------|-------------|-------|-------|-----|-----|-----|-----|
|                     |     | 17:50:57.0 | 43.02       | 0.23  | 13    | 0.6 | 1.3 | 1.5 | 3.7 |
| Bagnères de Bigorre |     |            |             |       |       |     |     |     |     |
| EST                 | C/D | W          | TP          | W     | TS    |     |     |     |     |
| BDBF                | +   | 0          | 17:50:59.80 | 2     | 62.23 |     |     |     |     |
| EPF                 |     | 1          | 17:51:00.10 |       |       |     |     |     |     |
| ENSF                | -   | 0          | 01.92       | 2     | 05.47 |     |     |     |     |
| BTH                 |     | 1          | 03.10       |       |       |     |     |     |     |
| JAU                 | +   | 0          | 05.05       | 2     | 11.81 |     |     |     |     |
| OGE                 |     | 1          | 06.74       | 3     | 15.88 |     |     |     |     |
| VIH                 | D   | 1          | 07.30       |       |       |     |     |     |     |
| ESCF                | +   | 0          | 07.78       | 2     | 16.40 |     |     |     |     |
| LHE                 | +   | 0          | 08.69       | 2     | 17.36 |     |     |     |     |
| MLS                 |     | 1          | 07.70       | 3     | 18.00 |     |     |     |     |
| PON                 | C   | 0          | 10.62       | 2     | 20.58 |     |     |     |     |
| SALF                | -   | 0          | 10.05       | 2     | 21.14 |     |     |     |     |
| LESF                | -   | 1          | 10.52       | 3     | 22.31 |     |     |     |     |
| EGRA                | C   | 0          | 12.64       | 2     | 23.20 |     |     |     |     |
| BOH                 |     | 0          | 13.80       | 2     | 27.04 |     |     |     |     |
| SOR                 | C   | 1          | 14.18       |       |       |     |     |     |     |
| GRBF                | +   | 1          | 14.07       | 3     | 29.93 |     |     |     |     |
| PAND                | -   | 1          | 16.56       | 3     | 32.50 |     |     |     |     |
| AVN                 | C   | 0          | 19.52       | 3     | 36.02 |     |     |     |     |
| LSPF                | -   | 1          | 19.85       | 3     | 37.30 |     |     |     |     |
| CAD                 |     | 9          | 22.50       | 3     | 42.00 |     |     |     |     |
| TRGS                | +   | 1          | 22.45       | 3     | 40.90 |     |     |     |     |
| BRU                 |     | 2          | 26.90       |       |       |     |     |     |     |
| VDCF                | +   | 2          | 26.89       |       |       |     |     |     |     |
| MTHF                | +   | 2          | 26.49       |       |       |     |     |     |     |
| LPO                 |     | 9          | 30.70       | 3     | 53.70 |     |     |     |     |
| OLT                 |     | 2          | 30.70       |       |       |     |     |     |     |
| ALB                 |     | 2          | 31.68       | 4     | 60.58 |     |     |     |     |
| ECRI                | C   | 1          | 32.55       | 2     | 56.90 |     |     |     |     |
| FONT                |     | 2          | 32.70       |       |       |     |     |     |     |
| ETER                | C   | 9          | 33.72       | 2     | 59.00 |     |     |     |     |
| EROQ                |     | 9          | 37.05       | 2     | 64.90 |     |     |     |     |
| ETOR                | D   | 1          | 41.93       | 2     | 74.50 |     |     |     |     |
| GUD                 | C   | 0          | 59.07       | 2     | 03.60 |     |     |     |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 19 novembre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ | MAG |
|------------------|------------|-------|-------|-------------|-----|-----|-----|-----|
|                  | 10:32:47.1 | 42.55 | 0.66  |             | 0.0 |     |     |     |
| Benasc           |            |       |       |             |     |     |     |     |
|                  | EST        | C/D   | W     | TP          |     | W   | TS  |     |
|                  | VIH        |       | 3     | 10:32:50.00 |     |     |     |     |
|                  | ENSF       | -     | 0     | 54.06       |     |     |     |     |
|                  | SALF       | +     | 0     | 55.62       |     |     |     |     |
|                  | AVN        |       | 1     | 59.70       |     |     |     |     |

| 19 novembre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|------------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                  | 19:56:46.2 | 42.41 | 2.15  |             | 0.1 | 1.4 |       |     |
| Puigcerdà        |            |       |       |             |     |     |       |     |
|                  | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                  | BRU        | C     | 0     | 19:56:48.86 |     | 2   | 50.98 |     |
|                  | TRGS       | +     | 0     | 49.69       |     |     |       |     |
|                  | VDCF       | +     | 0     | 51.32       |     | 2   | 54.66 |     |

| 21 novembre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|------------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                  | 03:57:53.4 | 42.49 | 1.05  |             | 0.5 | 3.0 |       | 1.5 |
| Sort             |            |       |       |             |     |     |       |     |
|                  | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                  | PON        | D     | 0     | 03:57:58.71 |     |     |       |     |
|                  | VIH        | C     | 1     | 58.40       |     | 2   | 61.70 |     |
|                  | SALF       | +     | 0     | 03:58:00.03 |     | 2   | 03.62 |     |
|                  | PAND       | -     | 0     | 00.56       |     | 3   | 05.31 |     |
|                  | GRBF       | +     | 1     | 03.08       |     |     |       |     |
|                  | ENSF       |       |       |             |     | 3   | 13.15 |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 22 novembre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|------------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                  | 12:09:22.2 | 42.39 | 1.83        |     | 0.4   | 3.0 |     | 1.6 |
| Bellver Cerdanya |            |       |             |     |       |     |     |     |
| EST              | C/D        | W     | TP          | W   | TS    |     |     |     |
| PAND             | —          | 2     | 12:09:26.93 | 3   | 30.68 |     |     |     |
| VIL              |            | 1     | 27.47       |     |       |     |     |     |
| BRU              |            | 1     | 27.77       |     |       |     |     |     |
| GRBF             |            | 1     | 31.78       | 3   | 38.90 |     |     |     |
| MLS              |            | 3     | 38.00       | 3   | 48.00 |     |     |     |

| 23 novembre 1993 | Ho         | LAT N | LON E       | PRO | RMS  | ERH | ERZ | MAG |
|------------------|------------|-------|-------------|-----|------|-----|-----|-----|
|                  | 02:33:58.4 | 42.58 | 0.87        |     | 0.1  | 6.7 |     | 1.7 |
| Esterri d'Àneu   |            |       |             |     |      |     |     |     |
| EST              | C/D        | W     | TP          | W   | TS   |     |     |     |
| VIH              | C          | 2     | 02:34:00.50 | 3   | 2.30 |     |     |     |
| PON              | C          | 0     | 02.41       |     |      |     |     |     |
| SALF             | +          | 0     | 04.40       | 2   | 8.51 |     |     |     |

| 23 novembre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|------------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                  | 05:03:27.5 | 42.55 | 1.06        | 1   | 0.3   | 1.4 | 3.5 | 1.6 |
| Esterri d'Àneu   |            |       |             |     |       |     |     |     |
| EST              | C/D        | W     | TP          | W   | TS    |     |     |     |
| SOR              | C          | 2     | 05:03:31.10 | 3   | 33.90 |     |     |     |
| VIH              | C          | 2     | 32.10       | 3   | 35.20 |     |     |     |
| SALF             | +          | 0     | 32.42       | 1   | 35.52 |     |     |     |
| PON              | C          | 0     | 33.30       |     |       |     |     |     |
| MLS              |            |       |             | 3   | 40.80 |     |     |     |
| GRBF             | +          | 0     | 36.68       | 3   | 42.80 |     |     |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 24 novembre 1993 | Ho         | LAT N | LON E       | PRO   | RMS | ERH | ERZ   | MAG |
|------------------|------------|-------|-------------|-------|-----|-----|-------|-----|
|                  | 23:28:42.7 | 42.82 | 1.91        | 7     | 0.4 | 1.0 | 2.0   | 3.0 |
| Ax-les-Thermes   |            |       |             |       |     |     |       |     |
| EST              | C/D        | W     | TP          | W     | TS  |     |       |     |
| LSPF             | -          | 0     | 23:28:45.63 |       | 3   |     | 48.35 |     |
| GRBF             | +          | 0     |             | 47.99 | 2   |     | 52.29 |     |
| TRGS             | +          | 0     |             | 48.89 |     |     |       |     |
| PAND             | +          | 0     |             | 50.42 |     |     |       |     |
| VDCF             | +          | 0     |             | 50.22 | 3   |     | 56.34 |     |
| MTHF             | +          | 0     |             | 51.45 | 3   |     | 58.91 |     |
| CAD              |            | 2     |             | 52.00 | 3   |     | 58.80 |     |
| LESF             | +          | 0     |             | 52.23 | 3   |     | 59.32 |     |
| SALF             | +          | 0     |             | 52.43 | 2   |     | 60.12 |     |
| BRU              | D          | 0     |             | 53.72 |     |     |       |     |
| MLS              | +          | 0     |             | 54.20 | 2   |     | 62.78 |     |
| VIL              |            | 0     |             | 56.16 |     |     |       |     |
| SOR              | C          | 0     |             | 56.38 |     |     |       |     |
| ALB              | C          | 0     |             | 57.25 |     |     |       |     |
| PERF             | +          | 1     |             | 57.16 | 3   |     | 68.47 |     |
| OLT              |            | 2     |             | 57.70 |     |     |       |     |
| VIH              | C          | 2     |             | 58.70 | 3   |     | 70.20 |     |
| ETER             | D          | 0     |             | 59.02 | 2   |     | 69.50 |     |
| PON              | D          | 0     | 23:29:00.61 |       |     |     |       |     |
| ENSF             | -          | 1     |             | 04.36 | 3   |     | 20.38 |     |
| EPF              |            | 2     |             | 03.80 |     |     |       |     |
| AVN              | +          | 0     |             | 06.98 |     |     |       |     |
| EGRA             |            | 9     |             | 08.89 | 2   |     | 26.00 |     |
| BTH              |            | 9     |             | 12.80 | 3   |     | 33.20 |     |
| LPO              |            | 2     |             | 15.20 |     |     |       |     |
| EROQ             |            | 9     |             | 23.78 | 2   |     | 50.30 |     |
| ECRI             |            | 9     |             | 36.47 | 2   |     | 74.30 |     |

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 III.2 Determinacions epicentrals

| 24 novembre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|------------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                  | 23:38:21.9 | 42.81 | 1.90        | 8   | 0.4   | 1.0 | 2.2 | 2.0 |
| Isil             |            |       |             |     |       |     |     |     |
| EST              | C/D        | W     | TP          | W   | TS    |     |     |     |
| LSPF             | -          | 0     | 23:38:24.91 | 2   | 27.60 |     |     |     |
| GRBF             | +          | 0     | 27.23       | 2   | 31.47 |     |     |     |
| TRGS             | +          | 0     | 28.16       | 2   | 32.60 |     |     |     |
| PAND             | +          |       |             | 3   | 34.63 |     |     |     |
| VDCF             | +          | 0     | 29.47       | 2   | 35.59 |     |     |     |
| MTHF             |            |       |             | 3   | 38.26 |     |     |     |
| LESF             | +          | 0     | 31.71       | 3   | 39.14 |     |     |     |
| SALF             | -          | 1     | 31.79       | 2   | 39.60 |     |     |     |
| BRU              |            | 1     | 32.99       | 3   | 41.83 |     |     |     |
| MLS              | -          | 0     | 32.99       |     |       |     |     |     |
| SOR              |            | 3     | 36.00       |     |       |     |     |     |
| OLT              |            | 3     | 37.70       |     |       |     |     |     |
| VIH              | C          | 2     | 38.10       | 3   | 49.30 |     |     |     |
| EPF              |            | 9     | 44.90       | 3   | 59.60 |     |     |     |
| LPO              |            | 9     | 59.00       | 3   | 83.00 |     |     |     |

| 25 novembre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|------------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                  | 00:19:52.1 | 42.81 | 1.91        | 6   | 0.4   | 0.9 | 3.5 | 2.3 |
| Isil             |            |       |             |     |       |     |     |     |
| EST              | C/D        | W     | TP          | W   | TS    |     |     |     |
| LSPF             | -          | 0     | 00:19:54.96 | 1   | 57.67 |     |     |     |
| GRBF             | +          | 0     | 57.30       | 2   | 61.63 |     |     |     |
| TRGS             | -          | 0     | 58.25       | 2   | 62.16 |     |     |     |
| PAND             | +          | 1     | 59.75       |     |       |     |     |     |
| VDCF             | +          | 0     | 59.53       | 2   | 65.76 |     |     |     |
| CAD              |            | 3     | 00:20:01.50 | 3   | 08.50 |     |     |     |
| MTHF             | -          | 0     | 00.86       | 3   | 08.21 |     |     |     |
| LESF             | -          | 1     | 01.69       | 3   | 09.74 |     |     |     |
| SALF             | -          | 0     | 01.86       | 2   | 10.06 |     |     |     |
| BRU              |            | 1     | 03.21       |     |       |     |     |     |
| MLS              |            |       |             | 3   | 12.00 |     |     |     |
| SOR              |            | 3     | 06.22       | 3   | 16.00 |     |     |     |
| OLT              |            | 3     | 08.00       |     |       |     |     |     |
| VIH              |            | 3     | 08.10       | 3   | 20.50 |     |     |     |
| ENSF             |            |       |             | 3   | 29.83 |     |     |     |
| EPF              |            | 9     | 14.90       | 3   | 30.00 |     |     |     |
| AVN              |            | 9     | 17.80       | 3   | 33.70 |     |     |     |
| EGRA             |            | 9     | 20.10       | 2   | 37.20 |     |     |     |
| CAF              |            | 9     | 31.00       | 3   | 58.70 |     |     |     |

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| 25 novembre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|------------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                  | 19:41:38.9 | 42.51 | 1.35  | 1           | 0.5 | 1.4 | 3.4   | 1.8 |
| Tirvia           |            |       |       |             |     |     |       |     |
|                  | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                  | PAND       | +     | 0     | 19:41:42.02 |     | 1   | 44.13 |     |
|                  | SALF       |       |       |             |     | 3   | 49.00 |     |
|                  | GRBF       | +     | 0     | 46.27       |     | 3   | 50.53 |     |
|                  | VIH        |       | 3     | 47.50       |     | 3   | 53.20 |     |
|                  | PON        | C     | 0     | 47.76       |     | 2   | 54.72 |     |
|                  | MLS        |       |       |             |     | 3   | 55.44 |     |
|                  | LSPF       |       | 2     | 50.97       |     |     |       |     |
|                  | AVN        |       | 3     | 53.50       |     | 3   | 65.20 |     |
|                  | EPF        |       | 2     | 55.70       |     | 3   | 67.00 |     |
|                  | MTHF       |       | 2     | 57.75       |     | 3   | 72.00 |     |
|                  | FONT       |       | 9     | 19:42:01.00 |     | 3   | 15.00 |     |

| 26 novembre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|------------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                  | 09:58:01.9 | 43.02 | -0.18 | 5           | 0.2 | 1.2 | 2.6   | 2.1 |
| Oest de Lourdes  |            |       |       |             |     |     |       |     |
|                  | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                  | JAU        |       | 0     | 09:58:05.11 |     | 1   | 07.67 |     |
|                  | BDBF       |       | 1     | 06.69       |     | 1   | 10.58 |     |
|                  | OGE        |       | 0     | 06.93       |     | 2   | 10.92 |     |
|                  | ESCF       |       | 0     | 07.36       |     | 1   | 11.74 |     |
|                  | LHE        |       | 2     | 08.10       |     | 3   | 13.30 |     |
|                  | ATE        |       | 0     | 08.97       |     | 2   | 14.89 |     |
|                  | EPF        |       | 1     | 09.30       |     | 2   | 15.00 |     |
|                  | ENSF       |       | 0     | 10.30       |     |     |       |     |
|                  | VIH        |       | 3     | 17.10       |     | 3   | 29.00 |     |
|                  | EGRA       |       | 4     | 21.50       |     | 4   | 36.00 |     |
|                  | SALF       |       | 1     | 21.35       |     | 3   | 35.78 |     |
|                  | AVN        |       | 9     | 28.30       |     | 3   | 47.70 |     |
|                  | LPO        |       | 9     | 37.80       |     | 3   | 63.00 |     |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.2 Determinacions epicentrals

| 27 novembre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|------------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                  | 05:29:03.9 | 42.61 | 2.11  | 8           | 0.1 | 1.7 | 2.6   | 1.5 |
| Montiluis        |            |       |       |             |     |     |       |     |
|                  | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                  | TRGS       | +     | 0     | 05:29:07.37 |     | 1   | 09.66 |     |
|                  | VDCF       |       |       |             |     | 2   | 10.79 |     |
|                  | BRU        |       | 1     | 10.49       |     |     |       |     |
|                  | PAND       | -     | 1     | 12.22       |     |     |       |     |

| 27 novembre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|------------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                  | 12:11:10.4 | 42.59 | 0.88  | 9           | 0.2 | 1.1 | 1.6   | 1.6 |
| Esterri d'Àneu   |            |       |       |             |     |     |       |     |
|                  | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                  | VIH        | D     | 1     | 12:11:13.00 |     | 3   | 15.00 |     |
|                  | PON        | C     | 0     | 14.85       |     |     |       |     |
|                  | SALF       |       |       |             |     | 3   | 19.94 |     |
|                  | MLS        |       | 1     | 18.33       |     | 2   | 24.00 |     |
|                  | ENSF       |       | 3     | 19.01       |     | 3   | 25.54 |     |
|                  | LESF       |       |       |             |     | 3   | 28.02 |     |
|                  | GRBF       |       | 2     | 21.00       |     | 3   | 28.17 |     |

| 27 novembre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|------------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                  | 22:43:10.9 | 42.81 | 1.91  | 9           | 0.3 | 1.9 | 4.6   | 1.6 |
| Isil             |            |       |       |             |     |     |       |     |
|                  | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                  | LSPF       | +     | 0     | 22:43:13.85 |     | 1   | 16.55 |     |
|                  | GRBF       | +     | 2     | 16.29       |     | 2   | 20.72 |     |
|                  | PAND       |       |       |             |     | 3   | 24.75 |     |
|                  | VDCF       | -     | 0     | 18.46       |     | 2   | 24.68 |     |
|                  | BRU        | C     | 0     | 21.94       |     |     |       |     |
|                  | FONT       |       | 9     | 32.40       |     | 3   | 49.00 |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 2 desembre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|-----------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                 | 03:14:44.6 | 43.00 | 0.01  | 13          | 0.4 | 2.7 | 4.3   | 2.1 |
| Lourdes         |            |       |       |             |     |     |       |     |
|                 | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                 | BDBF       | -     | 0     | 03:14:48.25 |     | 2   | 50.21 |     |
|                 | BTH        |       | 1     | 48.50       |     | 3   | 53.00 |     |
|                 | EPF        |       | 0     | 49.50       |     | 2   | 53.50 |     |
|                 | ENSF       | +     | 0     | 50.96       |     | 2   | 55.86 |     |
|                 | VIH        |       | 3     | 57.30       |     | 3   | 66.70 |     |
|                 | AVN        |       | 3     | 03:15:08.40 |     | 4   | 28.36 |     |
|                 | LPO        |       | 9     | 19.00       |     | 3   | 43.00 |     |

| 2 desembre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH  | ERZ   | MAG |
|-----------------|------------|-------|-------|-------------|-----|------|-------|-----|
|                 | 16:25:41.1 | 42.84 | 1.81  |             | 0.5 | 14.9 |       | 1.5 |
| Arreau          |            |       |       |             |     |      |       |     |
|                 | EST        | C/D   | W     | TP          |     | W    | TS    |     |
|                 | GRBF       | -     | 1     | 16:25:45.01 |     | 3    | 49.82 |     |
|                 | LESF       | -     | 1     | 49.29       |     |      |       |     |
|                 | SALF       | +     | 1     | 50.00       |     |      |       |     |
|                 | MTHF       |       |       |             |     | 3    | 59.54 |     |

| 5 desembre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|-----------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                 | 05:50:01.9 | 42.58 | 0.90  | 3           | 0.4 | 0.9 | 3.4   | 1.5 |
| Estèrri d'Àneu  |            |       |       |             |     |     |       |     |
|                 | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                 | PON        | D     | 0     | 05:50:06.27 |     | 2   | 09.27 |     |
|                 | SOR        | D     | 1     | 07.50       |     | 2   | 10.50 |     |
|                 | SALF       | +     | 0     | 07.75       |     | 1   | 11.63 |     |
|                 | MLS        | -     | 1     | 10.02       |     | 3   | 15.00 |     |
|                 | ENSF       |       |       |             |     | 3   | 17.20 |     |
|                 | PAND       |       |       |             |     | 3   | 18.26 |     |
|                 | LESF       |       |       |             |     | 3   | 19.88 |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 6 desembre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|-----------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                 | 08:40:16.2 | 43.01 | -0.14 |             | 0.2 | 3.2 |       | 2.0 |
| Lourdes         |            |       |       |             |     |     |       |     |
|                 | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                 | BTH        |       | 1     | 08:40:18.60 |     | 4   | 22.00 |     |
|                 | BDBF       |       | 2     | 20.48       |     | 2   | 24.08 |     |
|                 | EPF        |       | 1     | 23.20       |     | 2   | 28.20 |     |
|                 | ENSF       | +     | 1     | 24.35       |     | 2   | 30.22 |     |
|                 | MLS        |       |       |             |     | 3   | 47.00 |     |
|                 | SALF       | +     | 1     | 35.13       |     | 3   | 48.88 |     |
|                 | LPO        |       | 9     | 52.20       |     | 3   | 77.00 |     |

| 10 desembre 1993 | Ho         | LAT N | LON E | PRO         | RMS | ERH | ERZ   | MAG |
|------------------|------------|-------|-------|-------------|-----|-----|-------|-----|
|                  | 11:35:04.0 | 42.59 | 1.01  |             | 0.1 | 1.5 |       |     |
| Esterri d'Àneu   |            |       |       |             |     |     |       |     |
|                  | EST        | C/D   | W     | TP          |     | W   | TS    |     |
|                  | VIH        |       | 3     | 11:35:08.00 |     | 3   | 10.70 |     |
|                  | SALF       | +     | 0     | 08.57       |     |     |       |     |
|                  | PON        |       | 1     | 09.29       |     |     |       |     |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.2 Determinacions epicentrals

| 19 desembre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|------------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                  | 13:12:04.2 | 41.97 | 1.99        | 6   | 0.3   | 0.5 | 1.3 | 2.8 |
| Puig-Reig        |            |       |             |     |       |     |     |     |
| EST              | C/D        | W     | TP          | W   | TS    |     |     |     |
| BRU              | C          | 0     | 13:12:11.15 |     |       |     |     |     |
| CAD              |            | 3     | 11.50       | 3   | 17.70 |     |     |     |
| MRB              | D          | 1     | 11.78       | 2   | 17.33 |     |     |     |
| FONT             | D          | 1     | 12.00       | 3   | 17.00 |     |     |     |
| SQD              |            | 3     | 11.70       | 3   | 17.50 |     |     |     |
| TRGS             | -          | 1     | 14.61       | 2   | 22.27 |     |     |     |
| PAND             | -          | 0     | 16.50       | 2   | 25.37 |     |     |     |
| ALB              | C          | 0     | 16.43       | 2   | 25.29 |     |     |     |
| VDCF             | -          | 1     | 17.34       | 2   | 26.74 |     |     |     |
| ETER             | C          | 0     | 17.79       | 2   | 27.20 |     |     |     |
| SOR              |            | 2     | 18.90       | 3   | 29.30 |     |     |     |
| PERF             | +          | 1     | 19.90       | 2   | 31.08 |     |     |     |
| AVN              | D          | 0     | 21.27       | 2   | 33.99 |     |     |     |
| GRBF             | -          | 0     | 21.75       | 2   | 34.48 |     |     |     |
| SALF             | -          | 1     | 22.38       | 2   | 35.54 |     |     |     |
| PON              |            | 1     | 23.13       | 3   | 37.13 |     |     |     |
| MTHF             | +          | 0     | 23.85       |     |       |     |     |     |
| VIH              |            | 2     | 24.50       | 3   | 41.00 |     |     |     |
| EGRA             | D          | 0     | 27.31       | 2   | 43.90 |     |     |     |
| EPF              |            | 9     | 33.30       | 3   | 54.50 |     |     |     |
| EROQ             |            | 0     | 33.65       | 3   | 55.00 |     |     |     |

| 20 desembre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|------------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                  | 06:56:35.5 | 42.61 | 0.87        | 1   | 0.2   | 2.7 | 7.4 | 1.6 |
| Esterrí d'Àneu   |            |       |             |     |       |     |     |     |
| EST              | C/D        | W     | TP          | W   | TS    |     |     |     |
| VIH              | C          | 1     | 06:56:37.30 |     |       |     |     |     |
| PON              | C          | 0     | 40.16       |     |       |     |     |     |
| SALF             | +          | 0     | 41.23       | 2   | 45.02 |     |     |     |
| SOR              |            | 9     | 41.90       | 3   | 47.10 |     |     |     |
| MLS              |            | 2     | 43.22       | 3   | 48.95 |     |     |     |
| LESF             |            |       |             | 3   | 52.73 |     |     |     |

| 21 desembre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|------------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                  | 22:38:57.1 | 42.32 | 1.80        |     | 0.5   | 4.0 |     | 1.8 |
| Gósol            |            |       |             |     |       |     |     |     |
| EST              | C/D        | W     | TP          | W   | TS    |     |     |     |
| CAD              | D          | 1     | 22:38:58.50 |     |       |     |     |     |
| TRGS             | +          | 0     | 22:39:02.35 | 3   | 04.94 |     |     |     |
| PAND             |            |       |             | 3   | 06.30 |     |     |     |
| BRU              | D          | 0     | 02.41       |     |       |     |     |     |
| SALF             |            |       |             | 3   | 16.78 |     |     |     |
| FONT             |            | 2     | 11.80       | 3   | 20.90 |     |     |     |

| 28 desembre 1993 | Ho         | LAT N | LON E       | PRO | RMS   | ERH | ERZ | MAG |
|------------------|------------|-------|-------------|-----|-------|-----|-----|-----|
|                  | 05:05:49.5 | 42.67 | 1.72        | 2   | 0.4   | 0.8 | 1.7 | 2.0 |
| Vielha           |            |       |             |     |       |     |     |     |
| EST              | C/D        | W     | TP          | W   | TS    |     |     |     |
| PAND             | +          | 0     | 05:05:53.66 | 3   | 57.10 |     |     |     |
| GRBF             | +          | 0     | 54.36       | 2   | 57.17 |     |     |     |
| TRGS             | +          | 0     | 54.76       | 3   | 58.73 |     |     |     |
| LSPF             | +          | 0     | 55.93       | 2   | 60.88 |     |     |     |
| CAD              |            | 2     | 56.00       | 3   | 61.90 |     |     |     |
| VDCF             | +          | 1     | 58.44       | 3   | 65.07 |     |     |     |
| SOR              |            | 3     | 59.30       | 2   | 67.50 |     |     |     |
| MLS              |            |       | 05:06:00.00 | 2   | 06.71 |     |     |     |
| MTHF             | -          | 1     | 01.82       | 3   | 11.65 |     |     |     |
| PON              |            | 1     | 03.79       |     |       |     |     |     |
| ALB              |            | 1     | 05.01       | 3   | 16.55 |     |     |     |
| ETER             |            | 0     | 07.00       | 2   | 19.20 |     |     |     |
| FONT             |            | 2     | 10.00       | 3   | 24.00 |     |     |     |
| AVN              | +          | 0     | 09.82       | 2   | 25.00 |     |     |     |
| EPF              |            | 9     | 08.60       | 3   | 22.20 |     |     |     |
| LPO              |            | 9     | 27.10       | 3   | 53.50 |     |     |     |

### III. LA SISMICITAT DE CATALUNYA I DE LES REGIONS VEÏNES

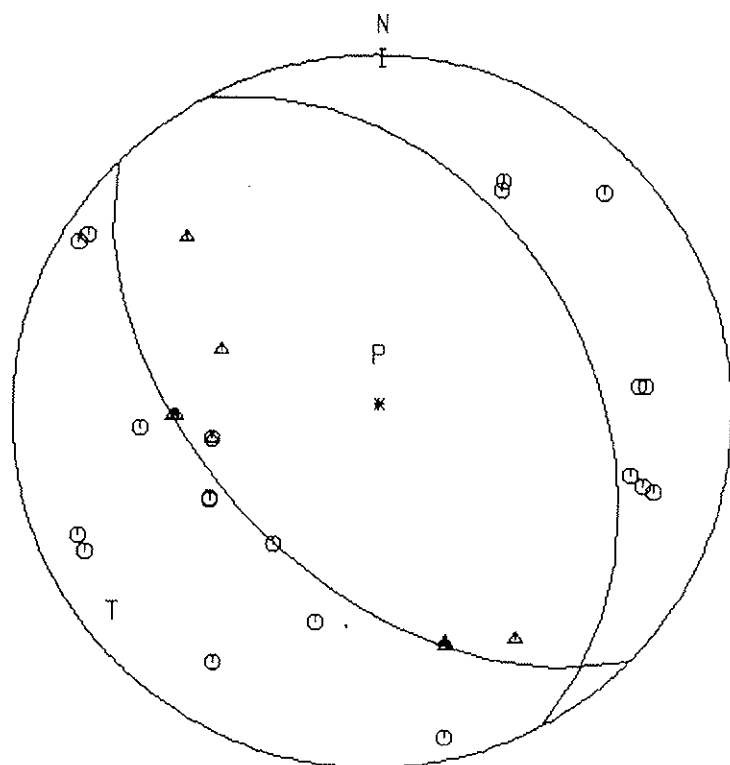
#### III.3 Mecanismes focals

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Es presenta a continuació la solució focal de la crisi sísmica del mes d'octubre al nord del Ripollès obtinguda a partir de la polaritat -compressió (octògon) o dilatació (triangle)- de l'ona P, amb la utilització de registres de diferents estacions.

El càlcul s'ha realitzat mitjançant un mètode numèric (Udías, A. i Buforn, E., 1988)\* que permet fer una estimació de l'orientació dels eixos i plans de falla i també de les seves desviacions típiques, per tota la crisi; la magnitud màxima correspon al sisme del 8 d'octubre de 1993 i té un valor de 3.3.

\* Udías, A. i Buforn, E. (1988). *Single and joint fault-plane solutions from first motion data*. D. Doonbos (Edit): Seismological Algorithms. Academic Press., London 443-453.



| N | Data     | Hora  | Lat<br>(°N) | Lon<br>(°E) | Pro<br>(km) | Mag |
|---|----------|-------|-------------|-------------|-------------|-----|
| 1 | 08.10.93 | 22:09 | 42.43       | 2.13        | 3           | 3.3 |
| 2 | 10.10.93 | 11:32 | 42.44       | 2.14        | 0           | 2.2 |
| 3 | 13.10.93 | 01:26 | 42.43       | 2.15        | 3           | 2.7 |
| 4 | 13.10.93 | 15:48 | 42.43       | 2.13        | 2           | 2.7 |

| *      | Plans nodals |         | Eixos   |        | Obs | índex<br>d'encerts |
|--------|--------------|---------|---------|--------|-----|--------------------|
|        | A            | B       | P       | T      |     |                    |
| Azimut | 331±1°       | 134±54° | 360±29° | 232±9° | 36  | 0.97               |
| Cabuss | 39±4°        | 52±1°   | 79±7°   | 7±1°   |     |                    |

\*mecanisme conjunt

Referència: Seismic Activity in the Pyrenees 1993. Report SAP-1-94, Servei Geològic de Catalunya i Observatoire Midi-Pyrénées, Barcelona-Toulouse, 1994, 81 pp.

### III LA SISMICITAT DE CATALUNYA I DE LES REGIONS VEÏNES

#### III.4 Informació macrosísmica

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L'anàlisi dels qüestionaris macrosísmics que es distribueixen quan té lloc un terratrèmol percebut per la població, permet assignar un valor d'intensitat (en l'escala MSK) a cada localitat. Amb aquestes dades s'estudia, per a cada terratrèmol, la distribució espacial dels seus efectes.

Presentem els resultats en forma de taules on s'indica, per a cada sisme percebut, la relació d'intensitats a diferents municipis. La lletra S vol dir que el sisme ha estat percebut, però sense poder assignar un valor d'intensitat. La lletra N vol dir que el sisme no ha estat percebut.

#### **Terratrèmol del 29 de març a les 10:39 (T.U.)**

Aquest sisme va ser percebut a Súria (Bages) amb una intensitat de III.

#### **Terratrèmol del 8 d'octubre a les 22:09 (T.U.)**

Taula I. Relació d'intensitats percebudes a diferents poblacions

| Núm | Població        | Intensitat |
|-----|-----------------|------------|
| 1   | Puigcerdà       | III        |
| 2   | Queralbs        | S          |
| 3   | Ribes de Freser | N          |
| 4   | Ripoll          | II         |
| 5   | Setcases        | III        |

#### **Terratrèmol del 5 de novembre a les 08:39 (T.U.)**

Aquest sisme va ser percebut a Queralbs (Ripollès) amb una intensitat de II.

### III. LA SISMICITAT DE CATALUNYA I DE LES REGIONS VEÏNES

#### III.5 Síntesi

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Els resultats de l'anàlisi dels registres de l'any 1993 els presentem, com a resum, a la taula II, on, per a cada sisme, s'indiquen les dades següents: data, temps d'origen, localització epicentral (latitud i longitud), profunditat del focus, error quadràtic mitjà, magnitud, intensitat màxima i nom de la regió corresponent a l'epicentre (d'acord amb el conveni indicat a la figura 3).

A la figura 4 es mostra un mapa amb els epicentres corresponents a l'any 1993, amb la utilització de símbols de mides diferents segons la magnitud dels sismes.

El nombre d'epicentres determinats aquest any ha augmentat respecte a l'any anterior. Aquest augment correspon a sismes de magnitud inferior a 2.5. La instal·lació de noves estacions al Pirineu Central permet la determinació de sismes de magnitud petita que no podien determinar-se anteriorment. D'altra banda, el nombre de sismes de magnitud superior a 2.5 és una mica inferior al de l'any passat i la magnitud màxima enregistrada ha estat inferior a 4.

S'observa que, igual que en anys anteriors, la concentració més gran d'epicentres ha tingut lloc a la zona de Bagnères de Bigorre (Pirineu francès) i al Pirineu lleidatà. Al Pirineu Oriental cal destacar la crisi sísmica dels mesos d'octubre i novembre ocorreguda al nord del Ripollès, amb una magnitud màxima de 3.3 (vegeu mecanisme focal i estudi macrosísmic). Hi ha igualment un lleuger augment de la sismicitat en territori francès al nord d'aquesta crisi. Assenyallem que a la zona marítima la sismicitat ha estat quasi inexistent, exceptuant un sisme localitzat entre la costa catalana i les Illes Balears

A la figura 5 es presenta la sismicitat de l'any 1993 en el context estructural de Catalunya.

Les grans unitats geològiques catalanes són: els Pirineus, el Sistema Mediterrani i la Conca de l'Ebre. La sismicitat presenta certes característiques relacionades amb aquest context:

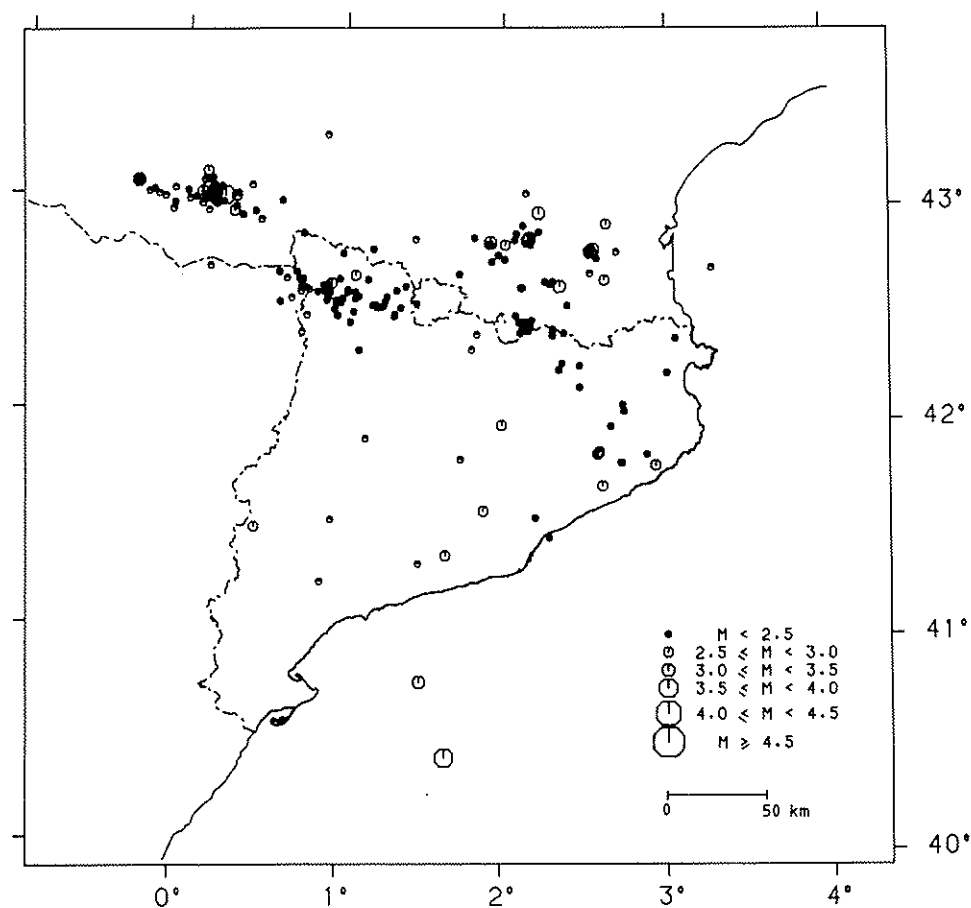
a) Els Pirineus són formats pels massissos granítics i la sèrie paleozoica -constituint la zona axial- i per les unitats alòctones de cobertura. La major concentració de sismes de Catalunya per a l'any 1993 apareix a la zona axial, i en particular a l'eix de la serralada, sobre tot a l'àrea de Vielha i en l'àmbit del batòlit granític de la Maladeta. Una altra petita concentració de sismes se situa a l'est de la Cerdanya al vessant francès del massís del Puigmal. Més al nord també hi ha hagut activitat sísmica al marge de la zona axial (falla nord-pirinenca).

b) El Sistema Mediterrani és format per les serralades costaneres -constituïdes per materials paleozoics i mesozoics de cobertura-, i la depressió intermèdia -reomplerta de sediments neògens i quaternaris-, separades per falles de direcció NE-SW. La quantitat de sismes ha estat inferior i es localitzen principalment en el contacte de la serralada pre-litoral i la depressió intermèdia. Mar endins, a 50 km de distància de Tarragona, es localitza un terratrèmol probablement associat al sistema de falles NE-SW.

c) La Conca de l'Ebre es caracteritza per un gruix important de la sèrie terciària. A l'interior de la conca hi ha una sismicitat molt feble, tan sols uns petits sismes de magnitud inferior a 2.5, que poden estar relacionats amb els plecs situats al front de les unitats al·lòctones encavalcants de cobertura.

d) Entre els Pirineus i el Sistema Mediterrani se situa la "zona de transferència", caracteritzada per un sistema de falles de direcció NW-SE, la zona volcànica neògena-quaternària, la conca neògena de l'Empordà i la fossa plioquaternària de la Selva. Els epicentres s'han concentrat principalment al marge meridional de la depressió de la Selva.

Figura 4. Situació dels epicentres dels terratrèmols de l'any 1993.



1) Paleozoic, 2) Unitats al·lòctones de cobertura, 3) Terciari, 4) Neogen i Quaternari, 5) Volcanisme neogen i quaternari, 6) Falla, 7) Encavalcament, 8) Contacte litològic.



Taula II. Llista de terratrèmols de l'any 1993

| DATA     | HORA       | LAT N | LON E | PRO | RMS | I | MAG | REGIÓ               |
|----------|------------|-------|-------|-----|-----|---|-----|---------------------|
| 02/01/93 | 20:06:34.6 | 42.95 | 0.42  |     | 0.3 |   | 2.4 | Campan              |
| 04/01/93 | 03:10:21.0 | 42.64 | 0.71  | 5   | 0.2 |   |     | Benasc              |
| 05/01/93 | 09:38:17.3 | 42.53 | 0.97  | 14  | 0.4 |   | 2.4 | Esterrí d'Àneu      |
| 06/01/93 | 19:25:20.4 | 42.68 | 2.53  | 4   | 0.2 |   | 2.3 | Ribesaltes          |
| 07/01/93 | 15:57:23.7 | 42.78 | 2.53  | 1   | 0.5 |   | 3.3 | Ribesaltes          |
| 09/01/93 | 06:19:11.2 | 42.61 | 0.89  |     | 0.2 |   | 2.3 | Esterrí d'Àneu      |
| 09/01/93 | 13:54:36.6 | 42.79 | 2.55  | 1   | 0.5 |   | 3.4 | Ribesaltes          |
| 09/01/93 | 17:19:00.6 | 42.93 | 0.34  |     | 0.1 |   |     | Campan              |
| 14/01/93 | 02:38:56.9 | 42.53 | 0.94  | 2   | 0.2 |   | 2.3 | Esterrí d'Àneu      |
| 16/01/93 | 15:36:25.4 | 43.02 | 0.30  | 16  | 0.4 |   | 2.8 | Bagnères Bigorre    |
| 17/01/93 | 15:56:41.6 | 41.80 | 2.73  |     | 0.1 |   | 2.1 | Blanes              |
| 19/01/93 | 14:08:38.2 | 42.62 | 2.34  | 5   | 0.3 |   | 3.0 | Prada               |
| 23/01/93 | 01:00:00.1 | 42.93 | 0.34  |     | 0.4 |   |     | Campan              |
| 27/01/93 | 23:08:58.3 | 42.81 | 2.00  | 1   | 0.3 |   | 2.5 | Ax-les-Thermes      |
| 02/02/93 | 22:53:32.6 | 43.01 | 0.05  | 8   | 0.2 |   | 2.2 | Lourdes             |
| 04/02/93 | 14:15:56.7 | 42.59 | 0.77  |     | 0.1 |   | 1.3 | Benasc              |
| 05/02/93 | 08:15:25.8 | 42.39 | 0.73  |     | 0.0 |   | 1.9 | Pont Suert          |
| 06/02/93 | 07:18:11.9 | 42.67 | 0.58  |     | 0.1 |   | 1.7 | Benasc              |
| 08/02/93 | 12:49:24.7 | 42.38 | 3.05  |     | 0.5 |   | 1.5 | La Jonquera         |
| 09/02/93 | 03:48:35.1 | 43.06 | 0.17  |     | 0.2 |   | 1.4 | Bagnères de Bigorre |
| 09/02/93 | 08:46:33.2 | 41.54 | 2.20  | 1   | 0.4 |   | 2.4 | Mataró              |
| 15/02/93 | 11:58:28.1 | 42.95 | 0.13  |     | 0.3 |   | 2.1 | Argelès Gazost      |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.5 Síntesi

| DATA     | HORA       | LAT N | LON E | PRO | RMS | I   | MAG | REGIÓ               |
|----------|------------|-------|-------|-----|-----|-----|-----|---------------------|
| 16/02/93 | 03:52:30.8 | 42.58 | 0.72  | 8   | 0.2 |     | 1.7 | Benasc              |
| 16/02/93 | 22:23:06.7 | 42.45 | 2.11  | 0   | 0.4 |     | 2.2 | Puigcerdà           |
| 17/02/93 | 10:36:57.7 | 42.99 | 0.22  |     | 0.0 |     | 1.9 | Campan              |
| 19/02/93 | 00:57:59.2 | 43.08 | -0.30 | 3   | 0.4 |     | 2.0 | Oest de Lourdes     |
| 19/02/93 | 10:05:10.5 | 42.64 | 0.63  | 2   | 0.3 |     | 1.7 | Benasc              |
| 22/02/93 | 13:28:26.9 | 43.00 | 0.17  | 4   | 0.4 |     | 2.6 | Argelès Gazost      |
| 24/02/93 | 05:56:39.6 | 43.08 | -0.31 | 4   | 0.5 |     | 3.1 | Oest de Lourdes     |
| 24/02/93 | 07:19:32.9 | 42.98 | 0.09  |     | 0.4 |     |     | Argelès Gazost      |
| 25/02/93 | 03:52:49.9 | 42.83 | 1.44  | 11  | 0.3 |     |     | Noarre              |
| 25/02/93 | 09:13:28.8 | 42.53 | 0.59  |     | 0.3 |     | 1.9 | Benasc              |
| 01/03/93 | 13:34:42.4 | 43.00 | 0.59  |     | 0.1 |     | 1.9 | Arreau              |
| 02/03/93 | 23:48:49.7 | 43.08 | -0.30 | 0   | 0.6 |     | 2.5 | Oest de Lourdes     |
| 04/03/93 | 15:23:59.8 | 42.76 | 1.96  |     | 0.3 |     |     | Ax-les-Thermes      |
| 06/03/93 | 18:43:46.6 | 43.01 | 0.12  | 5   | 0.5 |     | 2.8 | Lourdes             |
| 07/03/93 | 06:21:40.4 | 42.60 | 0.72  |     | 0.3 |     |     | Benasc              |
| 09/03/93 | 20:31:38.1 | 42.25 | 2.47  |     | 0.7 |     | 2.0 | Ripoll              |
| 14/03/93 | 17:26:35.4 | 43.02 | 0.13  | 8   | 0.4 |     | 2.6 | Lourdes             |
| 14/03/93 | 23:32:53.7 | 42.71 | 3.28  |     | 0.3 |     | 2.2 | Mediterrània        |
| 17/03/93 | 09:51:51.8 | 43.03 | 0.18  | 9   | 0.5 |     | 2.6 | Bagnères de Bigorre |
| 19/03/93 | 19:48:03.6 | 43.03 | 0.15  |     | 0.1 |     | 1.5 | Lourdes             |
| 25/03/93 | 20:27:48.9 | 42.85 | 0.73  | 7   | 0.2 |     | 1.7 | Arreau              |
| 29/03/93 | 10:37:51.9 | 42.97 | 0.30  | 1   | 0.1 |     | 1.8 | Campan              |
| 29/03/93 | 10:39:05.7 | 41.81 | 1.74  |     | 0.3 | III |     | Calaf               |
| 31/03/93 | 12:47:10.1 | 41.45 | 2.29  |     | 0.2 |     |     | Barcelona           |

III. La sismicitat de Catalunya i de les regions veïnes  
III.5 Síntesi

| DATA     | HORA       | LAT N | LON E | PRO | RMS | I   | MAG | REGIÓ               |
|----------|------------|-------|-------|-----|-----|-----|-----|---------------------|
| 03/04/93 | 06:09:13.4 | 43.10 | 0.15  |     | 0.4 |     | 1.8 | Lourdes             |
| 03/04/93 | 06:29:19.8 | 43.09 | 0.10  |     | 0.2 |     | 1.6 | Lourdes             |
| 08/04/93 | 08:18:57.7 | 42.64 | 1.14  | 9   | 0.3 |     | 1.7 | Esterrí d'Àneu      |
| 13/04/93 | 16:20:34.0 | 40.42 | 1.66  | 1   | 0.9 |     | 3.5 | Mediterrània        |
| 18/04/93 | 05:00:23.6 | 42.39 | 2.30  | 2   | 0.3 |     | 2.2 | Molló               |
| 19/04/93 | 03:18:31.9 | 42.62 | 0.91  | 5   | 0.3 |     | 2.6 | Esterrí d'Àneu      |
| 19/04/93 | 12:24:18.5 | 42.26 | 2.36  |     | 0.3 |     |     | Ripoll              |
| 21/04/93 | 02:07:13.3 | 43.06 | 0.21  | 12  | 0.3 |     | 2.2 | Bagnères de Bigorre |
| 23/04/93 | 13:30:15.8 | 42.23 | 2.34  |     | 0.4 |     |     | Ripoll              |
| 24/04/93 | 15:50:16.5 | 42.98 | 0.18  |     | 0.2 |     | 2.3 | Bagnères de Bigorre |
| 25/04/93 | 03:34:27.8 | 42.83 | 2.14  | 2   | 0.3 | III | 3.0 | Ax-les-Thermes      |
| 25/04/93 | 03:37:10.9 | 42.82 | 2.15  | 5   | 0.3 |     | 2.0 | Ax-les-Thermes      |
| 25/04/93 | 03:44:47.2 | 42.82 | 2.15  | 5   | 0.2 |     |     | Ax-les-Thermes      |
| 25/04/93 | 03:45:00.7 | 42.84 | 2.15  | 5   | 0.4 |     | 3.3 | Lavelanet           |
| 25/04/93 | 04:54:09.1 | 42.81 | 2.16  | 10  | 0.4 |     |     | Ax-les-Thermes      |
| 25/04/93 | 08:33:29.6 | 42.76 | 0.98  |     | 0.1 |     | 1.5 | Isil                |
| 29/04/93 | 02:32:06.9 | 42.44 | 2.13  | 0   | 0.1 |     | 1.6 | Puigcerdà           |
| 30/04/93 | 16:27:39.0 | 42.44 | 2.14  | 1   | 0.2 |     | 1.6 | Puigcerdà           |
| 14/05/93 | 11:49:45.2 | 41.80 | 2.72  |     | 0.2 |     | 2.2 | Blanes              |
| 17/05/93 | 02:29:14.2 | 41.32 | 1.48  |     | 0.1 |     |     | Valls               |
| 20/05/93 | 00:49:18.8 | 42.42 | 2.30  | 0   | 0.4 |     | 2.0 | Molló               |
| 23/05/93 | 15:16:25.4 | 42.63 | 0.72  |     | 0.1 |     | 1.6 | Benasc              |
| 24/05/93 | 14:28:33.9 | 43.04 | 0.15  |     | 0.4 |     | 2.6 | Lourdes             |
| 26/05/93 | 12:12:36.9 | 42.52 | 1.19  |     | 0.0 |     | 1.7 | Tírvia              |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.5 Síntesi

| DATA     | HORA       | LAT N | LON E | PRO | RMS | I  | MAG | REGIÓ                   |
|----------|------------|-------|-------|-----|-----|----|-----|-------------------------|
| 27/05/93 | 06:12:09.1 | 43.04 | 0.14  | 11  | 0.5 | IV | 3.7 | Lourdes                 |
| 27/05/93 | 20:14:07.9 | 43.03 | 0.09  | 5   | 0.4 |    | 3.2 | Lourdes                 |
| 30/05/93 | 07:19:43.0 | 42.64 | 0.73  |     | 0.0 |    |     | Benasc                  |
| 02/06/93 | 12:17:25.0 | 42.54 | 1.25  | 0   | 0.4 |    | 2.4 | Tírvia                  |
| 03/06/93 | 11:34:50.0 | 42.45 | 2.13  | 4   | 0.4 |    | 2.4 | Puigcerdà               |
| 04/06/93 | 14:46:40.3 | 43.07 | 0.40  |     | 0.3 |    | 2.1 | Ax-les-Thermes          |
| 06/06/93 | 01:51:25.1 | 42.96 | 2.21  | 3   | 0.4 |    |     | Quillan                 |
| 07/06/93 | 10:29:38.3 | 42.75 | 2.57  |     | 0.1 |    | 1.2 | Ribesaltes              |
| 07/06/93 | 20:57:33.9 | 42.58 | 1.06  |     | 0.1 |    | 1.5 | Esterri d'Àneu          |
| 07/06/93 | 22:47:53.2 | 42.56 | 1.08  |     | 0.0 |    | 1.3 | Esterri d'Àneu          |
| 09/06/93 | 11:13:47.3 | 41.52 | 0.93  |     | 0.3 |    |     | Tàrraga                 |
| 09/06/93 | 11:14:02.8 | 41.23 | 0.87  |     | 0.5 |    |     | Prades                  |
| 12/06/93 | 18:02:22.7 | 42.64 | 0.72  | 6   | 0.2 |    | 1.6 | Benasc                  |
| 15/06/93 | 02:21:41.9 | 41.57 | 1.88  |     | 0.4 |    | 2.6 | Sabadell                |
| 15/06/93 | 06:22:19.7 | 41.36 | 1.65  |     | 0.4 |    | 2.7 | Vilafranca del Penedès  |
| 15/06/93 | 12:26:13.5 | 43.05 | 2.13  |     | 0.3 |    | 2.4 | Mirepoix                |
| 24/06/93 | 00:51:58.7 | 42.55 | 0.98  | 2   | 0.1 |    | 1.6 | Esterri d'Àneu          |
| 25/06/93 | 12:29:47.5 | 41.90 | 1.14  |     | 0.3 |    |     | Artesa de Segre         |
| 28/06/93 | 12:21:02.8 | 42.54 | 0.94  |     | 0.3 |    |     | Esterri d'Àneu          |
| 30/06/93 | 22:33:34.9 | 41.97 | 2.66  |     | 0.3 |    | 2.0 | Santa Coloma de Farners |
| 01/07/93 | 11:59:27.5 | 42.95 | -0.09 |     | 0.4 |    | 2.2 | Argelès-Gazost          |
| 02/07/93 | 07:50:36.1 | 42.78 | 2.69  |     | 0.3 |    | 2.2 | Ribesaltes              |
| 03/07/93 | 11:56:47.2 | 42.22 | 3.00  |     | 0.1 |    |     | Figueres                |
| 04/07/93 | 05:14:53.7 | 42.46 | 2.17  |     | 0.1 |    |     | Molíó                   |

### III. La sismicitat de Catalunya i de les regions veïnes

#### III.5 Síntesi

| DATA     | HORA       | LAT N | LON E | PRO | RMS | I | MAG | REGIÓ                 |
|----------|------------|-------|-------|-----|-----|---|-----|-----------------------|
| 08/07/93 | 15:19:59.0 | 42.64 | 2.30  | 11  | 0.3 |   | 2.0 | Prada                 |
| 10/07/93 | 07:23:53.8 | 42.91 | 0.46  |     | 0.2 |   | 1.6 | Campan                |
| 10/07/93 | 14:53:03.3 | 42.74 | 2.00  | 5   | 0.4 |   | 2.4 | Ax-les-Thermes        |
| 12/07/93 | 22:28:05.4 | 42.64 | 2.25  | 1   | 0.2 |   | 1.6 | Prada                 |
| 14/07/93 | 09:54:20.5 | 42.40 | 2.37  | 3   | 0.4 |   | 1.7 | Molló                 |
| 16/07/93 | 01:42:55.5 | 41.84 | 2.88  |     | 0.4 |   | 2.4 | Girona                |
| 17/07/93 | 03:02:51.8 | 42.58 | 1.01  |     | 0.1 |   | 1.8 | Esterri d'Àneu        |
| 21/07/93 | 04:25:12.6 | 42.66 | 1.06  | 5   | 0.5 |   | 2.9 | Esterri d'Àneu        |
| 22/07/93 | 03:52:44.5 | 42.63 | 2.28  |     | 0.4 |   |     | Prada                 |
| 24/07/93 | 00:13:26.2 | 42.95 | 0.29  | 3   | 0.8 |   | 2.9 | Campan                |
| 28/07/93 | 20:24:18.9 | 42.91 | 2.63  | 2   | 0.4 |   | 2.6 | Tuchan                |
| 01/08/93 | 04:35:58.0 | 40.77 | 1.50  | 6   | 0.5 |   | 3.0 | Mediterrània          |
| 02/08/93 | 21:54:58.8 | 42.04 | 2.74  |     | 0.2 |   |     | Banyoles              |
| 06/08/93 | 00:50:34.3 | 43.03 | 0.31  | 15  | 0.4 |   | 2.3 | Bagnères de Bigorre   |
| 06/08/93 | 10:54:47.2 | 42.78 | 1.17  | 5   | 0.4 |   | 1.8 | Noarre                |
| 09/08/93 | 23:00:09.6 | 42.65 | 2.62  | 3   | 0.4 |   | 2.6 | Ceret                 |
| 14/08/93 | 11:01:16.0 | 42.61 | 1.38  |     | 0.1 |   | 1.6 | Tírvia                |
| 14/08/93 | 20:18:41.7 | 41.79 | 2.93  | 0   | 0.5 |   | 2.7 | Sant Feliu de Guixols |
| 15/08/93 | 20:56:22.0 | 43.03 | 0.19  | 9   | 0.4 |   | 2.0 | Bagnères de Bigorre   |
| 16/08/93 | 02:38:30.8 | 42.58 | 0.90  |     | 0.1 |   |     | Esterri d'Àneu        |
| 22/08/93 | 04:36:02.9 | 42.50 | 0.93  | 9   | 0.2 |   | 1.4 | Esterri d'Àneu        |
| 22/08/93 | 11:35:21.4 | 41.48 | 0.46  | 4   | 0.4 |   | 2.7 | Mequinensa            |
| 22/08/93 | 20:06:12.8 | 42.07 | 2.73  |     | 0.3 |   | 1.7 | Banyoles              |
| 30/08/93 | 16:33:53.1 | 42.47 | 0.76  |     | 0.3 |   | 2.4 | Pont de Suert         |

III. La sismicitat de Catalunya i de les regions veïnes  
 III.5 Síntesi

| DATA     | HORA       | LAT N | LON E | PRO | RMS | I   | MAG | REGIÓ                   |
|----------|------------|-------|-------|-----|-----|-----|-----|-------------------------|
| 01/09/93 | 13:15:23.0 | 42.51 | 1.20  |     | 0.4 |     | 1.9 | Tírvia                  |
| 01/09/93 | 20:38:04.1 | 43.13 | 0.12  |     | 0.7 |     | 2.6 | Tarbes                  |
| 02/09/93 | 06:26:51.5 | 41.85 | 2.59  | 1   | 0.5 |     | 2.5 | Santa Coloma de Farners |
| 02/09/93 | 12:39:22.5 | 42.15 | 2.47  |     | 0.3 |     | 1.8 | Manlleu                 |
| 06/09/93 | 13:15:13.5 | 42.51 | 1.22  | 20  | 0.3 |     | 2.3 | Tírvia                  |
| 09/09/93 | 15:51:18.6 | 42.48 | 2.07  | 8   | 0.5 |     | 2.1 | Puigcerdà               |
| 10/09/93 | 03:52:53.7 | 43.03 | -0.24 |     | 0.4 |     | 2.3 | Oest de Lourdes         |
| 10/09/93 | 05:59:23.4 | 42.78 | 2.53  | 8   | 0.3 |     | 2.1 | Ribesaltes              |
| 10/09/93 | 10:56:27.6 | 42.87 | 2.21  |     | 0.5 |     |     | Quillan                 |
| 12/09/93 | 00:24:25.1 | 43.04 | 0.00  |     | 0.2 |     | 2.2 | Lourdes                 |
| 13/09/93 | 03:29:11.2 | 42.54 | 0.88  |     | 0.3 |     |     | Esterri d'Àneu          |
| 13/09/93 | 08:49:55.8 | 42.56 | 1.26  |     | 0.2 |     |     | Tírvia                  |
| 13/09/93 | 21:53:19.8 | 42.64 | 0.96  |     | 0.1 |     | 2.1 | Esterri d'Àneu          |
| 15/09/93 | 15:54:25.3 | 42.83 | 2.06  | 7   | 0.4 |     | 2.4 | Ax-les-Thermes          |
| 16/09/93 | 21:05:43.5 | 42.98 | -0.08 |     | 0.2 |     |     | Argelès Gazost          |
| 20/09/93 | 04:22:59.4 | 41.84 | 2.58  | 0   | 0.4 |     | 2.8 | Santa Coloma de Farners |
| 20/09/93 | 10:55:22.0 | 42.59 | 1.32  |     | 0.1 |     | 1.8 | Tírvia                  |
| 24/09/93 | 19:03:31.9 | 42.41 | 2.30  |     | 1.1 |     | 2.0 | Molló                   |
| 25/09/93 | 23:24:09.9 | 42.86 | 2.07  | 3   | 0.4 |     | 2.0 | Puig-reig               |
| 26/09/93 | 02:35:45.4 | 42.73 | 1.92  |     | 0.3 |     | 1.6 | Ax-les-Thermes          |
| 28/09/93 | 18:50:31.1 | 42.58 | 0.82  |     | 0.1 |     | 1.4 | Benasc                  |
| 08/10/93 | 22:09:35.0 | 42.43 | 2.13  | 3   | 0.4 | III | 3.3 | Puigcerdà               |
| 08/10/93 | 22:33:12.5 | 42.44 | 2.13  |     | 0.3 |     | 1.9 | Puigcerdà               |
| 08/10/93 | 23:21:38.3 | 42.43 | 2.13  |     | 0.3 |     | 1.7 | Puigcerdà               |

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| DATA     | HORA       | LAT N | LON E | PRO | RMS | I  | MAG | REGIÓ           |
|----------|------------|-------|-------|-----|-----|----|-----|-----------------|
| 08/10/93 | 23:24:39.1 | 42.43 | 2.12  |     | 0.4 |    | 1.6 | Puigcerdà       |
| 08/10/93 | 23:52:42.3 | 42.43 | 2.12  | 7   | 0.4 |    | 2.2 | Puigcerdà       |
| 09/10/93 | 11:04:10.0 | 42.41 | 2.11  | 12  | 0.5 |    | 2.2 | Puigcerdà       |
| 09/10/93 | 12:28:09.9 | 42.43 | 2.12  |     | 0.4 |    | 2.0 | Puigcerdà       |
| 09/10/93 | 14:48:50.0 | 42.40 | 2.10  | 15  | 0.4 |    | 2.0 | Puigcerdà       |
| 09/10/93 | 14:56:31.5 | 42.45 | 2.09  | 1   | 0.2 |    | 1.9 | Puigcerdà       |
| 10/10/93 | 05:49:26.1 | 42.45 | 2.13  |     | 0.2 |    |     | Puigcerdà       |
| 10/10/93 | 11:32:13.4 | 42.44 | 2.14  | 0   | 0.5 |    | 2.2 | Puigcerdà       |
| 11/10/93 | 22:19:00.2 | 41.69 | 2.61  | 1   | 0.5 |    | 2.6 | Blanes          |
| 13/10/93 | 01:26:20.3 | 42.43 | 2.15  | 3   | 0.4 |    | 2.7 | Puigcerdà       |
| 13/10/93 | 01:30:56.9 | 42.44 | 2.13  |     | 0.1 |    |     | Puigcerdà       |
| 13/10/93 | 01:38:04.5 | 42.45 | 2.12  |     | 0.1 |    |     | Puigcerdà       |
| 13/10/93 | 03:53:05.0 | 42.44 | 2.13  | 0   | 0.3 |    |     | Puigcerdà       |
| 13/10/93 | 15:49:00.2 | 42.43 | 2.13  | 2   | 0.4 |    | 2.7 | Puigcerdà       |
| 16/10/93 | 02:50:33.9 | 42.47 | 0.95  |     | 0.1 |    |     | Sort            |
| 17/10/93 | 05:24:08.6 | 43.04 | -0.21 | 1   | 0.5 | IV | 2.0 | Oest de Lourdes |
| 17/10/93 | 15:45:08.3 | 42.61 | 0.86  | 11  | 0.1 |    | 2.0 | Esterri d'Àneu  |
| 18/10/93 | 00:06:14.9 | 42.31 | 1.09  | 1   | 0.5 |    | 2.0 | Tremp           |
| 18/10/93 | 08:38:30.7 | 42.67 | 0.69  | 8   | 0.3 |    | 1.9 | Vielha          |
| 18/10/93 | 13:42:34.1 | 42.47 | 1.31  |     | 0.2 |    |     | La Seu d'Urgell |
| 18/10/93 | 13:58:57.6 | 42.90 | 2.11  | 3   | 0.5 |    | 2.1 | Lavelanet       |
| 18/10/93 | 22:33:13.2 | 42.61 | 2.10  |     | 0.1 |    | 1.4 | Montlluís       |
| 24/10/93 | 15:18:35.2 | 43.01 | 0.17  |     | 0.0 |    | 1.7 | Lourdes         |
| 24/10/93 | 18:19:54.4 | 42.69 | 0.15  |     | 0.5 |    | 2.0 | Bujaruelo       |

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| DATA     | HORA       | LAT N | LON E | PRO | RMS | I  | MAG | REGIÓ               |
|----------|------------|-------|-------|-----|-----|----|-----|---------------------|
| 25/10/93 | 13:34:58.2 | 42.52 | 1.17  |     | 0.2 |    |     | Esterri d'Àneu      |
| 25/10/93 | 15:48:37.5 | 42.44 | 1.03  |     | 0.1 |    | 2.0 | Sort                |
| 26/10/93 | 01:32:29.7 | 42.53 | 2.39  | 9   | 0.3 |    |     | Prada               |
| 27/10/93 | 09:09:31.7 | 42.98 | 0.18  | 14  | 0.2 |    |     | Campan              |
| 28/10/93 | 08:28:26.6 | 43.31 | 0.87  |     | 0.3 |    |     | Le Fousset          |
| 03/11/93 | 13:35:16.8 | 42.52 | 1.24  | 1   | 0.4 |    | 1.6 | Tírvia              |
| 03/11/93 | 13:55:49.9 | 42.48 | 1.31  |     | 0.1 |    |     | La Seu d'Urgell     |
| 04/11/93 | 10:56:08.7 | 42.53 | 1.45  | 5   | 0.3 |    | 1.8 | Tírvia              |
| 05/11/93 | 08:39:22.9 | 42.42 | 2.14  | 3   | 0.5 | II | 3.1 | Puigcerdà           |
| 09/11/93 | 01:08:53.8 | 42.42 | 2.12  |     | 0.2 |    | 1.7 | Puigcerdà           |
| 09/11/93 | 16:52:31.5 | 43.05 | -0.08 |     | 0.4 |    | 1.6 | Lourdes             |
| 11/11/93 | 22:44:34.3 | 42.42 | 2.12  | 5   | 0.2 |    | 1.7 | Puigcerdà           |
| 15/11/93 | 22:26:37.5 | 42.56 | 0.89  | 9   | 0.4 |    | 1.6 | Esterri d'Àneu      |
| 17/11/93 | 17:50:57.0 | 43.02 | 0.23  | 13  | 0.6 |    | 3.7 | Bagnères de Bigorre |
| 19/11/93 | 10:32:47.1 | 42.55 | 0.66  |     | 0.0 |    |     | Benasc              |
| 19/11/93 | 19:56:46.2 | 42.41 | 2.15  |     | 0.1 |    |     | Puigcerdà           |
| 21/11/93 | 03:57:53.4 | 42.49 | 1.05  |     | 0.5 |    | 1.5 | Sort                |
| 22/11/93 | 12:09:22.2 | 42.39 | 1.83  |     | 0.4 |    | 1.6 | Bellver Cerdanya    |
| 23/11/93 | 02:33:58.4 | 42.58 | 0.87  |     | 0.1 |    | 1.7 | Esterri d'Àneu      |
| 23/11/93 | 05:03:27.5 | 42.55 | 1.06  | 1   | 0.3 |    | 1.6 | Esterri d'Àneu      |
| 24/11/93 | 23:28:42.7 | 42.82 | 1.91  | 7   | 0.4 |    | 3.0 | Ax-les-Thermes      |
| 24/11/93 | 23:38:21.9 | 42.81 | 1.90  | 8   | 0.4 |    | 2.0 | Isil                |
| 25/11/93 | 00:19:52.1 | 42.81 | 1.91  | 6   | 0.4 |    | 2.3 | Isil                |
| 25/11/93 | 19:41:38.9 | 42.51 | 1.35  | 1   | 0.5 |    | 1.8 | Tírvia              |

| DATA     | HORA       | LAT N  | LON E | PRO | RMS | I | MAG | REGIÓ           |
|----------|------------|--------|-------|-----|-----|---|-----|-----------------|
| 26/11/93 | 09:58:01.9 | 43.02  | -0.18 | 5   | 0.2 |   | 2.1 | Oest de Lourdes |
| 27/11/93 | 05:29:03.9 | 42.61  | 2.11  |     | 0.1 |   | 1.5 | Montlluís       |
| 27/11/93 | 12:11:10.4 | 42.1.6 | 0.88  | 9   | 0.2 |   | 1.6 | Esterri d'Àneu  |
| 27/11/93 | 22:43:10.9 | 42.81  | 1.91  | 9   | 0.3 |   | 1.6 | Isil            |
| 2/12/93  | 03:14:44.6 | 43.00  | 0.01  | 13  | 0.4 |   | 2.1 | Lourdes         |
| 2/12/93  | 16:25:41.1 | 42.84  | 1.81  |     | 0.5 |   | 1.5 | Arreau          |
| 05/12/93 | 05:50:01.9 | 42.58  | 0.90  | 3   | 0.4 |   | 1.5 | Esterri d'Àneu  |
| 06/12/93 | 08:40:16.2 | 43.01  | -0.14 |     | 0.2 |   | 2.0 | Lourdes         |
| 10/12/93 | 11:35:04.0 | 42.59  | 1.01  |     | 0.1 |   | 1.5 | Esterri d'Àneu  |
| 19/12/93 | 13:12:04.2 | 41.97  | 1.99  | 6   | 0.3 |   | 2.8 | Puig-Reig       |
| 20/12/93 | 06:56:35.5 | 42.61  | 0.87  | 1   | 0.2 |   | 1.6 | Esterri d'Àneu  |
| 21/12/93 | 22:38:57.1 | 42.32  | 1.80  |     | 0.5 |   | 1.8 | Gósol           |
| 28/12/93 | 05:05:49.5 | 42.67  | 1.72  | 2   | 0.4 |   | 2.0 | Vielha          |

A més dels sismes ocorreguts a la nostra zona, les estacions de la xarxa han enregistrat un gran nombre de terratrèmols amb epicentre en unes altres regions del món. Presentem aquí un petit resum dels més notables, tant per la seva magnitud com pels danys produïts.

#### Regionals (distància inferior a 1500 Km)

| Data        | Hora  | Magnitud | Observacions        |
|-------------|-------|----------|---------------------|
| 16 febrer   | 03:11 | 4.4      | SE C. de S. Vicente |
| 23 maig     | 07:40 | 4.4      | Is. Chafarinas      |
| 22 juny     | 21:52 | 4.5      | SW Faro             |
| 15 octubre  | 08:37 | 4.5      | Algèria             |
| 9 novembre  | 22:01 | 4.1      | Golf de Cadis       |
| 18 desembre | 16:15 | 4.7      | Algèria             |
| 23 desembre | 14:22 | 5.0      | Adra                |

#### Telesismes (distància superior a 1500 Km)

##### a) de més magnitud ( $m_b \geq 6.5$ )

| Data        | Hora  | Magnitud | Observacions                  |
|-------------|-------|----------|-------------------------------|
| 15 gener    | 11:06 | 6.9      | Japó                          |
| 24 maig     | 23:51 | 6.6      | Argentina                     |
| 8 juny      | 23:17 | 6.5      | Argentina                     |
| 12 juliol   | 13:17 | 6.6      | Japó                          |
| 8 agost     | 08:34 | 7.2      | Illes Marianes                |
| 11 octubre  | 15:54 | 6.5      | Japó                          |
| 13 novembre | 01:18 | 6.5      | Est de la costa de Kamtchatka |

##### b) els més destructors:

| Data        | Hora  | Magnitud | Observacions                  |
|-------------|-------|----------|-------------------------------|
| 15 gener    | 11:06 | 6.9      | Japó                          |
| 8 juny      | 13:03 | 6.4      | Est de la costa de Kamtchatka |
| 12 juliol   | 13:17 | 6.6      | Japó                          |
| 8 agost     | 08:34 | 7.2      | Illes Marianes                |
| 21 setembre | 03:28 | 5.8      | Oregon                        |
| 29 setembre | 22:25 | 6.3      | Índia                         |



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