

**Acknowledgments:** The authors thank the seismologists and technicians who have worked at NOTSSI since 1981; This work has been carried out in the framework of the National Science Program "Environmental Protection and Reduction of Risks of Adverse Events and Natural Disasters", approved by the Resolution of the Council of Ministers No 577/17.08.2018 and supported by the Ministry of Education and Science (MES) of Bulgaria (Agreement No Д01-322/18.12.2019).

### How to cite:

Solakov D., Simeonova S., Raykova Pl., Aleksandrova I. (2020) Catalogue of the earthquakes in Bulgaria and surroundings since 1981, National Institute of Geophysics, Geodesy and Geography-BAS, DOI: <https://doi.org/10.34975/ctlg-2020.v.1>

### Description

A homogeneous earthquake catalogue for Bulgaria and adjacent areas covering the time span 1981–2019 (instrumental seismicity) is presented. The catalogues including instrumental seismicity of Solakov et al. (1993) and Botev et al. (2010), covering the time interval 1981–2000, were updated for the period 2001–2019 using instrumentally determined focal earthquake parameters.

Data for earthquake catalogues are from the Bulgarian seismological network (NOTSSI). At present the Bulgarian seismological network ensures reliable registration and high quality information for earthquakes occurred in Bulgaria and surroundings. Since 2005–2006, real-time data exchange between Bulgaria and Greece, Romania, Serbia, Northern Macedonia and Turkey was implemented. These data are also used in hypocentral location.

The here presented catalogue for the period 1981–2019 is homogenized concerning magnitude. Regression equations (presented in Solakov et al., 2018) are applied to convert magnitude scales used in Bulgarian seismological routine practice ( $M_d$  and  $M_p$ ) to the widely used moment magnitude. For stronger events are given moment magnitude estimation (if exist) from Global Centroid Moment Tensor Catalog (with priority) or EMSC catalogue.

The catalogue is processed in the sense that duplicated events and quarry blasts are removed. A comprehensive assessment of catalogue completeness indicates that no earthquake with moment magnitude,  $M_w$  3.2 or greater has been omitted in the whole instrumental period (1981–2019).

The following information is given in the catalogue:

- Date: Year, month, day;
- Origin time in standardize GMT: Hour, minute and second;
- Epicenter coordinates: Latitude  $\varphi^\circ$  N and Longitude  $\lambda^\circ$  E;
- Focal depth in km;
- Estimated moment magnitude,  $M_w$ ;
- Epicentral/Maximum intensity (European macroseismic scale – EMS-98)  $I_0/I_{max}$  (if available).

It should be stated that the catalogue will be updated annually.

### References:

- Botev E., R. Glavcheva, B. Babachkova, S. Velichkova, I. Tzoncheva, K. Donkova, 2010. Bulgaria Catalogue of Earthquakes 1991–2000. Mining activity and Geology, 5-6, 39–42, (in Bulgarian).
- Solakov, D., S. Simeonova (Editors), 1993. Bulgaria Catalogue of Earthquakes 1981–1990, BAS, Geoph. Inst., Seism. Dep., Sofia, pp 39.
- Solakov D., S. Simeonova, Pl. Raykova, I. Aleksandrova, 2018. Empirical relations converting  $M_d$  and  $M_p$  (magnitudes applied in Bulgarian seismological routine practice) to moment magnitude. Comptes Rendus de L'Academie Bulgare, 71, 8, DOI: 10.7546/CRABS.2018.08.09, 1076–1085.

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 1981 | 4     | 1   | 10   | 55     | 2      | 41.96            | 23.21             | 4             | 3.3            | 3.5                              |
| 1981 | 4     | 2   | 12   | 30     | 11     | 41.93            | 22.99             | 8             | 3.4            | 4.5                              |
| 1981 | 5     | 3   | 22   | 16     | 10     | 42.13            | 25.2              | 14            | 3.2            |                                  |
| 1981 | 5     | 6   | 4    | 41     | 17     | 41.88            | 23.99             | 8             | 4.0            | 5.5                              |
| 1981 | 5     | 25  | 18   | 1      | 33     | 44.02            | 27.59             | 15            | 3.4            |                                  |
| 1981 | 6     | 8   | 3    | 19     | 24     | 42.76            | 27.52             | 2             | 3.4            |                                  |
| 1981 | 6     | 10  | 1    | 54     | 40     | 42.59            | 27.83             | 12            | 3.2            |                                  |
| 1981 | 6     | 13  | 14   | 40     | 0      | 41.82            | 22.84             | 9             | 3.4            |                                  |
| 1981 | 7     | 17  | 19   | 17     | 44     | 41.92            | 23                | 9             | 3.2            |                                  |
| 1981 | 7     | 21  | 17   | 45     | 42     | 42.63            | 27.64             | 6             | 3.2            |                                  |
| 1981 | 7     | 23  | 6    | 15     | 0      | 43.15            | 27.45             | 6             | 4.4            | 6.5                              |
| 1981 | 8     | 26  | 19   | 42     | 48     | 41.96            | 23.23             | 15            | 4.0            | 4.5                              |
| 1981 | 8     | 30  | 15   | 40     | 37     | 42.15            | 25.23             | 16            | 4.3            | 5.5                              |
| 1981 | 9     | 4   | 0    | 22     | 1      | 43.14            | 27.57             | 7             | 3.9            | 5.5                              |
| 1981 | 9     | 5   | 0    | 8      | 24     | 41.85            | 23.24             | 16            | 3.3            |                                  |
| 1981 | 9     | 7   | 17   | 43     | 12     | 41.4             | 22.6              | 8             | 4.7            | 5.5                              |
| 1981 | 9     | 13  | 22   | 9      | 45     | 41.74            | 25.26             | 5             | 3.3            |                                  |
| 1981 | 9     | 19  | 15   | 28     | 45     | 43.16            | 27.57             | 13            | 3.2            |                                  |
| 1981 | 9     | 20  | 9    | 12     | 58     | 42.24            | 24.93             | 17            | 3.4            |                                  |
| 1981 | 9     | 25  | 19   | 50     | 38     | 41.72            | 23.84             | 13            | 3.2            |                                  |
| 1981 | 9     | 30  | 12   | 3      | 0      | 41.95            | 23.15             | 11            | 3.3            | 4                                |
| 1981 | 10    | 1   | 12   | 10     | 54     | 41.88            | 23.65             | 12            | 4.1            | 5.5                              |
| 1981 | 10    | 14  | 18   | 36     | 39     | 41.97            | 23.25             | 13            | 3.4            |                                  |
| 1981 | 11    | 9   | 13   | 40     | 3      | 41.88            | 23.7              | 3             | 3.4            | 3.5                              |
| 1981 | 11    | 27  | 2    | 54     | 45     | 42.52            | 23.61             | 3             | 3.2            |                                  |
| 1981 | 12    | 7   | 9    | 33     | 47     | 42.09            | 24.81             | 5             | 3.2            | 5.5                              |
| 1982 | 2     | 20  | 4    | 45     | 52     | 41.82            | 24.34             | 12            | 3.7            | 4.5                              |
| 1982 | 3     | 6   | 8    | 59     | 54     | 42.67            | 28.48             | 20            | 4.1            |                                  |
| 1982 | 4     | 27  | 3    | 51     | 48     | 41.89            | 23.35             | 10            | 3.7            |                                  |
| 1982 | 5     | 15  | 4    | 44     | 51     | 42.12            | 24.27             | 9             | 3.5            |                                  |
| 1982 | 6     | 26  | 19   | 47     | 34     | 41.87            | 23.69             | 12            | 3.5            |                                  |
| 1982 | 6     | 30  | 18   | 49     | 6      | 41.71            | 23.84             | 14            | 3.7            |                                  |
| 1982 | 8     | 27  | 9    | 58     | 54     | 43.65            | 26.21             | 19            | 4.4            | 5.5                              |
| 1982 | 8     | 31  | 3    | 45     | 6      | 43.16            | 27.46             | 10            | 3.5            | 5                                |
| 1982 | 10    | 23  | 18   | 25     | 54     | 42.06            | 24.83             | 13            | 3.8            | 4.5                              |
| 1982 | 12    | 30  | 12   | 11     | 11     | 41.88            | 23.15             | 7             | 3.4            |                                  |
| 1983 | 4     | 24  | 14   | 33     | 7      | 42.65            | 22.8              | 2             | 3.2            |                                  |
| 1983 | 8     | 13  | 2    | 8      | 46     | 41.81            | 23.18             | 15            | 3.5            | 3.5                              |
| 1983 | 8     | 26  | 16   | 15     | 31     | 41.03            | 22.38             | 11            | 4.6            |                                  |
| 1983 | 8     | 28  | 11   | 37     | 50     | 41.79            | 23.76             | 11            | 3.5            | 4                                |
| 1983 | 9     | 10  | 18   | 40     | 21     | 42.17            | 23.73             | 10            | 3.7            |                                  |

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 1983 | 9     | 13  | 20   | 39     | 26     | 41.72            | 23.77             | 4             | 3.2            |                                  |
| 1983 | 11    | 10  | 17   | 28     | 21     | 43.11            | 27.53             | 4             | 4.5            | 6.5                              |
| 1983 | 12    | 21  | 12   | 51     | 26     | 43.21            | 26.08             | 12            | 3.3            |                                  |
| 1983 | 12    | 22  | 14   | 56     | 45     | 42.74            | 23.33             | 13            | 3.9            | 5                                |
| 1984 | 1     | 23  | 9    | 29     | 25     | 41.94            | 23.39             | 12            | 4.7            | 5.5                              |
| 1984 | 1     | 23  | 10   | 26     | 34     | 41.95            | 23.35             | 11            | 5.2            | 6                                |
| 1984 | 1     | 23  | 15   | 5      | 29     | 43.31            | 25.4              | 13            | 3.5            | 5                                |
| 1984 | 1     | 23  | 22   | 42     | 26     | 42.06            | 24.01             | 15            | 3.3            | 4.5                              |
| 1984 | 2     | 14  | 15   | 56     | 9      | 43.7             | 27.85             | 13            | 3.2            |                                  |
| 1984 | 3     | 1   | 12   | 56     | 11     | 42.18            | 25.43             | 18            | 3.3            | 4                                |
| 1984 | 5     | 28  | 5    | 38     | 51     | 41.96            | 23.19             | 14            | 3.6            |                                  |
| 1984 | 6     | 14  | 14   | 11     | 41     | 43.12            | 27.51             | 11            | 3.3            | 4                                |
| 1984 | 7     | 3   | 8    | 23     | 4      | 41.022           | 22.5              | 10            | 3.8            | 4                                |
| 1984 | 8     | 13  | 0    | 8      | 33     | 41.78            | 23.68             | 5             | 3.3            |                                  |
| 1984 | 8     | 31  | 6    | 55     | 49     | 41.99            | 24.22             | 16            | 3.4            | 4                                |
| 1984 | 9     | 3   | 9    | 19     | 6      | 42.18            | 25.06             | 14            | 3.4            |                                  |
| 1985 | 1     | 5   | 13   | 6      | 33     | 42.56            | 22.12             | 28            | 4.9            | 6                                |
| 1985 | 2     | 16  | 6    | 33     | 40     | 42.05            | 23.62             | 10            | 4.1            | 5                                |
| 1985 | 4     | 4   | 21   | 45     | 39     | 42.11            | 25.84             | 12            | 3.4            |                                  |
| 1985 | 6     | 12  | 14   | 5      | 0      | 43.11            | 27.5              | 12            | 4.3            | 6                                |
| 1985 | 8     | 6   | 14   | 25     | 55     | 42.75            | 27.91             | 18            | 3.2            |                                  |
| 1985 | 9     | 17  | 6    | 53     | 33     | 41.93            | 23                | 13            | 3.7            | 5                                |
| 1985 | 9     | 28  | 14   | 50     | 15     | 41.58            | 22.25             | 7             | 5.2            | 7                                |
| 1985 | 9     | 29  | 0    | 36     | 12     | 41.49            | 22.33             | 10            | 3.4            |                                  |
| 1985 | 10    | 1   | 13   | 21     | 1      | 41.56            | 22.32             | 5             | 3.3            |                                  |
| 1985 | 10    | 1   | 13   | 25     | 2      | 41.54            | 22.31             | 10            | 3.4            |                                  |
| 1985 | 10    | 2   | 2    | 32     | 51     | 41.43            | 22.24             | 5             | 4.0            |                                  |
| 1985 | 11    | 9   | 23   | 19     | 50     | 41.26            | 24.03             | 17            | 3.4            |                                  |
| 1985 | 11    | 9   | 23   | 30     | 43     | 41.26            | 23.98             | 18            | 5.2            | 7.5                              |
| 1985 | 11    | 12  | 16   | 41     | 31     | 42.24            | 24.88             | 12            | 3.2            |                                  |
| 1985 | 11    | 14  | 20   | 59     | 8      | 41.96            | 23.27             | 8             | 3.3            |                                  |
| 1986 | 2     | 21  | 5    | 39     | 56     | 43.27            | 26.05             | 11            | 5.4            | 7.5                              |
| 1986 | 2     | 21  | 6    | 18     | 36     | 43.26            | 25.97             | 16            | 4.4            | 5.5                              |
| 1986 | 2     | 21  | 6    | 20     | 54     | 43.23            | 25.99             | 18            | 3.5            |                                  |
| 1986 | 2     | 21  | 8    | 36     | 38     | 43.26            | 26.02             | 15            | 3.8            | 4.5                              |
| 1986 | 2     | 22  | 3    | 51     | 50     | 41.87            | 23.71             | 2             | 3.2            |                                  |
| 1986 | 3     | 23  | 20   | 50     | 56     | 43.06            | 25.62             | 12            | 3.2            |                                  |
| 1986 | 4     | 10  | 4    | 43     | 11     | 43.18            | 26.13             | 0             | 3.2            |                                  |
| 1986 | 5     | 15  | 16   | 37     | 14     | 41.95            | 23.13             | 17            | 3.9            | 4.5                              |
| 1986 | 5     | 15  | 16   | 45     | 23     | 41.95            | 23.15             | 18            | 4.5            | 5.5                              |
| 1986 | 5     | 25  | 16   | 57     | 30     | 43.21            | 26.01             | 14            | 3.3            | 4                                |

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 1986 | 5     | 26  | 15   | 46     | 30     | 43.24            | 26.03             | 13            | 3.2            | 4                                |
| 1986 | 5     | 26  | 20   | 36     | 2      | 41.85            | 25.27             | 17            | 3.2            |                                  |
| 1986 | 5     | 29  | 6    | 24     | 35     | 41.92            | 23.17             | 2             | 3.6            | 4.5                              |
| 1986 | 6     | 20  | 12   | 26     | 36     | 43.25            | 26.07             | 10            | 3.4            | 4.5                              |
| 1986 | 6     | 30  | 5    | 14     | 1      | 42.05            | 22.13             | 10            | 3.9            |                                  |
| 1986 | 8     | 1   | 14   | 34     | 12     | 43.27            | 26.06             | 11            | 3.4            | 4.5                              |
| 1986 | 8     | 19  | 4    | 5      | 42     | 43.19            | 25.99             | 13            | 4.0            |                                  |
| 1986 | 8     | 29  | 19   | 30     | 18     | 43.34            | 26.06             | 11            | 3.2            |                                  |
| 1986 | 8     | 30  | 19   | 8      | 38     | 41.73            | 24.27             | 14            | 3.4            |                                  |
| 1986 | 9     | 7   | 10   | 47     | 53     | 43.23            | 26.01             | 13            | 3.3            | 4                                |
| 1986 | 9     | 7   | 10   | 54     | 1      | 43.26            | 26                | 12            | 3.3            | 5                                |
| 1986 | 10    | 26  | 13   | 32     | 14     | 41.94            | 23.15             | 16            | 3.3            | 3.5                              |
| 1986 | 11    | 23  | 4    | 34     | 31     | 43.25            | 26.01             | 9             | 3.4            | 4                                |
| 1986 | 12    | 7   | 14   | 17     | 9      | 43.25            | 26.02             | 14            | 5.6            | 8                                |
| 1986 | 12    | 7   | 14   | 53     | 26     | 43.14            | 26.11             | 20            | 4.4            | 5.5                              |
| 1986 | 12    | 7   | 15   | 20     | 29     | 43.2             | 26.04             | 2             | 3.3            |                                  |
| 1986 | 12    | 7   | 17   | 26     | 6      | 43.22            | 25.98             | 14            | 4.8            | 6                                |
| 1986 | 12    | 7   | 17   | 39     | 20     | 43.22            | 25.98             | 13            | 3.2            |                                  |
| 1986 | 12    | 8   | 9    | 31     | 33     | 43.3             | 26.06             | 13            | 3.3            |                                  |
| 1986 | 12    | 8   | 14   | 44     | 28     | 43.26            | 26.03             | 20            | 4.5            | 6                                |
| 1986 | 12    | 11  | 3    | 52     | 31     | 43.24            | 26.04             | 15            | 3.4            |                                  |
| 1986 | 12    | 12  | 1    | 28     | 48     | 43.25            | 26.09             | 10            | 3.6            |                                  |
| 1986 | 12    | 12  | 19   | 29     | 52     | 43.27            | 26.05             | 12            | 4.6            | 6                                |
| 1986 | 12    | 14  | 10   | 29     | 49     | 43.24            | 26.02             | 10            | 3.2            |                                  |
| 1986 | 12    | 15  | 0    | 58     | 51     | 43.27            | 26.03             | 6             | 3.4            |                                  |
| 1986 | 12    | 17  | 22   | 1      | 45     | 43.28            | 26.07             | 14            | 4.8            | 6.5                              |
| 1986 | 12    | 18  | 7    | 16     | 16     | 43.23            | 26.06             | 14            | 4.4            | 6.5                              |
| 1986 | 12    | 18  | 17   | 16     | 16     | 43.25            | 26.07             | 18            | 4.5            | 6.5                              |
| 1986 | 12    | 18  | 23   | 39     | 15     | 43.25            | 26.07             | 11            | 3.6            |                                  |
| 1986 | 12    | 23  | 17   | 46     | 0      | 43.24            | 26.07             | 6             | 3.2            |                                  |
| 1987 | 1     | 14  | 6    | 30     | 13     | 43.23            | 25.97             | 16            | 3.3            |                                  |
| 1987 | 1     | 21  | 9    | 54     | 5      | 43.26            | 26.03             | 15            | 4.3            | 6                                |
| 1987 | 1     | 29  | 21   | 43     | 30     | 43.2             | 26                | 10            | 3.4            |                                  |
| 1987 | 2     | 4   | 6    | 7      | 58     | 41.97            | 23.18             | 13            | 3.2            |                                  |
| 1987 | 2     | 22  | 3    | 18     | 2      | 42.21            | 24.93             | 15            | 3.8            | 4                                |
| 1987 | 3     | 13  | 11   | 48     | 36     | 41.39            | 23.92             | 16            | 3.3            |                                  |
| 1987 | 3     | 21  | 6    | 27     | 20     | 43.21            | 26.13             | 2             | 3.2            |                                  |
| 1987 | 3     | 23  | 9    | 5      | 24     | 43.88            | 23.56             | 4             | 3.8            | 5.5                              |
| 1987 | 3     | 29  | 4    | 10     | 7      | 42.14            | 25.38             | 15            | 4.2            | 5.5                              |
| 1987 | 4     | 8   | 1    | 31     | 59     | 42.17            | 25.14             | 8             | 3.2            |                                  |
| 1987 | 4     | 12  | 9    | 0      | 54     | 42.54            | 26.59             | 16            | 3.9            | 5.5                              |

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 1987 | 5     | 2   | 9    | 5      | 32     | 41.92            | 24.61             | 11            | 3.9            | 5.5                              |
| 1987 | 5     | 2   | 14   | 2      | 33     | 43.1             | 27.47             | 8             | 4.1            | 5                                |
| 1987 | 5     | 7   | 21   | 14     | 7      | 42.54            | 26.55             | 10            | 3.8            | 4.5                              |
| 1987 | 5     | 11  | 17   | 35     | 3      | 43.24            | 25.98             | 14            | 4.2            | 4                                |
| 1987 | 5     | 30  | 6    | 59     | 8      | 41.66            | 23.61             | 11            | 3.2            |                                  |
| 1987 | 6     | 3   | 12   | 36     | 58     | 41.96            | 22.92             | 14            | 3.3            |                                  |
| 1987 | 7     | 25  | 9    | 25     | 32     | 43.25            | 25.99             | 13            | 3.4            | 4                                |
| 1987 | 8     | 3   | 20   | 14     | 20     | 41.78            | 23.74             | 10            | 3.2            |                                  |
| 1987 | 8     | 6   | 8    | 17     | 10     | 43.23            | 25.89             | 15            | 3.2            |                                  |
| 1987 | 9     | 16  | 13   | 1      | 52     | 41.14            | 23.8              | 5             | 3.2            |                                  |
| 1987 | 9     | 19  | 6    | 32     | 54     | 43.45            | 27.82             | 14            | 3.2            | 5                                |
| 1987 | 9     | 30  | 11   | 49     | 23     | 41.78            | 23.75             | 10            | 3.5            |                                  |
| 1987 | 10    | 19  | 4    | 0      | 35     | 43.25            | 25.98             | 12            | 3.3            | 4                                |
| 1987 | 11    | 9   | 5    | 23     | 26     | 41.77            | 23.74             | 5             | 3.2            |                                  |
| 1987 | 11    | 25  | 9    | 43     | 57     | 43.16            | 26.09             | 14            | 3.3            | 5                                |
| 1988 | 3     | 7   | 20   | 24     | 33     | 41.78            | 23.75             | 13            | 3.2            | 4                                |
| 1988 | 3     | 23  | 18   | 58     | 45     | 41.86            | 22.77             | 14            | 3.3            | 4.5                              |
| 1988 | 4     | 24  | 13   | 44     | 34     | 41.98            | 23.2              | 15            | 3.3            |                                  |
| 1988 | 5     | 9   | 20   | 13     | 5      | 41.78            | 23.75             | 12            | 3.5            |                                  |
| 1988 | 5     | 17  | 13   | 42     | 59     | 41.91            | 23.56             | 14            | 3.3            |                                  |
| 1988 | 5     | 27  | 12   | 58     | 48     | 41.74            | 23.72             | 18            | 3.2            |                                  |
| 1988 | 6     | 21  | 16   | 26     | 28     | 42.23            | 24.87             | 16            | 3.2            |                                  |
| 1988 | 6     | 22  | 15   | 41     | 44     | 41.78            | 23.73             | 13            | 3.3            | 4                                |
| 1988 | 8     | 18  | 17   | 37     | 43     | 42.08            | 24                | 9             | 3.2            | 4                                |
| 1988 | 9     | 2   | 14   | 24     | 25     | 41.02            | 25.62             | 8             | 3.2            |                                  |
| 1988 | 9     | 28  | 6    | 26     | 46     | 41.91            | 23.04             | 9             | 3.4            |                                  |
| 1988 | 9     | 28  | 14   | 42     | 40     | 41.76            | 23.71             | 20            | 3.2            |                                  |
| 1988 | 12    | 23  | 5    | 21     | 13     | 42.13            | 25.17             | 16            | 3.7            | 4.5                              |
| 1989 | 1     | 16  | 8    | 36     | 49     | 42.27            | 24.76             | 18            | 3.2            |                                  |
| 1989 | 1     | 18  | 7    | 14     | 14     | 41.6             | 24.6              | 8             | 3.2            |                                  |
| 1989 | 3     | 6   | 21   | 38     | 15     | 42.11            | 24.37             | 15            | 3.2            |                                  |
| 1989 | 4     | 9   | 20   | 50     | 4      | 41.84            | 22.89             | 12            | 3.5            | 4                                |
| 1989 | 4     | 10  | 1    | 34     | 3      | 41.88            | 22.91             | 8             | 3.6            |                                  |
| 1989 | 4     | 23  | 23   | 56     | 19     | 41.92            | 23.57             | 4             | 3.2            |                                  |
| 1989 | 6     | 3   | 16   | 37     | 36     | 41.96            | 23.27             | 12            | 3.7            |                                  |
| 1989 | 7     | 8   | 15   | 48     | 18     | 41.28            | 23.18             | 15            | 3.4            |                                  |
| 1989 | 10    | 25  | 15   | 27     | 43     | 43.05            | 26.7              | 17            | 4.4            | 6                                |
| 1989 | 10    | 25  | 16   | 23     | 44     | 42.99            | 26.6              | 11            | 3.2            |                                  |
| 1989 | 10    | 26  | 5    | 57     | 34     | 42.48            | 26.26             | 14            | 3.2            |                                  |
| 1989 | 11    | 28  | 12   | 30     | 40     | 41.95            | 23                | 14            | 3.2            | 3.5                              |
| 1989 | 12    | 6   | 13   | 5      | 14     | 42.07            | 24.83             | 12            | 3.4            | 5.5                              |

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 1989 | 12    | 12  | 6    | 50     | 50     | 41.3             | 23.37             | 16            | 3.2            |                                  |
| 1989 | 12    | 26  | 5    | 56     | 1      | 41.96            | 23.15             | 15            | 3.2            |                                  |
| 1990 | 1     | 2   | 22   | 54     | 35     | 43.1             | 27.59             | 18            | 3.4            |                                  |
| 1990 | 1     | 28  | 10   | 21     | 32     | 42.53            | 26.26             | 15            | 3.2            |                                  |
| 1990 | 1     | 31  | 10   | 16     | 14     | 41.41            | 22.72             | 13            | 4.4            | 4                                |
| 1990 | 1     | 31  | 19   | 40     | 25     | 41.41            | 22.71             | 13            | 3.3            |                                  |
| 1990 | 2     | 3   | 22   | 50     | 21     | 41.44            | 22.79             | 0             | 3.2            |                                  |
| 1990 | 3     | 3   | 20   | 39     | 25     | 42.94            | 27.72             | 16            | 3.4            |                                  |
| 1990 | 3     | 11  | 17   | 54     | 6      | 41.89            | 23.31             | 12            | 3.4            |                                  |
| 1990 | 3     | 16  | 19   | 21     | 55     | 41.42            | 22.73             | 10            | 3.5            |                                  |
| 1990 | 3     | 22  | 7    | 15     | 49     | 41.95            | 23.07             | 15            | 3.4            | 4.5                              |
| 1990 | 4     | 16  | 17   | 50     | 22     | 42.54            | 26.1              | 14            | 3.2            |                                  |
| 1990 | 6     | 10  | 11   | 36     | 45     | 41.27            | 29.36             | 14            | 4.5            |                                  |
| 1990 | 6     | 12  | 4    | 21     | 19     | 43.97            | 26.41             | 20            | 4.2            | 4.5                              |
| 1990 | 6     | 23  | 14   | 33     | 40     | 41.7             | 23.79             | 11            | 3.2            |                                  |
| 1990 | 7     | 11  | 14   | 54     | 36     | 41.94            | 23.79             | 12            | 3.7            |                                  |
| 1990 | 7     | 12  | 2    | 19     | 54     | 43.93            | 24.61             | 12            | 3.2            |                                  |
| 1990 | 7     | 16  | 7    | 5      | 7      | 41.4             | 22.72             | 12            | 3.4            |                                  |
| 1990 | 7     | 28  | 9    | 28     | 27     | 41.94            | 23.13             | 19            | 3.5            |                                  |
| 1990 | 9     | 10  | 18   | 28     | 10     | 42.25            | 25.39             | 5             | 3.7            |                                  |
| 1990 | 9     | 18  | 22   | 59     | 4      | 41.95            | 23.14             | 16            | 3.5            | 3.5                              |
| 1990 | 11    | 18  | 23   | 21     | 39     | 41.5             | 23.74             | 15            | 3.2            |                                  |
| 1990 | 12    | 5   | 9    | 39     | 15     | 43.29            | 26.01             | 16            | 3.5            | 4.5                              |
| 1990 | 12    | 21  | 6    | 57     | 43     | 41.01            | 22.3              | 13            | 6.1            |                                  |
| 1990 | 12    | 21  | 8    | 0      | 58     | 41.03            | 22.43             | 14            | 3.7            |                                  |
| 1991 | 1     | 16  | 14   | 45     | 28     | 41.35            | 23.28             | 10            | 3.2            |                                  |
| 1991 | 1     | 25  | 3    | 23     | 31     | 42.95            | 28.07             | 12            | 3.2            |                                  |
| 1991 | 2     | 6   | 10   | 45     | 10     | 41.93            | 23                | 12            | 3.4            |                                  |
| 1991 | 2     | 9   | 8    | 56     | 40     | 42.37            | 23.62             | 17            | 3.8            | 4.5                              |
| 1991 | 2     | 17  | 21   | 49     | 11     | 41.44            | 25.44             | 12            | 4.0            | 4.5                              |
| 1991 | 3     | 15  | 11   | 38     | 46     | 41.77            | 22.93             | 2             | 3.2            |                                  |
| 1991 | 5     | 31  | 11   | 17     | 52     | 41.7             | 23.83             | 18            | 3.7            |                                  |
| 1991 | 6     | 11  | 16   | 16     | 41     | 43.3             | 26.11             | 7             | 3.4            |                                  |
| 1991 | 6     | 17  | 14   | 46     | 35     | 43.03            | 22.83             | 15            | 3.5            |                                  |
| 1991 | 6     | 23  | 19   | 10     | 40     | 41.25            | 23.38             | 14            | 3.3            |                                  |
| 1991 | 6     | 29  | 22   | 27     | 22     | 41.87            | 22.89             | 13            | 3.7            |                                  |
| 1991 | 7     | 3   | 15   | 33     | 14     | 41.98            | 23.4              | 11            | 3.3            |                                  |
| 1991 | 7     | 23  | 11   | 55     | 33     | 41.77            | 23.09             | 12            | 3.8            |                                  |
| 1991 | 8     | 15  | 4    | 58     | 58     | 41.02            | 22.02             | 15            | 4.2            |                                  |
| 1991 | 8     | 22  | 8    | 38     | 49     | 41.26            | 23.68             | 17            | 3.4            |                                  |
| 1991 | 8     | 24  | 20   | 10     | 41     | 41.08            | 22.08             | 17            | 3.6            |                                  |

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 1991 | 9     | 8   | 16   | 57     | 18     | 41.12            | 22.47             | 10            | 3.2            |                                  |
| 1991 | 9     | 11  | 9    | 3      | 27     | 42.23            | 25.46             | 16            | 3.4            |                                  |
| 1991 | 9     | 17  | 5    | 25     | 16     | 41.96            | 23.15             | 16            | 3.7            |                                  |
| 1991 | 10    | 1   | 3    | 6      | 31     | 43.87            | 26.62             | 2             | 3.2            |                                  |
| 1991 | 10    | 10  | 6    | 10     | 4      | 42.17            | 25.09             | 16            | 3.3            |                                  |
| 1991 | 10    | 17  | 3    | 12     | 47     | 41.15            | 24                | 14            | 3.8            |                                  |
| 1991 | 10    | 18  | 3    | 12     | 47     | 41.17            | 23.99             | 16            | 3.8            |                                  |
| 1991 | 10    | 25  | 18   | 5      | 21     | 41.27            | 23.29             | 11            | 4.1            |                                  |
| 1991 | 11    | 8   | 9    | 40     | 22     | 41.28            | 23.67             | 5             | 3.4            |                                  |
| 1992 | 1     | 13  | 5    | 58     | 0      | 43.25            | 26.01             | 7             | 3.5            | 4.5                              |
| 1992 | 1     | 25  | 22   | 34     | 26     | 41.79            | 22.63             | 5             | 4.2            |                                  |
| 1992 | 2     | 21  | 19   | 7      | 9      | 41.83            | 22.84             | 11            | 3.4            |                                  |
| 1992 | 3     | 7   | 12   | 48     | 8      | 41.99            | 24.27             | 19            | 3.4            |                                  |
| 1992 | 4     | 1   | 6    | 9      | 57     | 41.15            | 24.03             | 6             | 3.5            |                                  |
| 1992 | 4     | 6   | 4    | 12     | 45     | 42.51            | 25.75             | 5             | 3.3            |                                  |
| 1992 | 6     | 8   | 2    | 52     | 8      | 42.13            | 25.43             | 17            | 4.2            | 4.5                              |
| 1992 | 6     | 10  | 4    | 5      | 10     | 42.33            | 23.99             | 13            | 4.0            |                                  |
| 1992 | 7     | 7   | 7    | 47     | 3      | 41.32            | 22.48             | 2             | 3.5            |                                  |
| 1992 | 7     | 24  | 4    | 34     | 51     | 41.97            | 25.57             | 10            | 3.3            |                                  |
| 1992 | 8     | 17  | 13   | 23     | 26     | 42.52            | 26.29             | 8             | 3.4            |                                  |
| 1992 | 8     | 24  | 21   | 43     | 47     | 42.47            | 24.9              | 20            | 4.3            | 4.5                              |
| 1992 | 8     | 26  | 18   | 38     | 50     | 41.31            | 22.73             | 7             | 3.2            |                                  |
| 1992 | 9     | 1   | 17   | 39     | 15     | 42.55            | 24.57             | 18            | 3.2            |                                  |
| 1992 | 9     | 29  | 11   | 37     | 3      | 41.83            | 22.93             | 17            | 3.2            |                                  |
| 1992 | 10    | 30  | 13   | 43     | 4      | 42.47            | 24.06             | 11            | 3.2            |                                  |
| 1992 | 11    | 12  | 6    | 24     | 29     | 41.84            | 26.35             | 13            | 3.5            | 4                                |
| 1992 | 11    | 21  | 22   | 26     | 8      | 43.27            | 26.87             | 15            | 3.3            |                                  |
| 1992 | 11    | 23  | 2    | 19     | 59     | 43.2             | 26.8              | 4             | 3.7            | 4.5                              |
| 1993 | 1     | 5   | 16   | 36     | 57     | 41.37            | 22.84             | 11            | 3.7            |                                  |
| 1993 | 1     | 12  | 18   | 50     | 54     | 42.47            | 22.21             | 13            | 4.2            |                                  |
| 1993 | 1     | 13  | 2    | 3      | 55     | 42.53            | 22.02             | 6             | 3.4            |                                  |
| 1993 | 1     | 14  | 0    | 41     | 26     | 41.97            | 23.09             | 11            | 3.4            |                                  |
| 1993 | 1     | 16  | 7    | 49     | 30     | 41.97            | 23.03             | 11            | 3.4            |                                  |
| 1993 | 1     | 16  | 17   | 32     | 59     | 41.98            | 23.06             | 10            | 3.3            |                                  |
| 1993 | 1     | 17  | 10   | 21     | 34     | 42.97            | 25.45             | 2             | 3.2            |                                  |
| 1993 | 2     | 12  | 2    | 53     | 6      | 41.62            | 25.21             | 10            | 3.8            | 4.5                              |
| 1993 | 3     | 27  | 23   | 47     | 9      | 41.15            | 23.08             | 12            | 4.3            | 4                                |
| 1993 | 3     | 28  | 0    | 6      | 39     | 41.16            | 23.02             | 12            | 4.1            |                                  |
| 1993 | 4     | 3   | 4    | 52     | 58     | 41.82            | 22.74             | 10            | 3.5            |                                  |
| 1993 | 4     | 11  | 23   | 24     | 37     | 41.66            | 24.14             | 8             | 3.2            |                                  |
| 1993 | 4     | 21  | 16   | 54     | 3      | 43.15            | 27.56             | 8             | 4.3            | 5.5                              |

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 1993 | 5     | 22  | 5    | 4      | 42     | 41.46            | 23.12             | 14            | 3.7            |                                  |
| 1993 | 5     | 24  | 14   | 14     | 31     | 41.86            | 22.9              | 20            | 3.5            |                                  |
| 1993 | 6     | 10  | 15   | 19     | 3      | 41.83            | 22.31             | 8             | 3.5            |                                  |
| 1993 | 9     | 2   | 2    | 3      | 54     | 41.14            | 25.92             | 2             | 3.3            |                                  |
| 1993 | 9     | 7   | 11   | 56     | 47     | 43.16            | 27.31             | 20            | 3.7            |                                  |
| 1993 | 10    | 11  | 23   | 18     | 5      | 41.94            | 23.06             | 10            | 3.3            |                                  |
| 1993 | 11    | 13  | 19   | 36     | 57     | 41.91            | 22.71             | 14            | 3.3            |                                  |
| 1993 | 12    | 16  | 9    | 22     | 16     | 41.53            | 23.13             | 11            | 4.3            | 5.5                              |
| 1994 | 1     | 7   | 3    | 48     | 17     | 41.81            | 22.27             | 6             | 3.2            |                                  |
| 1994 | 1     | 11  | 1    | 59     | 31     | 41.74            | 24.2              | 13            | 4.0            | 4                                |
| 1994 | 3     | 21  | 21   | 42     | 26     | 42.09            | 23.49             | 10            | 4.3            |                                  |
| 1994 | 4     | 7   | 20   | 32     | 16     | 41.94            | 23.14             | 19            | 3.3            |                                  |
| 1994 | 4     | 24  | 18   | 17     | 6      | 41.63            | 24.06             | 17            | 3.3            |                                  |
| 1994 | 5     | 23  | 12   | 23     | 17     | 41.96            | 23.2              | 18            | 4.0            |                                  |
| 1994 | 5     | 23  | 12   | 25     | 18     | 41.99            | 23.29             | 4             | 3.6            |                                  |
| 1994 | 5     | 25  | 23   | 46     | 53     | 41.91            | 24.46             | 11            | 3.5            |                                  |
| 1994 | 7     | 15  | 9    | 28     | 29     | 44.25            | 26.94             | 2             | 3.3            |                                  |
| 1994 | 7     | 16  | 3    | 9      | 20     | 41.02            | 26.96             | 10            | 3.4            |                                  |
| 1994 | 8     | 3   | 3    | 52     | 8      | 41.94            | 23.1              | 10            | 3.8            |                                  |
| 1994 | 8     | 23  | 6    | 47     | 48     | 42.75            | 28.7              | 8             | 3.3            |                                  |
| 1994 | 10    | 31  | 1    | 42     | 39     | 42.33            | 22.04             | 11            | 3.8            |                                  |
| 1994 | 11    | 5   | 17   | 29     | 3      | 41.12            | 23.34             | 12            | 3.9            |                                  |
| 1994 | 11    | 5   | 18   | 51     | 13     | 41.07            | 23.28             | 4             | 3.2            |                                  |
| 1994 | 11    | 17  | 23   | 45     | 51     | 42.51            | 23.63             | 4             | 3.3            |                                  |
| 1994 | 11    | 26  | 19   | 22     | 13     | 41.79            | 25.27             | 13            | 3.5            |                                  |
| 1994 | 11    | 29  | 10   | 18     | 41     | 42.16            | 25.19             | 13            | 3.9            | 4.5                              |
| 1995 | 1     | 1   | 16   | 25     | 23     | 42.58            | 23.38             | 1             | 3.3            |                                  |
| 1995 | 1     | 28  | 14   | 18     | 0      | 41.84            | 23.18             | 18            | 3.2            |                                  |
| 1995 | 3     | 20  | 20   | 39     | 7      | 41.36            | 22.63             | 5             | 3.2            |                                  |
| 1995 | 4     | 22  | 8    | 57     | 36     | 41.44            | 22.72             | 12            | 3.2            |                                  |
| 1995 | 5     | 20  | 20   | 9      | 52     | 41.09            | 23.09             | 5             | 3.5            |                                  |
| 1995 | 6     | 28  | 21   | 47     | 37     | 41.99            | 23.1              | 8             | 3.4            |                                  |
| 1995 | 7     | 17  | 11   | 13     | 1      | 42.7             | 23.16             | 12            | 3.5            |                                  |
| 1995 | 7     | 17  | 15   | 24     | 22     | 41.81            | 25.17             | 11            | 3.2            |                                  |
| 1995 | 7     | 17  | 20   | 10     | 30     | 41.26            | 25.4              | 9             | 3.7            |                                  |
| 1995 | 7     | 18  | 20   | 34     | 53     | 41.33            | 27.4              | 2             | 3.2            |                                  |
| 1995 | 7     | 18  | 23   | 29     | 53     | 42.61            | 27.87             | 5             | 4.1            | 4.5                              |
| 1995 | 7     | 20  | 19   | 20     | 8      | 43.95            | 26.68             | 6             | 3.4            |                                  |
| 1995 | 7     | 28  | 2    | 49     | 9      | 43.57            | 22.21             | 2             | 3.7            |                                  |
| 1995 | 8     | 17  | 4    | 38     | 12     | 41.96            | 23.31             | 5             | 3.5            |                                  |
| 1995 | 8     | 20  | 0    | 56     | 31     | 41.08            | 27.31             | 5             | 3.3            |                                  |

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 1995 | 8     | 23  | 9    | 27     | 17     | 42.02            | 24.9              | 5             | 3.5            |                                  |
| 1995 | 8     | 29  | 1    | 1      | 3      | 41.93            | 24.49             | 16            | 3.2            |                                  |
| 1995 | 9     | 8   | 3    | 51     | 40     | 41.69            | 24.03             | 14            | 3.4            |                                  |
| 1995 | 12    | 14  | 16   | 25     | 23     | 42.61            | 23.37             | 10            | 3.5            |                                  |
| 1995 | 12    | 28  | 1    | 17     | 34     | 41.94            | 23.11             | 17            | 3.2            |                                  |
| 1996 | 2     | 1   | 17   | 43     | 55     | 41.72            | 23.81             | 14            | 4.5            |                                  |
| 1996 | 2     | 2   | 5    | 11     | 49     | 42.76            | 24                | 11            | 3.4            |                                  |
| 1996 | 4     | 20  | 19   | 56     | 51     | 42.7             | 23.58             | 8             | 3.9            |                                  |
| 1996 | 6     | 2   | 12   | 46     | 30     | 41.29            | 24.1              | 11            | 3.3            |                                  |
| 1996 | 9     | 25  | 9    | 18     | 53     | 41.83            | 22.84             | 8             | 3.4            |                                  |
| 1996 | 11    | 15  | 0    | 5      | 6      | 42.05            | 22.46             | 10            | 3.2            |                                  |
| 1996 | 11    | 18  | 4    | 19     | 32     | 42.03            | 22.45             | 12            | 3.2            |                                  |
| 1996 | 12    | 29  | 8    | 21     | 51     | 42.89            | 29.6              | 5             | 3.6            |                                  |
| 1997 | 1     | 19  | 4    | 12     | 18     | 42.44            | 26.14             | 11            | 3.4            |                                  |
| 1997 | 3     | 18  | 7    | 57     | 28     | 41.64            | 23.76             | 19            | 3.7            |                                  |
| 1997 | 4     | 2   | 16   | 10     | 39     | 42.05            | 26.58             | 10            | 3.2            |                                  |
| 1997 | 4     | 4   | 8    | 31     | 29     | 41.7             | 23.82             | 10            | 3.8            |                                  |
| 1997 | 4     | 19  | 21   | 0      | 46     | 43.42            | 28.56             | 18            | 3.8            |                                  |
| 1997 | 5     | 6   | 7    | 5      | 56     | 41.7             | 23.86             | 12            | 3.2            |                                  |
| 1997 | 5     | 13  | 19   | 15     | 58     | 41.22            | 23.71             | 10            | 4.0            |                                  |
| 1997 | 6     | 13  | 8    | 20     | 26     | 41.24            | 24.56             | 9             | 3.8            |                                  |
| 1997 | 6     | 13  | 16   | 13     | 10     | 41.83            | 23.54             | 7             | 3.5            |                                  |
| 1997 | 6     | 27  | 8    | 35     | 11     | 42.03            | 23.49             | 15            | 3.5            |                                  |
| 1997 | 7     | 1   | 4    | 27     | 43     | 42.02            | 23.48             | 2             | 3.7            |                                  |
| 1997 | 7     | 1   | 4    | 50     | 33     | 42.03            | 23.48             | 3             | 3.4            |                                  |
| 1997 | 7     | 4   | 8    | 36     | 54     | 42.02            | 23.46             | 8             | 3.2            |                                  |
| 1997 | 7     | 9   | 1    | 21     | 48     | 42.03            | 23.46             | 18            | 3.4            |                                  |
| 1997 | 7     | 14  | 16   | 13     | 35     | 41.55            | 24.02             | 2             | 3.2            |                                  |
| 1997 | 7     | 17  | 3    | 6      | 55     | 41.78            | 23.72             | 5             | 3.7            |                                  |
| 1997 | 7     | 27  | 1    | 22     | 29     | 43.68            | 22.03             | 10            | 3.5            |                                  |
| 1997 | 8     | 5   | 19   | 34     | 2      | 41.85            | 23.53             | 3             | 3.4            |                                  |
| 1997 | 8     | 5   | 19   | 50     | 27     | 41.86            | 23.54             | 5             | 3.5            |                                  |
| 1997 | 8     | 7   | 22   | 38     | 13     | 42.11            | 24.08             | 13            | 3.2            |                                  |
| 1997 | 8     | 8   | 10   | 36     | 16     | 43.12            | 27.48             | 11            | 4.0            |                                  |
| 1997 | 8     | 13  | 10   | 44     | 47     | 42.73            | 23.14             | 11            | 3.5            |                                  |
| 1997 | 8     | 19  | 0    | 48     | 5      | 41.82            | 23.32             | 8             | 3.3            |                                  |
| 1997 | 9     | 22  | 7    | 7      | 18     | 41.23            | 23.2              | 10            | 3.7            |                                  |
| 1997 | 10    | 3   | 0    | 20     | 19     | 42.03            | 23.52             | 2             | 3.3            |                                  |
| 1997 | 10    | 24  | 20   | 55     | 2      | 41.66            | 22.35             | 3             | 3.4            |                                  |
| 1997 | 10    | 29  | 4    | 8      | 17     | 42.03            | 23.48             | 13            | 3.8            |                                  |
| 1997 | 11    | 15  | 9    | 25     | 38     | 42.05            | 23.48             | 0             | 3.2            |                                  |

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 1997 | 11    | 15  | 12   | 48     | 52     | 42.02            | 23.49             | 4             | 3.6            |                                  |
| 1997 | 11    | 18  | 22   | 55     | 6      | 42.03            | 23.48             | 4             | 3.7            |                                  |
| 1997 | 11    | 20  | 8    | 46     | 47     | 42.02            | 23.45             | 6             | 3.7            |                                  |
| 1997 | 11    | 25  | 0    | 31     | 50     | 42.04            | 23.47             | 7             | 3.7            |                                  |
| 1997 | 11    | 25  | 0    | 35     | 21     | 42.03            | 23.47             | 5             | 3.2            |                                  |
| 1997 | 11    | 26  | 8    | 46     | 47     | 42.02            | 23.45             | 6             | 3.7            |                                  |
| 1998 | 1     | 1   | 18   | 9      | 5      | 41.16            | 24.41             | 10            | 3.4            |                                  |
| 1998 | 1     | 12  | 3    | 23     | 28     | 41.96            | 23.23             | 11            | 3.3            |                                  |
| 1998 | 1     | 15  | 19   | 1      | 45     | 41.99            | 23.06             | 5             | 3.2            |                                  |
| 1998 | 2     | 4   | 2    | 18     | 12     | 41.11            | 23.8              | 9             | 3.5            |                                  |
| 1998 | 2     | 15  | 12   | 0      | 17     | 41.36            | 23.71             | 10            | 3.8            |                                  |
| 1998 | 3     | 26  | 20   | 38     | 0      | 41.29            | 22.73             | 4             | 3.2            |                                  |
| 1998 | 3     | 28  | 18   | 13     | 22     | 41.3             | 22.7              | 2             | 3.4            |                                  |
| 1998 | 4     | 3   | 13   | 31     | 52     | 42.08            | 24.06             | 10            | 3.3            |                                  |
| 1998 | 4     | 4   | 22   | 47     | 46     | 41.3             | 22.66             | 4             | 3.4            |                                  |
| 1998 | 4     | 6   | 0    | 38     | 27     | 41.53            | 27.6              | 10            | 4.0            |                                  |
| 1998 | 4     | 8   | 19   | 43     | 43     | 41.33            | 22.74             | 11            | 3.5            |                                  |
| 1998 | 4     | 18  | 19   | 59     | 52     | 42.2             | 24.15             | 8             | 3.4            |                                  |
| 1998 | 6     | 5   | 23   | 29     | 45     | 41.97            | 23.14             | 14            | 3.2            |                                  |
| 1998 | 6     | 9   | 22   | 45     | 10     | 41.04            | 24.4              | 8             | 3.2            |                                  |
| 1998 | 7     | 2   | 19   | 48     | 43     | 41.74            | 22.8              | 2             | 3.3            |                                  |
| 1998 | 7     | 3   | 3    | 37     | 17     | 41.92            | 23.12             | 9             | 4.0            |                                  |
| 1998 | 7     | 6   | 18   | 25     | 57     | 41.92            | 22.05             | 5             | 4.2            |                                  |
| 1998 | 7     | 6   | 23   | 10     | 9      | 41.93            | 22.07             | 11            | 3.4            |                                  |
| 1998 | 7     | 9   | 4    | 20     | 37     | 42.75            | 23.07             | 7             | 3.4            |                                  |
| 1998 | 7     | 13  | 18   | 9      | 3      | 41.09            | 24.4              | 8             | 3.4            |                                  |
| 1998 | 7     | 14  | 23   | 0      | 19     | 41.96            | 23.15             | 12            | 3.6            |                                  |
| 1998 | 7     | 28  | 7    | 26     | 39     | 41.1             | 23.82             | 10            | 3.9            |                                  |
| 1998 | 8     | 25  | 5    | 2      | 9      | 41.97            | 23.21             | 2             | 3.2            |                                  |
| 1998 | 9     | 2   | 11   | 39     | 11     | 41.02            | 24.06             | 6             | 3.4            |                                  |
| 1998 | 9     | 2   | 11   | 42     | 46     | 41.12            | 24.06             | 10            | 3.4            |                                  |
| 1998 | 9     | 10  | 16   | 57     | 37     | 41.87            | 23.53             | 20            | 3.2            |                                  |
| 1998 | 10    | 2   | 21   | 22     | 5      | 42.13            | 23.65             | 3             | 3.2            |                                  |
| 1998 | 10    | 26  | 10   | 0      | 0      | 41.96            | 23.14             | 15            | 3.9            |                                  |
| 1998 | 11    | 25  | 23   | 38     | 17     | 41.22            | 29.91             | 15            | 3.4            |                                  |
| 1998 | 12    | 6   | 11   | 4      | 56     | 43.29            | 28.61             | 13            | 3.2            |                                  |
| 1998 | 12    | 10  | 8    | 3      | 56     | 41.8             | 22.89             | 10            | 3.3            |                                  |
| 1998 | 12    | 11  | 15   | 9      | 20     | 42.18            | 25.291            | 14            | 4.7            | 5.5                              |
| 1999 | 1     | 3   | 7    | 33     | 32     | 41.89            | 22.02             | 9             | 4.0            |                                  |
| 1999 | 1     | 11  | 16   | 45     | 37     | 41.74            | 22.88             | 8             | 3.2            |                                  |
| 1999 | 1     | 16  | 12   | 20     | 31     | 42.03            | 23.46             | 13            | 3.5            |                                  |

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 1999 | 1     | 16  | 13   | 52     | 20     | 42.01            | 23.45             | 9             | 3.2            |                                  |
| 1999 | 1     | 23  | 5    | 1      | 39     | 42.04            | 23.49             | 5             | 3.8            |                                  |
| 1999 | 3     | 8   | 3    | 37     | 5      | 41.72            | 24.34             | 9             | 3.3            |                                  |
| 1999 | 3     | 29  | 23   | 21     | 9      | 41.2             | 24.04             | 8             | 3.4            |                                  |
| 1999 | 4     | 11  | 21   | 37     | 27     | 41.03            | 24.43             | 7             | 3.4            |                                  |
| 1999 | 4     | 15  | 23   | 4      | 5      | 42.13            | 22.52             | 10            | 3.3            |                                  |
| 1999 | 5     | 3   | 22   | 43     | 45     | 42.31            | 23.85             | 10            | 3.5            |                                  |
| 1999 | 5     | 10  | 22   | 17     | 49     | 41.05            | 24.38             | 5             | 3.3            |                                  |
| 1999 | 8     | 7   | 6    | 46     | 56     | 42.02            | 23.52             | 5             | 3.3            |                                  |
| 1999 | 8     | 18  | 3    | 34     | 28     | 42.14            | 23.58             | 4             | 3.4            |                                  |
| 1999 | 8     | 19  | 13   | 44     | 23     | 42.03            | 23.52             | 6             | 3.5            |                                  |
| 1999 | 8     | 27  | 12   | 45     | 42     | 41.3             | 23.75             | 8             | 3.2            |                                  |
| 1999 | 8     | 29  | 18   | 29     | 57     | 41.25            | 27.7              | 2             | 3.4            |                                  |
| 1999 | 9     | 7   | 5    | 2      | 9      | 41.25            | 22.7              | 3             | 3.7            |                                  |
| 1999 | 9     | 8   | 15   | 35     | 26     | 41.01            | 27.72             | 13            | 3.4            |                                  |
| 1999 | 10    | 26  | 3    | 32     | 17     | 42.15            | 23.53             | 8             | 3.2            |                                  |
| 1999 | 11    | 11  | 16   | 17     | 59     | 41.95            | 23.15             | 14            | 3.4            |                                  |
| 1999 | 11    | 23  | 0    | 47     | 49     | 42.1             | 25.14             | 13            | 3.2            |                                  |
| 1999 | 11    | 30  | 15   | 31     | 49     | 41.35            | 23.39             | 9             | 3.2            |                                  |
| 1999 | 12    | 15  | 23   | 10     | 41     | 41.99            | 23.08             | 13            | 3.5            |                                  |
| 2000 | 1     | 9   | 11   | 49     | 45     | 42.99            | 25.42             | 9             | 3.5            |                                  |
| 2000 | 1     | 26  | 2    | 44     | 22     | 41.52            | 24.37             | 11            | 3.5            |                                  |
| 2000 | 2     | 1   | 10   | 36     | 25     | 41.11            | 22.73             | 6             | 3.8            |                                  |
| 2000 | 2     | 2   | 23   | 5      | 36     | 41.82            | 22.81             | 9             | 3.5            |                                  |
| 2000 | 3     | 2   | 9    | 21     | 1      | 43.02            | 25.4              | 7             | 3.8            |                                  |
| 2000 | 3     | 8   | 13   | 11     | 3      | 43.05            | 22.7              | 10            | 3.7            |                                  |
| 2000 | 4     | 25  | 11   | 43     | 34     | 41.7             | 23.83             | 15            | 3.4            |                                  |
| 2000 | 6     | 1   | 22   | 36     | 31     | 41.94            | 23.66             | 2             | 3.7            |                                  |
| 2000 | 6     | 3   | 5    | 35     | 55     | 41.96            | 23.32             | 7             | 3.5            |                                  |
| 2000 | 6     | 3   | 5    | 52     | 14     | 41.93            | 23.35             | 2             | 3.3            |                                  |
| 2000 | 6     | 3   | 6    | 25     | 32     | 41.95            | 23.28             | 7             | 3.6            |                                  |
| 2000 | 6     | 3   | 23   | 4      | 0      | 41.91            | 23.32             | 5             | 3.3            |                                  |
| 2000 | 6     | 18  | 19   | 20     | 41     | 41.2             | 25.91             | 14            | 3.4            |                                  |
| 2000 | 6     | 20  | 21   | 54     | 33     | 41.58            | 23.98             | 13            | 3.7            |                                  |
| 2000 | 6     | 24  | 6    | 38     | 54     | 41.91            | 22.99             | 12            | 3.4            |                                  |
| 2000 | 7     | 25  | 2    | 52     | 56     | 41.99            | 23.18             | 10            | 3.8            |                                  |
| 2000 | 7     | 29  | 2    | 12     | 13     | 41.67            | 24.03             | 8             | 3.3            |                                  |
| 2000 | 8     | 22  | 13   | 42     | 29     | 41.2             | 23.24             | 13            | 3.9            |                                  |
| 2000 | 8     | 23  | 8    | 11     | 5      | 43.03            | 22.92             | 20            | 3.3            |                                  |
| 2000 | 8     | 28  | 5    | 6      | 46     | 43.02            | 25.42             | 10            | 3.3            |                                  |
| 2000 | 8     | 28  | 5    | 16     | 48     | 42.98            | 25.41             | 10            | 4.2            |                                  |

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 2000 | 8     | 28  | 5    | 26     | 0      | 43               | 25.41             | 10            | 3.5            |                                  |
| 2000 | 9     | 22  | 8    | 48     | 53     | 41.63            | 24.05             | 15            | 3.9            |                                  |
| 2000 | 10    | 13  | 17   | 34     | 7      | 41.96            | 23.22             | 9             | 3.4            |                                  |
| 2000 | 10    | 25  | 23   | 6      | 4      | 42.85            | 22.91             | 10            | 4.0            |                                  |
| 2000 | 10    | 25  | 23   | 7      | 12     | 42.86            | 22.81             | 10            | 3.6            |                                  |
| 2000 | 10    | 26  | 22   | 31     | 43     | 42.19            | 25.2              | 8             | 3.2            |                                  |
| 2000 | 11    | 3   | 17   | 33     | 2      | 41.71            | 24.68             | 10            | 3.4            |                                  |
| 2000 | 11    | 18  | 4    | 1      | 54     | 41.85            | 22.91             | 15            | 3.3            |                                  |
| 2000 | 11    | 29  | 12   | 26     | 14     | 41.05            | 23.29             | 3             | 3.7            |                                  |
| 2000 | 11    | 29  | 13   | 45     | 8      | 41.07            | 23.29             | 2             | 3.6            |                                  |
| 2000 | 12    | 5   | 12   | 38     | 30     | 43.11            | 27.54             | 6             | 3.5            |                                  |
| 2000 | 12    | 6   | 12   | 21     | 18     | 41.31            | 23.54             | 16            | 3.4            |                                  |
| 2000 | 12    | 7   | 14   | 38     | 37     | 41.8             | 23.8              | 2             | 3.2            |                                  |
| 2000 | 12    | 27  | 18   | 31     | 18     | 41.95            | 23.19             | 8             | 3.2            |                                  |
| 2001 | 2     | 7   | 1    | 41     | 43     | 44.1             | 25.47             | 10            | 3.2            |                                  |
| 2001 | 3     | 5   | 14   | 15     | 31     | 42.23            | 23.32             | 5             | 3.8            |                                  |
| 2001 | 3     | 5   | 14   | 16     | 7      | 42.22            | 23.29             | 10            | 3.3            |                                  |
| 2001 | 3     | 24  | 13   | 7      | 43     | 41.07            | 28.47             | 8             | 3.7            |                                  |
| 2001 | 4     | 12  | 22   | 29     | 22     | 42.76            | 28.11             | 12            | 3.9            |                                  |
| 2001 | 4     | 13  | 22   | 29     | 23     | 42.78            | 28.01             | 15            | 3.5            |                                  |
| 2001 | 5     | 23  | 7    | 23     | 4      | 41.8             | 22.82             | 2             | 3.2            |                                  |
| 2001 | 6     | 19  | 20   | 56     | 12     | 43.89            | 27.54             | 13            | 3.3            |                                  |
| 2001 | 7     | 16  | 11   | 51     | 27     | 42.74            | 23.73             | 11            | 3.4            |                                  |
| 2001 | 7     | 26  | 17   | 52     | 2      | 41.38            | 23.59             | 14            | 3.2            |                                  |
| 2001 | 7     | 29  | 20   | 10     | 29     | 43.98            | 26.7              | 2             | 3.3            |                                  |
| 2001 | 8     | 8   | 0    | 58     | 16     | 42.55            | 26.48             | 15            | 4.1            | 5                                |
| 2001 | 8     | 9   | 1    | 44     | 2      | 42.65            | 26.39             | 5             | 3.8            |                                  |
| 2001 | 8     | 9   | 4    | 0      | 5      | 42.54            | 26.49             | 16            | 3.4            |                                  |
| 2001 | 8     | 12  | 15   | 39     | 56     | 41.96            | 23.12             | 9             | 3.2            |                                  |
| 2001 | 8     | 13  | 14   | 26     | 12     | 42.56            | 26.48             | 16            | 4.8            | 5                                |
| 2001 | 8     | 15  | 6    | 18     | 52     | 42.56            | 26.49             | 20            | 3.2            |                                  |
| 2001 | 8     | 15  | 19   | 7      | 56     | 41.69            | 28.23             | 10            | 3.3            |                                  |
| 2001 | 8     | 26  | 3    | 38     | 4      | 41.89            | 23.18             | 20            | 3.3            |                                  |
| 2001 | 10    | 3   | 9    | 42     | 11     | 42.57            | 26.51             | 14            | 3.3            |                                  |
| 2002 | 2     | 4   | 19   | 45     | 42     | 42.12            | 23.39             | 2             | 3.2            |                                  |
| 2002 | 2     | 18  | 10   | 19     | 19     | 42.03            | 23.33             | 10            | 4.4            | 5                                |
| 2002 | 2     | 18  | 10   | 44     | 52     | 42.03            | 23.31             | 4             | 3.5            |                                  |
| 2002 | 2     | 21  | 22   | 50     | 40     | 41.25            | 26.99             | 20            | 3.3            |                                  |
| 2002 | 3     | 8   | 13   | 31     | 26     | 41.05            | 23.42             | 5             | 3.9            |                                  |
| 2002 | 3     | 18  | 17   | 2      | 35     | 42.76            | 28.1              | 18            | 3.5            |                                  |
| 2002 | 3     | 27  | 8    | 28     | 38     | 41.13            | 24.59             | 9             | 3.3            |                                  |

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 2002 | 4     | 5   | 13   | 13     | 58     | 42.05            | 24.83             | 11            | 4.6            | 6                                |
| 2002 | 4     | 5   | 13   | 17     | 0      | 42.06            | 24.88             | 13            | 3.5            |                                  |
| 2002 | 4     | 5   | 14   | 22     | 4      | 42.07            | 24.84             | 13            | 3.4            |                                  |
| 2002 | 4     | 5   | 23   | 22     | 5      | 42.06            | 24.85             | 2             | 3.2            |                                  |
| 2002 | 4     | 6   | 1    | 10     | 57     | 42.04            | 24.81             | 10            | 4.0            |                                  |
| 2002 | 4     | 6   | 5    | 47     | 7      | 42.06            | 24.83             | 18            | 4.1            |                                  |
| 2002 | 4     | 6   | 7    | 48     | 46     | 42.05            | 24.83             | 8             | 3.9            |                                  |
| 2002 | 4     | 6   | 7    | 53     | 5      | 42.05            | 24.81             | 11            | 3.2            |                                  |
| 2002 | 4     | 8   | 4    | 38     | 45     | 42.03            | 24.83             | 10            | 3.4            |                                  |
| 2002 | 4     | 11  | 1    | 45     | 27     | 43.13            | 27.44             | 12            | 3.3            |                                  |
| 2002 | 6     | 12  | 20   | 25     | 37     | 42.6             | 23.32             | 6             | 3.4            |                                  |
| 2002 | 6     | 15  | 20   | 30     | 44     | 41.23            | 24.09             | 11            | 3.2            |                                  |
| 2002 | 7     | 23  | 3    | 27     | 13     | 42.9             | 28.36             | 20            | 3.2            |                                  |
| 2002 | 7     | 31  | 4    | 5      | 51     | 41.15            | 22.95             | 11            | 4.6            |                                  |
| 2002 | 8     | 2   | 9    | 37     | 22     | 44.42            | 22.02             | 8             | 4.2            |                                  |
| 2002 | 8     | 2   | 21   | 44     | 27     | 41.13            | 25.48             | 13            | 3.3            |                                  |
| 2002 | 9     | 3   | 19   | 49     | 28     | 42.68            | 23.11             | 12            | 3.5            | 4.5                              |
| 2002 | 9     | 4   | 20   | 39     | 11     | 41.75            | 23.8              | 8             | 3.8            |                                  |
| 2002 | 9     | 18  | 9    | 9      | 17     | 42.19            | 23.23             | 8             | 3.5            |                                  |
| 2002 | 10    | 18  | 17   | 2      | 35     | 42.72            | 28.09             | 10            | 3.4            |                                  |
| 2002 | 10    | 26  | 16   | 45     | 9      | 41.85            | 22.82             | 10            | 3.4            |                                  |
| 2002 | 11    | 2   | 4    | 51     | 39     | 41.66            | 24.63             | 12            | 3.2            |                                  |
| 2002 | 11    | 13  | 6    | 13     | 1      | 41.28            | 23.97             | 20            | 3.2            |                                  |
| 2002 | 11    | 17  | 3    | 15     | 12     | 41.82            | 25.47             | 14            | 3.3            |                                  |
| 2002 | 11    | 18  | 10   | 54     | 37     | 41.81            | 25.44             | 14            | 3.4            |                                  |
| 2003 | 1     | 14  | 8    | 3      | 8      | 41.15            | 24.5              | 7             | 3.9            |                                  |
| 2003 | 1     | 17  | 18   | 54     | 47     | 41.99            | 23.25             | 13            | 3.2            |                                  |
| 2003 | 1     | 20  | 18   | 8      | 29     | 41.97            | 23.28             | 2             | 3.5            |                                  |
| 2003 | 2     | 8   | 18   | 2      | 33     | 41.37            | 23.21             | 10            | 3.2            |                                  |
| 2003 | 2     | 11  | 0    | 53     | 9      | 41.63            | 23.41             | 2             | 3.2            |                                  |
| 2003 | 3     | 5   | 6    | 39     | 13     | 44.37            | 27.18             | 12            | 3.2            |                                  |
| 2003 | 4     | 29  | 3    | 52     | 29     | 41.58            | 22.55             | 2             | 3.4            |                                  |
| 2003 | 5     | 3   | 21   | 3      | 6      | 41.86            | 22.95             | 15            | 3.5            |                                  |
| 2003 | 5     | 18  | 1    | 49     | 7      | 42.69            | 26.51             | 11            | 3.9            | 4.5                              |
| 2003 | 6     | 9   | 9    | 14     | 43     | 41.68            | 23.4              | 13            | 4.0            | 4.5                              |
| 2003 | 6     | 9   | 9    | 18     | 20     | 41.63            | 23.39             | 19            | 3.2            |                                  |
| 2003 | 6     | 20  | 9    | 11     | 27     | 42.5             | 26.42             | 15            | 3.2            |                                  |
| 2003 | 7     | 7   | 7    | 15     | 21     | 41.67            | 24.88             | 10            | 3.3            |                                  |
| 2003 | 7     | 27  | 22   | 44     | 15     | 42.88            | 22.16             | 8             | 3.9            |                                  |
| 2003 | 7     | 31  | 1    | 0      | 7      | 41.8             | 22.84             | 10            | 3.4            |                                  |
| 2003 | 8     | 15  | 6    | 34     | 19     | 41.86            | 22.87             | 2             | 3.4            |                                  |

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 2003 | 8     | 16  | 4    | 54     | 26     | 42.42            | 26.17             | 12            | 3.3            |                                  |
| 2003 | 10    | 30  | 9    | 5      | 37     | 41.35            | 23.46             | 20            | 3.2            |                                  |
| 2003 | 11    | 9   | 17   | 51     | 12     | 41.96            | 23.22             | 7             | 4.0            | 4.5                              |
| 2003 | 11    | 15  | 14   | 11     | 8      | 42.09            | 24.87             | 13            | 3.4            |                                  |
| 2003 | 12    | 10  | 10   | 22     | 52     | 41.95            | 23.18             | 6             | 3.4            |                                  |
| 2003 | 12    | 17  | 23   | 15     | 13     | 43.16            | 27.45             | 9             | 4.8            | 6.5                              |
| 2004 | 2     | 13  | 18   | 54     | 50     | 42.26            | 25.4              | 9             | 3.2            |                                  |
| 2004 | 4     | 9   | 14   | 27     | 50     | 42.98            | 22                | 5             | 3.9            |                                  |
| 2004 | 4     | 26  | 2    | 10     | 46     | 42.14            | 25.98             | 15            | 3.3            |                                  |
| 2004 | 4     | 26  | 11   | 58     | 12     | 41.98            | 23.22             | 5             | 3.3            |                                  |
| 2004 | 4     | 26  | 13   | 22     | 21     | 41.92            | 23.23             | 16            | 3.8            |                                  |
| 2004 | 5     | 5   | 3    | 44     | 10     | 41.65            | 26.59             | 14            | 3.2            |                                  |
| 2004 | 5     | 10  | 3    | 17     | 40     | 42.08            | 24.11             | 8             | 3.7            |                                  |
| 2004 | 5     | 14  | 11   | 9      | 36     | 43.54            | 26.45             | 3             | 4.1            | 5                                |
| 2004 | 6     | 7   | 5    | 53     | 3      | 43.61            | 28.86             | 10            | 3.3            |                                  |
| 2004 | 6     | 9   | 14   | 7      | 12     | 41.16            | 25.11             | 8             | 3.4            |                                  |
| 2004 | 6     | 10  | 12   | 45     | 39     | 41.42            | 23.55             | 11            | 3.5            |                                  |
| 2004 | 6     | 12  | 0    | 10     | 34     | 42.36            | 22.47             | 20            | 3.8            |                                  |
| 2004 | 6     | 22  | 4    | 10     | 14     | 41.82            | 22.43             | 8             | 3.2            |                                  |
| 2004 | 6     | 27  | 11   | 54     | 9      | 41.95            | 23.43             | 9             | 4.2            | 4.5                              |
| 2004 | 6     | 27  | 12   | 6      | 59     | 41.94            | 23.39             | 15            | 3.4            |                                  |
| 2004 | 7     | 1   | 23   | 42     | 36     | 41.92            | 23.31             | 14            | 3.3            |                                  |
| 2004 | 8     | 4   | 9    | 3      | 41     | 41.67            | 23.34             | 16            | 3.3            |                                  |
| 2004 | 8     | 7   | 22   | 8      | 22     | 42.35            | 22.36             | 10            | 3.9            |                                  |
| 2004 | 8     | 13  | 23   | 56     | 31     | 41.13            | 25.1              | 2             | 3.3            |                                  |
| 2004 | 8     | 19  | 21   | 45     | 12     | 41.83            | 22.05             | 10            | 3.5            |                                  |
| 2004 | 9     | 10  | 17   | 46     | 4      | 42.28            | 24.81             | 15            | 4.3            | 4.5                              |
| 2004 | 9     | 18  | 3    | 14     | 23     | 44.11            | 25.49             | 6             | 3.3            |                                  |
| 2004 | 11    | 3   | 4    | 18     | 36     | 41.96            | 23.17             | 16            | 3.7            |                                  |
| 2004 | 12    | 14  | 23   | 18     | 47     | 41.17            | 24.26             | 20            | 3.2            |                                  |
| 2005 | 2     | 12  | 17   | 33     | 32     | 42.22            | 25.08             | 11            | 3.5            |                                  |
| 2005 | 2     | 14  | 0    | 35     | 37     | 41.94            | 23.06             | 18            | 3.3            |                                  |
| 2005 | 2     | 14  | 0    | 44     | 2      | 41.95            | 23.08             | 17            | 3.9            |                                  |
| 2005 | 3     | 16  | 21   | 7      | 15     | 41.98            | 23.25             | 8             | 3.3            |                                  |
| 2005 | 3     | 19  | 2    | 21     | 41     | 41.36            | 22.65             | 9             | 3.3            |                                  |
| 2005 | 3     | 19  | 3    | 27     | 12     | 41.27            | 22.42             | 9             | 3.3            |                                  |
| 2005 | 3     | 21  | 3    | 17     | 35     | 41.32            | 22.6              | 3             | 3.2            |                                  |
| 2005 | 4     | 13  | 18   | 52     | 23     | 41.36            | 22.56             | 1             | 3.3            |                                  |
| 2005 | 4     | 24  | 9    | 26     | 18     | 41.36            | 22.68             | 10            | 3.8            |                                  |
| 2005 | 7     | 6   | 23   | 26     | 22     | 41.08            | 26.72             | 20            | 3.2            |                                  |
| 2005 | 7     | 25  | 19   | 41     | 49     | 41.88            | 22.19             | 10            | 3.5            |                                  |

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 2005 | 8     | 4   | 7    | 50     | 24     | 41.82            | 22.86             | 2             | 3.2            |                                  |
| 2005 | 9     | 8   | 3    | 1      | 51     | 41.95            | 23.3              | 2             | 3.2            |                                  |
| 2005 | 10    | 16  | 7    | 1      | 12     | 41.81            | 22.64             | 9             | 3.5            |                                  |
| 2005 | 10    | 19  | 8    | 54     | 37     | 41.88            | 24.05             | 11            | 3.7            |                                  |
| 2005 | 10    | 31  | 16   | 54     | 47     | 44.1             | 26.38             | 20            | 3.2            |                                  |
| 2005 | 12    | 3   | 20   | 31     | 43     | 42.37            | 23.62             | 20            | 3.2            |                                  |
| 2006 | 1     | 13  | 21   | 36     | 47     | 41.2             | 23.09             | 13            | 3.4            |                                  |
| 2006 | 1     | 20  | 23   | 9      | 26     | 42.69            | 26.52             | 13            | 4.2            |                                  |
| 2006 | 2     | 4   | 21   | 33     | 22     | 41.87            | 22.95             | 20            | 4.1            |                                  |
| 2006 | 2     | 4   | 22   | 50     | 8      | 43.44            | 27.6              | 12            | 3.2            |                                  |
| 2006 | 2     | 15  | 21   | 50     | 32     | 41.88            | 22.93             | 13            | 3.6            |                                  |
| 2006 | 2     | 16  | 5    | 47     | 22     | 41.87            | 22.02             | 10            | 3.5            |                                  |
| 2006 | 2     | 20  | 17   | 20     | 9      | 41.69            | 25.48             | 13            | 4.7            | 6                                |
| 2006 | 2     | 20  | 17   | 22     | 55     | 41.69            | 25.51             | 2             | 3.5            |                                  |
| 2006 | 2     | 20  | 17   | 43     | 26     | 41.68            | 25.46             | 13            | 3.4            |                                  |
| 2006 | 2     | 20  | 18   | 29     | 16     | 41.64            | 25.54             | 14            | 3.2            |                                  |
| 2006 | 2     | 21  | 15   | 20     | 59     | 41.64            | 25.52             | 15            | 3.7            |                                  |
| 2006 | 2     | 23  | 18   | 22     | 7      | 42.66            | 24.73             | 12            | 3.2            |                                  |
| 2006 | 2     | 23  | 22   | 1      | 26     | 41.71            | 25.47             | 12            | 3.2            |                                  |
| 2006 | 2     | 24  | 10   | 36     | 40     | 41.72            | 25.47             | 20            | 3.3            |                                  |
| 2006 | 2     | 24  | 13   | 35     | 0      | 41.69            | 25.49             | 17            | 3.4            |                                  |
| 2006 | 3     | 14  | 8    | 6      | 48     | 41.7             | 25.45             | 12            | 3.7            |                                  |
| 2006 | 3     | 14  | 8    | 39     | 4      | 41.72            | 25.45             | 10            | 3.5            |                                  |
| 2006 | 3     | 17  | 0    | 56     | 11     | 42.88            | 23.46             | 16            | 3.2            |                                  |
| 2006 | 4     | 27  | 12   | 38     | 14     | 42.57            | 23.37             | 2             | 3.2            |                                  |
| 2006 | 5     | 3   | 19   | 40     | 34     | 41.96            | 23.19             | 5             | 3.5            |                                  |
| 2006 | 5     | 5   | 19   | 44     | 35     | 41.96            | 23.18             | 8             | 3.4            |                                  |
| 2006 | 5     | 10  | 7    | 29     | 56     | 42.97            | 22.96             | 10            | 3.8            |                                  |
| 2006 | 5     | 10  | 9    | 31     | 6      | 42.46            | 26.13             | 7             | 3.5            |                                  |
| 2006 | 5     | 14  | 5    | 8      | 0      | 41.64            | 25.52             | 9             | 3.2            |                                  |
| 2006 | 6     | 2   | 7    | 20     | 26     | 41.98            | 23.23             | 8             | 3.2            |                                  |
| 2006 | 7     | 15  | 23   | 29     | 6      | 41.24            | 25.29             | 2             | 3.2            |                                  |
| 2006 | 7     | 18  | 7    | 41     | 29     | 41.1             | 22.72             | 10            | 3.2            |                                  |
| 2006 | 7     | 22  | 20   | 2      | 10     | 42.24            | 24.14             | 20            | 3.3            |                                  |
| 2006 | 8     | 1   | 13   | 15     | 28     | 41.7             | 25.44             | 9             | 3.3            |                                  |
| 2006 | 8     | 5   | 5    | 38     | 13     | 41.96            | 23.2              | 14            | 3.3            |                                  |
| 2006 | 8     | 7   | 2    | 44     | 34     | 41.95            | 22.94             | 15            | 3.4            |                                  |
| 2006 | 8     | 13  | 2    | 9      | 55     | 41.76            | 23.69             | 13            | 3.2            |                                  |
| 2006 | 10    | 3   | 14   | 33     | 56     | 41.22            | 22.4              | 20            | 3.4            |                                  |
| 2006 | 11    | 20  | 1    | 2      | 26     | 41.86            | 22.73             | 7             | 4.0            |                                  |
| 2006 | 11    | 22  | 18   | 43     | 25     | 41.79            | 22.37             | 8             | 3.3            |                                  |

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 2007 | 2     | 19  | 21   | 34     | 3      | 41.06            | 25.02             | 1             | 3.2            |                                  |
| 2007 | 4     | 10  | 3    | 15     | 50     | 41.25            | 25.58             | 10            | 3.2            |                                  |
| 2007 | 5     | 12  | 13   | 45     | 52     | 42.86            | 26.74             | 6             | 3.4            |                                  |
| 2007 | 7     | 15  | 4    | 57     | 31     | 41.28            | 24                | 7             | 3.4            |                                  |
| 2007 | 8     | 3   | 19   | 32     | 40     | 41.58            | 23.63             | 15            | 3.7            |                                  |
| 2007 | 8     | 16  | 2    | 31     | 18     | 41.06            | 24.11             | 5             | 3.3            |                                  |
| 2007 | 8     | 18  | 10   | 32     | 3      | 41.75            | 22.88             | 20            | 3.3            |                                  |
| 2007 | 9     | 14  | 19   | 58     | 19     | 41.94            | 23.15             | 0             | 3.5            |                                  |
| 2007 | 9     | 15  | 14   | 40     | 37     | 41.94            | 23.14             | 10            | 3.3            |                                  |
| 2007 | 10    | 4   | 23   | 47     | 40     | 42.99            | 22.43             | 2             | 3.3            |                                  |
| 2007 | 12    | 1   | 20   | 23     | 42     | 41.36            | 22.73             | 3             | 3.2            |                                  |
| 2007 | 12    | 7   | 4    | 40     | 12     | 41.78            | 28.35             | 7             | 3.7            |                                  |
| 2007 | 12    | 10  | 17   | 15     | 15     | 42.12            | 25.16             | 10            | 3.2            |                                  |
| 2008 | 1     | 25  | 10   | 10     | 30     | 42.49            | 26.11             | 13            | 3.4            |                                  |
| 2008 | 1     | 29  | 5    | 29     | 35     | 43.26            | 26                | 4             | 3.3            | 4.5                              |
| 2008 | 3     | 15  | 21   | 50     | 51     | 42.6             | 22.43             | 8             | 3.4            |                                  |
| 2008 | 3     | 24  | 12   | 46     | 48     | 41.98            | 23.25             | 2             | 3.5            |                                  |
| 2008 | 4     | 15  | 3    | 43     | 10     | 42.89            | 25.36             | 10            | 4.6            | 5.5                              |
| 2008 | 4     | 15  | 18   | 2      | 57     | 42.9             | 25.34             | 13            | 3.2            |                                  |
| 2008 | 4     | 18  | 21   | 12     | 14     | 44.12            | 24.36             | 9             | 3.2            |                                  |
| 2008 | 5     | 6   | 0    | 20     | 57     | 41.64            | 23.54             | 10            | 3.6            |                                  |
| 2008 | 5     | 12  | 10   | 11     | 55     | 43.23            | 26.07             | 12            | 4.5            | 4.5                              |
| 2008 | 6     | 22  | 18   | 43     | 53     | 41.95            | 22.99             | 20            | 3.5            |                                  |
| 2008 | 6     | 23  | 19   | 1      | 48     | 41.92            | 23.08             | 13            | 3.6            |                                  |
| 2008 | 8     | 9   | 3    | 25     | 45     | 42.67            | 23.38             | 14            | 3.4            |                                  |
| 2008 | 8     | 31  | 17   | 22     | 43     | 42.4             | 25.93             | 6             | 3.2            |                                  |
| 2008 | 9     | 2   | 1    | 57     | 26     | 41.62            | 24.04             | 4             | 3.3            |                                  |
| 2008 | 9     | 11  | 20   | 14     | 48     | 41.38            | 22.39             | 2             | 3.3            |                                  |
| 2008 | 10    | 6   | 16   | 40     | 1      | 41.09            | 25.76             | 5             | 3.2            |                                  |
| 2008 | 11    | 5   | 7    | 36     | 54     | 43.14            | 27.48             | 4             | 4.0            | 4.5                              |
| 2008 | 11    | 15  | 20   | 8      | 19     | 42.66            | 23.33             | 12            | 3.6            | 5                                |
| 2008 | 11    | 16  | 5    | 3      | 4      | 42.63            | 23.4              | 8             | 3.3            |                                  |
| 2008 | 12    | 6   | 9    | 0      | 35     | 41.67            | 23.94             | 12            | 3.6            |                                  |
| 2008 | 12    | 6   | 9    | 23     | 11     | 41.67            | 23.93             | 13            | 3.3            |                                  |
| 2008 | 12    | 24  | 5    | 0      | 44     | 41.69            | 23.85             | 20            | 3.3            |                                  |
| 2009 | 1     | 27  | 21   | 23     | 38     | 41.56            | 27.99             | 2             | 3.3            |                                  |
| 2009 | 2     | 4   | 13   | 31     | 17     | 42.59            | 23.98             | 17            | 3.8            |                                  |
| 2009 | 2     | 5   | 15   | 27     | 21     | 41.48            | 27.51             | 10            | 3.8            |                                  |
| 2009 | 2     | 6   | 13   | 18     | 19     | 41.57            | 23.48             | 18            | 3.2            |                                  |
| 2009 | 2     | 7   | 18   | 39     | 28     | 42.84            | 25.2              | 2             | 3.7            |                                  |
| 2009 | 3     | 9   | 17   | 19     | 0      | 42.59            | 27.01             | 15            | 3.2            |                                  |

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 2009 | 4     | 1   | 11   | 15     | 29     | 41.81            | 22.66             | 20            | 3.2            |                                  |
| 2009 | 4     | 1   | 21   | 37     | 55     | 41.75            | 22.87             | 20            | 3.2            |                                  |
| 2009 | 4     | 9   | 6    | 35     | 26     | 41.74            | 25.26             | 13            | 3.6            |                                  |
| 2009 | 4     | 14  | 13   | 21     | 59     | 41.79            | 22.9              | 11            | 3.4            |                                  |
| 2009 | 5     | 4   | 7    | 15     | 42     | 41.93            | 23.4              | 9             | 3.8            |                                  |
| 2009 | 5     | 5   | 16   | 11     | 14     | 41.86            | 22.06             | 5             | 4.1            |                                  |
| 2009 | 5     | 5   | 17   | 39     | 33     | 41.85            | 22.11             | 7             | 4.1            |                                  |
| 2009 | 5     | 6   | 14   | 29     | 16     | 41.84            | 22.02             | 10            | 3.7            |                                  |
| 2009 | 5     | 15  | 10   | 19     | 43     | 41.18            | 23.15             | 5             | 3.2            |                                  |
| 2009 | 5     | 16  | 12   | 3      | 33     | 41.09            | 22.43             | 1             | 3.6            |                                  |
| 2009 | 5     | 18  | 10   | 28     | 49     | 41.02            | 25.76             | 3             | 3.2            |                                  |
| 2009 | 5     | 19  | 16   | 49     | 6      | 42.26            | 26.2              | 5             | 3.3            |                                  |
| 2009 | 5     | 23  | 23   | 22     | 34     | 41.3             | 22.73             | 5             | 4.0            |                                  |
| 2009 | 5     | 24  | 14   | 13     | 35     | 41.33            | 22.71             | 8             | 3.5            |                                  |
| 2009 | 5     | 24  | 14   | 29     | 15     | 41.35            | 22.71             | 8             | 4.4            |                                  |
| 2009 | 5     | 24  | 14   | 30     | 11     | 41.26            | 22.73             | 2             | 3.6            |                                  |
| 2009 | 5     | 24  | 14   | 31     | 0      | 41.3             | 22.73             | 10            | 3.7            |                                  |
| 2009 | 5     | 24  | 14   | 34     | 3      | 41.33            | 22.73             | 2             | 4.2            |                                  |
| 2009 | 5     | 24  | 16   | 17     | 50     | 41.32            | 22.74             | 5             | 5.3            | 5                                |
| 2009 | 5     | 24  | 16   | 21     | 5      | 41.27            | 22.72             | 2             | 3.3            |                                  |
| 2009 | 5     | 24  | 16   | 23     | 8      | 41.33            | 22.74             | 5             | 4.5            |                                  |
| 2009 | 5     | 24  | 16   | 24     | 32     | 41.32            | 22.69             | 9             | 3.7            |                                  |
| 2009 | 5     | 24  | 16   | 26     | 55     | 41.34            | 22.71             | 10            | 3.4            |                                  |
| 2009 | 5     | 24  | 16   | 28     | 40     | 41.28            | 22.7              | 12            | 3.2            |                                  |
| 2009 | 5     | 24  | 16   | 31     | 55     | 41.33            | 22.72             | 5             | 3.5            |                                  |
| 2009 | 5     | 24  | 16   | 35     | 23     | 41.31            | 22.71             | 6             | 3.6            |                                  |
| 2009 | 5     | 24  | 16   | 39     | 32     | 41.31            | 22.71             | 12            | 3.2            |                                  |
| 2009 | 5     | 24  | 16   | 43     | 56     | 41.3             | 22.71             | 5             | 3.5            |                                  |
| 2009 | 5     | 24  | 16   | 46     | 2      | 41.32            | 22.7              | 8             | 3.2            |                                  |
| 2009 | 5     | 24  | 16   | 58     | 0      | 41.32            | 22.71             | 8             | 3.6            |                                  |
| 2009 | 5     | 24  | 17   | 1      | 44     | 41.34            | 22.71             | 5             | 3.8            |                                  |
| 2009 | 5     | 24  | 17   | 25     | 10     | 41.31            | 22.7              | 15            | 3.6            |                                  |
| 2009 | 5     | 24  | 17   | 26     | 9      | 41.33            | 22.71             | 8             | 3.2            |                                  |
| 2009 | 5     | 24  | 17   | 46     | 27     | 41.27            | 22.7              | 10            | 3.7            |                                  |
| 2009 | 5     | 24  | 18   | 12     | 54     | 41.36            | 22.71             | 9             | 3.7            |                                  |
| 2009 | 5     | 24  | 18   | 23     | 49     | 41.27            | 22.76             | 5             | 3.4            |                                  |
| 2009 | 5     | 24  | 18   | 50     | 17     | 41.32            | 22.71             | 7             | 4.1            |                                  |
| 2009 | 5     | 24  | 18   | 53     | 14     | 41.28            | 22.72             | 5             | 3.6            |                                  |
| 2009 | 5     | 24  | 19   | 15     | 4      | 41.3             | 22.72             | 0             | 3.5            |                                  |
| 2009 | 5     | 24  | 19   | 37     | 6      | 41.28            | 22.73             | 15            | 4.9            |                                  |
| 2009 | 5     | 24  | 19   | 42     | 58     | 41.27            | 22.73             | 6             | 3.6            |                                  |

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 2009 | 5     | 24  | 19   | 49     | 21     | 41.3             | 22.71             | 0             | 3.5            |                                  |
| 2009 | 5     | 24  | 19   | 50     | 1      | 41.29            | 22.73             | 0             | 3.7            |                                  |
| 2009 | 5     | 24  | 19   | 53     | 51     | 41.26            | 22.7              | 0             | 3.7            |                                  |
| 2009 | 5     | 24  | 20   | 0      | 16     | 41.29            | 22.7              | 0             | 3.4            |                                  |
| 2009 | 5     | 24  | 20   | 3      | 59     | 41.27            | 22.71             | 0             | 3.4            |                                  |
| 2009 | 5     | 24  | 20   | 4      | 38     | 41.26            | 22.7              | 0             | 3.3            |                                  |
| 2009 | 5     | 24  | 20   | 32     | 37     | 41.28            | 22.72             | 0             | 3.6            |                                  |
| 2009 | 5     | 24  | 20   | 34     | 54     | 41.29            | 22.69             | 0             | 3.4            |                                  |
| 2009 | 5     | 24  | 20   | 36     | 53     | 41.32            | 22.7              | 0             | 3.4            |                                  |
| 2009 | 5     | 24  | 20   | 47     | 0      | 41.18            | 22.71             | 0             | 3.5            |                                  |
| 2009 | 5     | 24  | 20   | 48     | 1      | 41.28            | 22.69             | 0             | 3.3            |                                  |
| 2009 | 5     | 24  | 20   | 54     | 3      | 41.31            | 22.72             | 0             | 3.3            |                                  |
| 2009 | 5     | 24  | 21   | 27     | 25     | 41.31            | 22.7              | 0             | 3.7            |                                  |
| 2009 | 5     | 24  | 21   | 45     | 41     | 41.31            | 22.71             | 0             | 3.7            |                                  |
| 2009 | 5     | 24  | 21   | 48     | 47     | 41.31            | 22.73             | 0             | 3.3            |                                  |
| 2009 | 5     | 24  | 22   | 20     | 10     | 41.3             | 22.7              | 8             | 3.2            |                                  |
| 2009 | 5     | 24  | 22   | 46     | 53     | 41.3             | 22.69             | 0             | 3.6            |                                  |
| 2009 | 5     | 25  | 4    | 10     | 2      | 41.33            | 22.74             | 6             | 3.2            |                                  |
| 2009 | 5     | 25  | 4    | 50     | 3      | 41.35            | 22.67             | 10            | 3.7            |                                  |
| 2009 | 5     | 25  | 7    | 59     | 40     | 41.31            | 22.67             | 4             | 4.2            |                                  |
| 2009 | 5     | 25  | 8    | 1      | 17     | 41.28            | 22.68             | 0             | 3.4            |                                  |
| 2009 | 5     | 25  | 8    | 10     | 17     | 41.31            | 22.7              | 9             | 3.2            |                                  |
| 2009 | 5     | 25  | 9    | 31     | 18     | 41.29            | 22.76             | 8             | 3.4            |                                  |
| 2009 | 5     | 25  | 10   | 38     | 37     | 41.28            | 22.68             | 9             | 3.5            |                                  |
| 2009 | 5     | 25  | 12   | 55     | 28     | 41.27            | 22.71             | 9             | 3.5            |                                  |
| 2009 | 5     | 25  | 20   | 24     | 23     | 41.28            | 22.7              | 2             | 3.3            |                                  |
| 2009 | 5     | 26  | 6    | 33     | 58     | 41.31            | 22.7              | 5             | 3.2            |                                  |
| 2009 | 5     | 26  | 6    | 43     | 47     | 41.27            | 22.72             | 7             | 3.3            |                                  |
| 2009 | 5     | 31  | 22   | 7      | 3      | 43.28            | 25.95             | 2             | 4.4            |                                  |
| 2009 | 6     | 1   | 8    | 3      | 39     | 41.27            | 22.73             | 5             | 4.3            |                                  |
| 2009 | 6     | 1   | 23   | 55     | 20     | 41.39            | 22.85             | 13            | 3.5            |                                  |
| 2009 | 6     | 1   | 23   | 55     | 40     | 41.39            | 22.84             | 15            | 3.8            |                                  |
| 2009 | 6     | 2   | 1    | 8      | 39     | 41.28            | 22.66             | 20            | 3.5            |                                  |
| 2009 | 6     | 3   | 4    | 52     | 26     | 41.27            | 22.76             | 10            | 3.2            |                                  |
| 2009 | 6     | 6   | 21   | 40     | 27     | 41.32            | 22.72             | 5             | 3.8            |                                  |
| 2009 | 6     | 6   | 21   | 40     | 57     | 41.28            | 22.7              | 8             | 4.1            |                                  |
| 2009 | 6     | 6   | 22   | 45     | 29     | 41.29            | 22.69             | 8             | 3.2            |                                  |
| 2009 | 6     | 7   | 8    | 37     | 33     | 41.28            | 22.7              | 10            | 3.2            |                                  |
| 2009 | 6     | 8   | 3    | 19     | 17     | 41.3             | 22.7              | 8             | 3.4            |                                  |
| 2009 | 6     | 13  | 9    | 19     | 29     | 41.28            | 22.75             | 7             | 3.4            |                                  |
| 2009 | 6     | 13  | 10   | 58     | 12     | 41.36            | 22.68             | 6             | 3.8            |                                  |

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 2009 | 6     | 15  | 9    | 56     | 44     | 41.31            | 22.76             | 5             | 4.1            |                                  |
| 2009 | 6     | 15  | 10   | 0      | 23     | 41.3             | 22.7              | 16            | 3.5            |                                  |
| 2009 | 6     | 15  | 11   | 24     | 58     | 41.31            | 22.76             | 7             | 3.4            |                                  |
| 2009 | 6     | 17  | 6    | 24     | 49     | 41.32            | 22.75             | 11            | 3.2            |                                  |
| 2009 | 6     | 19  | 4    | 15     | 58     | 41.34            | 22.86             | 10            | 3.6            |                                  |
| 2009 | 6     | 19  | 4    | 49     | 3      | 41.37            | 22.83             | 2             | 3.4            |                                  |
| 2009 | 6     | 20  | 14   | 10     | 40     | 44.29            | 25.75             | 2             | 4.0            |                                  |
| 2009 | 6     | 23  | 0    | 16     | 6      | 41.28            | 22.71             | 10            | 3.5            |                                  |
| 2009 | 6     | 25  | 20   | 17     | 17     | 42.57            | 24.29             | 15            | 3.3            |                                  |
| 2009 | 6     | 26  | 2    | 26     | 28     | 41.47            | 24.92             | 10            | 3.2            |                                  |
| 2009 | 6     | 28  | 20   | 55     | 41     | 41.51            | 24.94             | 10            | 3.4            |                                  |
| 2009 | 7     | 4   | 6    | 0      | 33     | 41.32            | 22.71             | 2             | 3.4            |                                  |
| 2009 | 7     | 4   | 6    | 5      | 48     | 41.36            | 22.7              | 2             | 3.2            |                                  |
| 2009 | 7     | 5   | 10   | 42     | 49     | 41.84            | 22.19             | 3             | 3.3            |                                  |
| 2009 | 7     | 9   | 3    | 31     | 12     | 41.91            | 22.19             | 4             | 3.6            |                                  |
| 2009 | 7     | 19  | 16   | 4      | 23     | 41.3             | 22.72             | 2             | 3.3            |                                  |
| 2009 | 7     | 21  | 3    | 54     | 0      | 41.82            | 25.1              | 4             | 3.7            |                                  |
| 2009 | 7     | 27  | 8    | 39     | 59     | 42.05            | 24.81             | 8             | 4.0            | 5                                |
| 2009 | 7     | 27  | 10   | 43     | 58     | 42.06            | 24.83             | 8             | 3.8            |                                  |
| 2009 | 7     | 27  | 11   | 37     | 36     | 42.06            | 24.85             | 3             | 3.2            |                                  |
| 2009 | 8     | 5   | 7    | 49     | 0      | 43.38            | 28.77             | 8             | 5.0            | 6.5                              |
| 2009 | 8     | 8   | 0    | 56     | 0      | 41.3             | 22.75             | 2             | 3.5            |                                  |
| 2009 | 8     | 8   | 14   | 28     | 45     | 43.43            | 28.65             | 10            | 3.2            |                                  |
| 2009 | 8     | 24  | 9    | 38     | 6      | 41.32            | 22.73             | 2             | 3.6            |                                  |
| 2009 | 8     | 27  | 3    | 47     | 33     | 41.31            | 22.76             | 2             | 3.4            |                                  |
| 2009 | 9     | 15  | 15   | 33     | 51     | 41.29            | 22.76             | 2             | 3.5            |                                  |
| 2009 | 9     | 20  | 23   | 22     | 37     | 41.33            | 22.71             | 2             | 3.4            |                                  |
| 2009 | 9     | 30  | 19   | 8      | 6      | 41.89            | 23.64             | 5             | 3.2            |                                  |
| 2009 | 10    | 2   | 4    | 47     | 15     | 41.45            | 22.6              | 4             | 3.2            |                                  |
| 2009 | 10    | 5   | 10   | 37     | 9      | 41.17            | 23.78             | 7             | 3.5            |                                  |
| 2009 | 10    | 18  | 16   | 20     | 54     | 41.34            | 22.75             | 0             | 3.8            |                                  |
| 2009 | 10    | 22  | 7    | 50     | 42     | 42.69            | 26.27             | 3             | 3.2            |                                  |
| 2009 | 10    | 28  | 10   | 40     | 42     | 42.21            | 26.25             | 7             | 3.3            |                                  |
| 2009 | 10    | 28  | 11   | 1      | 0      | 42.21            | 26.24             | 5             | 3.2            |                                  |
| 2009 | 10    | 29  | 3    | 21     | 20     | 41.69            | 23.91             | 14            | 3.4            |                                  |
| 2009 | 11    | 16  | 17   | 4      | 33     | 42.23            | 26.23             | 6             | 3.4            |                                  |
| 2009 | 11    | 23  | 0    | 13     | 45     | 43.29            | 28.29             | 15            | 3.7            |                                  |
| 2009 | 11    | 30  | 5    | 48     | 7      | 43.43            | 28.67             | 14            | 4.2            | 5                                |
| 2009 | 12    | 6   | 17   | 11     | 44     | 43.4             | 28.73             | 9             | 3.5            |                                  |
| 2009 | 12    | 9   | 18   | 14     | 39     | 41.97            | 23.22             | 2             | 3.3            |                                  |
| 2009 | 12    | 18  | 0    | 46     | 34     | 42.98            | 22.65             | 3             | 3.4            |                                  |

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 2009 | 12    | 26  | 0    | 29     | 28     | 41.29            | 22.77             | 2             | 3.2            |                                  |
| 2009 | 12    | 26  | 9    | 2      | 39     | 41.33            | 22.75             | 2             | 3.3            |                                  |
| 2010 | 1     | 6   | 7    | 29     | 20     | 41.69            | 23.56             | 2             | 3.3            |                                  |
| 2010 | 1     | 10  | 14   | 59     | 14     | 41.96            | 23.18             | 14            | 3.5            |                                  |
| 2010 | 1     | 11  | 16   | 12     | 35     | 42.35            | 23.75             | 4             | 3.2            |                                  |
| 2010 | 2     | 16  | 4    | 37     | 37     | 42.41            | 23.81             | 12            | 3.2            |                                  |
| 2010 | 2     | 22  | 14   | 2      | 35     | 42.25            | 23.38             | 6             | 3.5            |                                  |
| 2010 | 3     | 29  | 12   | 49     | 41     | 42.64            | 26.24             | 15            | 3.2            |                                  |
| 2010 | 4     | 29  | 14   | 15     | 7      | 41.69            | 24.02             | 9             | 3.8            |                                  |
| 2010 | 5     | 16  | 18   | 3      | 33     | 41.85            | 22.73             | 2             | 3.4            |                                  |
| 2010 | 5     | 27  | 7    | 56     | 0      | 41.39            | 22.7              | 2             | 3.7            |                                  |
| 2010 | 6     | 1   | 7    | 20     | 33     | 41.79            | 22.31             | 2             | 3.8            |                                  |
| 2010 | 6     | 15  | 7    | 31     | 10     | 41.23            | 22.98             | 0             | 4.0            |                                  |
| 2010 | 7     | 3   | 15   | 26     | 51     | 41.85            | 24.04             | 5             | 3.6            |                                  |
| 2010 | 7     | 5   | 21   | 7      | 42     | 41.61            | 22.54             | 2             | 3.4            |                                  |
| 2010 | 7     | 10  | 4    | 33     | 40     | 41.7             | 23.89             | 10            | 3.4            |                                  |
| 2010 | 7     | 15  | 9    | 52     | 11     | 42.15            | 23.47             | 5             | 3.4            |                                  |
| 2010 | 7     | 16  | 15   | 0      | 40     | 41.78            | 22.38             | 8             | 3.5            |                                  |
| 2010 | 8     | 12  | 21   | 57     | 50     | 41.87            | 22.21             | 15            | 3.4            |                                  |
| 2010 | 8     | 18  | 19   | 38     | 51     | 41.83            | 22.86             | 12            | 3.2            |                                  |
| 2010 | 8     | 21  | 2    | 34     | 59     | 42.19            | 26.26             | 5             | 4.0            |                                  |
| 2010 | 9     | 10  | 0    | 43     | 37     | 41.87            | 22.1              | 3             | 3.8            |                                  |
| 2010 | 9     | 10  | 7    | 11     | 44     | 42.63            | 23.38             | 4             | 3.6            | 5.5                              |
| 2010 | 9     | 28  | 15   | 34     | 12     | 41.87            | 24.01             | 8             | 3.2            |                                  |
| 2010 | 10    | 7   | 19   | 51     | 21     | 43.16            | 27.5              | 2             | 4.4            | 6                                |
| 2010 | 10    | 12  | 10   | 17     | 20     | 42.82            | 23.03             | 8             | 3.4            |                                  |
| 2010 | 10    | 31  | 9    | 41     | 4      | 41.71            | 24.3              | 5             | 3.2            |                                  |
| 2010 | 11    | 3   | 21   | 56     | 55     | 42.52            | 23.68             | 14            | 3.4            |                                  |
| 2010 | 12    | 10  | 20   | 47     | 23     | 41.83            | 22.25             | 2             | 3.2            |                                  |
| 2011 | 1     | 8   | 11   | 20     | 7      | 42.22            | 26.28             | 8             | 3.3            |                                  |
| 2011 | 1     | 14  | 15   | 49     | 48     | 42.18            | 25.16             | 4             | 3.2            |                                  |
| 2011 | 2     | 7   | 10   | 39     | 25     | 41.48            | 23.14             | 2             | 3.4            |                                  |
| 2011 | 2     | 7   | 16   | 22     | 41     | 41.51            | 23.17             | 2             | 3.4            |                                  |
| 2011 | 2     | 28  | 18   | 28     | 3      | 42.18            | 25.16             | 3             | 3.2            |                                  |
| 2011 | 3     | 18  | 6    | 27     | 16     | 41.06            | 23.38             | 1             | 3.4            |                                  |
| 2011 | 3     | 28  | 18   | 4      | 7      | 42.24            | 26.2              | 7             | 3.5            | 4                                |
| 2011 | 3     | 29  | 2    | 55     | 5      | 41.85            | 22.15             | 2             | 3.2            |                                  |
| 2011 | 3     | 29  | 7    | 28     | 55     | 42.02            | 25.76             | 10            | 3.8            | 4.5                              |
| 2011 | 4     | 18  | 14   | 18     | 0      | 41.23            | 22.89             | 4             | 3.7            |                                  |
| 2011 | 4     | 22  | 21   | 27     | 15     | 43.31            | 28.68             | 25            | 3.4            |                                  |
| 2011 | 5     | 5   | 0    | 17     | 5      | 41.21            | 23.76             | 2             | 3.8            |                                  |

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 2011 | 6     | 6   | 2    | 25     | 25     | 42.22            | 26.24             | 5             | 3.5            | 4.5                              |
| 2011 | 6     | 24  | 17   | 44     | 49     | 42.22            | 26.2              | 4             | 4.2            |                                  |
| 2011 | 6     | 24  | 17   | 47     | 33     | 42.19            | 26.27             | 5             | 3.2            |                                  |
| 2011 | 7     | 23  | 7    | 32     | 18     | 41.92            | 23.19             | 1             | 3.4            |                                  |
| 2011 | 8     | 5   | 2    | 16     | 58     | 42.22            | 26.2              | 9             | 3.7            |                                  |
| 2011 | 8     | 20  | 20   | 50     | 4      | 41.37            | 22.82             | 2             | 3.5            |                                  |
| 2011 | 8     | 24  | 19   | 59     | 4      | 43.9             | 28.2              | 6             | 3.8            |                                  |
| 2011 | 9     | 5   | 1    | 32     | 31     | 43.68            | 22.09             | 10            | 3.5            |                                  |
| 2011 | 10    | 6   | 1    | 55     | 51     | 41.34            | 22.75             | 1             | 3.8            |                                  |
| 2011 | 10    | 6   | 1    | 58     | 32     | 41.34            | 22.76             | 2             | 3.8            |                                  |
| 2011 | 10    | 7   | 12   | 33     | 23     | 41.32            | 22.77             | 0             | 3.6            | 4                                |
| 2011 | 10    | 11  | 19   | 49     | 10     | 43.65            | 28.32             | 28            | 4.0            |                                  |
| 2011 | 10    | 21  | 12   | 26     | 32     | 41.66            | 24.6              | 7             | 3.6            |                                  |
| 2011 | 10    | 30  | 4    | 47     | 17     | 41.63            | 24.6              | 5             | 3.5            |                                  |
| 2011 | 11    | 10  | 22   | 20     | 44     | 41.31            | 23.65             | 4             | 3.2            |                                  |
| 2011 | 11    | 29  | 12   | 20     | 12     | 41.47            | 23.76             | 13            | 3.2            |                                  |
| 2011 | 12    | 18  | 21   | 56     | 26     | 41.35            | 22.75             | 2             | 3.4            |                                  |
| 2012 | 1     | 20  | 22   | 58     | 42     | 41.96            | 23.38             | 5             | 3.8            |                                  |
| 2012 | 2     | 9   | 22   | 34     | 40     | 42.2             | 26.27             | 10            | 3.5            |                                  |
| 2012 | 3     | 7   | 15   | 34     | 23     | 44.56            | 25.95             | 20            | 3.3            | 7.5                              |
| 2012 | 3     | 30  | 20   | 48     | 34     | 42.67            | 26.3              | 4             | 4.1            |                                  |
| 2012 | 5     | 4   | 13   | 20     | 0      | 43.07            | 22.1              | 1             | 3.4            |                                  |
| 2012 | 5     | 10  | 22   | 40     | 29     | 41.38            | 25.72             | 9             | 3.3            |                                  |
| 2012 | 5     | 10  | 22   | 44     | 29     | 41.38            | 25.72             | 9             | 3.3            |                                  |
| 2012 | 5     | 22  | 0    | 0      | 32     | 42.57            | 23.04             | 14            | 5.6            |                                  |
| 2012 | 5     | 22  | 0    | 4      | 53     | 42.57            | 22.98             | 4             | 4.3            |                                  |
| 2012 | 5     | 22  | 0    | 16     | 53     | 42.56            | 23.08             | 17            | 3.2            |                                  |
| 2012 | 5     | 22  | 0    | 43     | 47     | 42.58            | 23.05             | 10            | 3.6            |                                  |
| 2012 | 5     | 22  | 1    | 30     | 50     | 42.58            | 23                | 13            | 4.8            |                                  |
| 2012 | 5     | 22  | 1    | 34     | 31     | 42.53            | 23.09             | 10            | 3.2            |                                  |
| 2012 | 5     | 22  | 2    | 11     | 6      | 42.6             | 22.98             | 11            | 3.4            |                                  |
| 2012 | 5     | 22  | 2    | 13     | 28     | 42.58            | 23.07             | 12            | 4.3            |                                  |
| 2012 | 5     | 22  | 4    | 9      | 58     | 42.57            | 23.04             | 2             | 3.4            |                                  |
| 2012 | 5     | 22  | 4    | 29     | 11     | 42.58            | 23.08             | 15            | 3.3            |                                  |
| 2012 | 5     | 22  | 17   | 7      | 42     | 42.58            | 23.04             | 17            | 3.5            |                                  |
| 2012 | 5     | 23  | 10   | 57     | 25     | 42.54            | 23.11             | 11            | 3.2            |                                  |
| 2012 | 5     | 23  | 11   | 41     | 8      | 42.56            | 23.02             | 2             | 3.3            |                                  |
| 2012 | 5     | 23  | 21   | 59     | 14     | 42.56            | 23.09             | 14            | 3.9            |                                  |
| 2012 | 5     | 29  | 7    | 23     | 31     | 42.58            | 23.01             | 8             | 3.9            |                                  |
| 2012 | 5     | 30  | 5    | 36     | 23     | 42.55            | 23.07             | 9             | 3.6            |                                  |
| 2012 | 6     | 3   | 20   | 8      | 50     | 42.19            | 23.96             | 4             | 3.7            |                                  |

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 2012 | 6     | 16  | 4    | 51     | 2      | 42.57            | 23.07             | 10            | 3.2            |                                  |
| 2012 | 6     | 23  | 8    | 58     | 48     | 41.9             | 23.27             | 2             | 3.6            |                                  |
| 2012 | 7     | 14  | 12   | 52     | 7      | 42.57            | 23.06             | 8             | 4.4            |                                  |
| 2012 | 7     | 22  | 22   | 10     | 51     | 41.32            | 22.8              | 2             | 3.7            |                                  |
| 2012 | 7     | 31  | 0    | 10     | 21     | 42.54            | 23.1              | 7             | 3.4            |                                  |
| 2012 | 8     | 16  | 2    | 11     | 54     | 42.57            | 23.06             | 10            | 3.3            |                                  |
| 2012 | 8     | 19  | 6    | 36     | 14     | 42.32            | 22.22             | 1             | 3.3            |                                  |
| 2012 | 8     | 27  | 16   | 26     | 52     | 41.42            | 22.52             | 7             | 3.8            |                                  |
| 2012 | 9     | 3   | 16   | 54     | 32     | 41.41            | 22.91             | 4             | 3.2            |                                  |
| 2012 | 10    | 4   | 20   | 37     | 16     | 41.38            | 24.06             | 4             | 3.4            |                                  |
| 2012 | 11    | 28  | 15   | 32     | 52     | 41.31            | 22.4              | 12            | 3.6            |                                  |
| 2012 | 12    | 2   | 20   | 11     | 32     | 43.02            | 27.92             | 13            | 3.3            |                                  |
| 2012 | 12    | 3   | 18   | 58     | 39     | 43.44            | 28.68             | 18            | 4.4            | 4.5                              |
| 2013 | 1     | 4   | 1    | 26     | 32     | 41.26            | 23.1              | 6             | 3.3            |                                  |
| 2013 | 2     | 6   | 22   | 45     | 20     | 43.33            | 28.81             | 2             | 3.6            |                                  |
| 2013 | 3     | 19  | 12   | 44     | 33     | 42.24            | 29.31             | 13            | 4.7            |                                  |
| 2013 | 4     | 9   | 6    | 59     | 23     | 42.23            | 26.24             | 6             | 3.4            |                                  |
| 2013 | 4     | 9   | 7    | 3      | 43     | 42.27            | 26.2              | 4             | 3.6            |                                  |
| 2013 | 4     | 9   | 7    | 4      | 9      | 42.27            | 26.21             | 7             | 3.4            |                                  |
| 2013 | 4     | 14  | 14   | 30     | 46     | 42.14            | 26.29             | 2             | 3.2            |                                  |
| 2013 | 4     | 29  | 0    | 8      | 0      | 42.23            | 26.26             | 5             | 3.2            |                                  |
| 2013 | 5     | 8   | 9    | 27     | 46     | 41.43            | 23.38             | 8             | 3.5            |                                  |
| 2013 | 5     | 17  | 13   | 40     | 27     | 42.22            | 26.25             | 5             | 3.8            | 4                                |
| 2013 | 5     | 28  | 3    | 28     | 33     | 43.04            | 29.14             | 5             | 3.8            |                                  |
| 2013 | 6     | 6   | 11   | 6      | 4      | 41.97            | 23.11             | 2             | 3.2            |                                  |
| 2013 | 7     | 9   | 17   | 12     | 0      | 42.22            | 26.26             | 10            | 3.8            | 5                                |
| 2013 | 7     | 9   | 18   | 11     | 38     | 42.18            | 26.28             | 8             | 3.8            |                                  |
| 2013 | 7     | 11  | 6    | 29     | 37     | 42.18            | 26.29             | 5             | 3.2            |                                  |
| 2013 | 7     | 27  | 1    | 24     | 26     | 41.97            | 23.28             | 2             | 3.8            |                                  |
| 2013 | 7     | 27  | 1    | 48     | 32     | 41.96            | 23.28             | 2             | 4.0            |                                  |
| 2013 | 7     | 27  | 3    | 17     | 1      | 41.97            | 23.27             | 2             | 3.8            |                                  |
| 2013 | 7     | 27  | 3    | 20     | 10     | 41.97            | 23.27             | 2             | 3.5            |                                  |
| 2013 | 7     | 27  | 3    | 21     | 55     | 41.95            | 23.24             | 2             | 3.9            |                                  |
| 2013 | 7     | 27  | 3    | 51     | 22     | 41.96            | 23.25             | 6             | 3.2            |                                  |
| 2013 | 8     | 9   | 19   | 55     | 17     | 43.93            | 26.98             | 20            | 3.5            |                                  |
| 2013 | 8     | 13  | 6    | 14     | 35     | 43.13            | 27.45             | 5             | 3.9            | 4.5                              |
| 2013 | 8     | 14  | 12   | 52     | 55     | 42.99            | 23.63             | 12            | 3.7            |                                  |
| 2013 | 8     | 28  | 6    | 48     | 50     | 41.62            | 24.05             | 13            | 3.6            |                                  |
| 2013 | 8     | 28  | 8    | 43     | 43     | 41.6             | 24.05             | 15            | 3.6            |                                  |
| 2013 | 8     | 29  | 4    | 6      | 16     | 44.06            | 25.87             | 20            | 3.9            |                                  |
| 2013 | 9     | 8   | 18   | 8      | 1      | 41.66            | 23.95             | 13            | 3.2            |                                  |

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 2013 | 9     | 10  | 18   | 56     | 39     | 43.01            | 23.59             | 10            | 3.3            |                                  |
| 2013 | 9     | 10  | 19   | 28     | 49     | 41.65            | 25.29             | 14            | 3.6            |                                  |
| 2013 | 9     | 20  | 10   | 48     | 11     | 41.84            | 22.86             | 20            | 3.2            |                                  |
| 2013 | 9     | 22  | 12   | 27     | 1      | 42.39            | 23.67             | 15            | 3.8            |                                  |
| 2013 | 10    | 14  | 21   | 44     | 7      | 41.79            | 22.76             | 8             | 3.2            |                                  |
| 2013 | 10    | 26  | 11   | 44     | 20     | 43.41            | 27.69             | 15            | 3.3            |                                  |
| 2013 | 11    | 19  | 16   | 50     | 54     | 41.62            | 24.65             | 17            | 3.2            |                                  |
| 2013 | 12    | 10  | 2    | 35     | 38     | 41.28            | 22.48             | 12            | 3.4            |                                  |
| 2014 | 1     | 3   | 11   | 33     | 34     | 41.28            | 22.74             | 5             | 3.4            |                                  |
| 2014 | 1     | 14  | 15   | 44     | 2      | 41.91            | 24.53             | 17            | 3.3            |                                  |
| 2014 | 1     | 16  | 2    | 1      | 10     | 42.22            | 26.24             | 20            | 3.2            |                                  |
| 2014 | 1     | 29  | 5    | 5      | 11     | 41.92            | 24.54             | 20            | 3.6            |                                  |
| 2014 | 1     | 30  | 9    | 23     | 39     | 42.41            | 23.81             | 11            | 3.2            |                                  |
| 2014 | 2     | 5   | 1    | 56     | 44     | 41.42            | 28.64             | 26            | 3.6            |                                  |
| 2014 | 2     | 20  | 15   | 12     | 0      | 41.69            | 23.83             | 2             | 3.5            |                                  |
| 2014 | 2     | 28  | 15   | 35     | 15     | 41.14            | 25.6              | 8             | 3.4            |                                  |
| 2014 | 3     | 4   | 0    | 49     | 12     | 42.41            | 23.82             | 9             | 3.2            |                                  |
| 2014 | 3     | 11  | 18   | 50     | 48     | 43.12            | 22.04             | 4             | 3.7            |                                  |
| 2014 | 3     | 16  | 23   | 44     | 37     | 41.15            | 24.47             | 12            | 3.3            |                                  |
| 2014 | 3     | 28  | 4    | 41     | 45     | 42.16            | 23.58             | 8             | 3.4            |                                  |
| 2014 | 4     | 5   | 3    | 36     | 48     | 41.82            | 22.83             | 11            | 3.4            |                                  |
| 2014 | 4     | 19  | 16   | 2      | 51     | 42.17            | 25.16             | 13            | 3.4            |                                  |
| 2014 | 5     | 26  | 20   | 39     | 12     | 41.51            | 24.93             | 16            | 3.7            |                                  |
| 2014 | 6     | 24  | 19   | 39     | 53     | 43.85            | 24.51             | 28            | 4.3            | 4                                |
| 2014 | 7     | 8   | 17   | 4      | 28     | 41.18            | 23.13             | 9             | 3.2            |                                  |
| 2014 | 8     | 21  | 4    | 28     | 16     | 41.68            | 24.23             | 6             | 4.1            |                                  |
| 2014 | 10    | 1   | 9    | 47     | 55     | 41.1             | 23.32             | 10            | 3.2            |                                  |
| 2014 | 10    | 5   | 9    | 45     | 2      | 41.04            | 24.29             | 8             | 3.3            |                                  |
| 2014 | 10    | 10  | 20   | 21     | 40     | 42.2             | 25.28             | 9             | 3.4            |                                  |
| 2014 | 11    | 5   | 11   | 0      | 44     | 41.84            | 25.15             | 11            | 3.2            |                                  |
| 2014 | 11    | 7   | 7    | 42     | 9      | 41.04            | 23.4              | 6             | 3.2            |                                  |
| 2014 | 11    | 20  | 12   | 13     | 25     | 41.96            | 23.17             | 14            | 3.4            |                                  |
| 2015 | 1     | 2   | 5    | 50     | 54     | 41.21            | 23.98             | 9             | 3.5            |                                  |
| 2015 | 1     | 14  | 3    | 10     | 54     | 41.21            | 25.79             | 2             | 3.3            |                                  |
| 2015 | 2     | 5   | 6    | 16     | 45     | 42.75            | 26.08             | 12            | 4.2            | 4                                |
| 2015 | 3     | 24  | 20   | 37     | 50     | 41.97            | 23.26             | 14            | 3.2            |                                  |
| 2015 | 3     | 28  | 17   | 29     | 2      | 41.3             | 22.69             | 10            | 3.8            |                                  |
| 2015 | 3     | 28  | 19   | 0      | 30     | 41.3             | 22.74             | 15            | 3.6            |                                  |
| 2015 | 4     | 2   | 2    | 24     | 10     | 42.25            | 26.23             | 11            | 3.2            |                                  |
| 2015 | 4     | 2   | 2    | 27     | 8      | 42.23            | 26.24             | 11            | 3.5            |                                  |
| 2015 | 4     | 2   | 2    | 28     | 45     | 42.21            | 26.29             | 14            | 3.3            |                                  |

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 2015 | 4     | 2   | 2    | 29     | 36     | 42.24            | 26.24             | 8             | 3.2            | 4.5                              |
| 2015 | 4     | 29  | 4    | 40     | 56     | 42.18            | 29.02             | 20            | 4.1            |                                  |
| 2015 | 6     | 7   | 1    | 37     | 47     | 42.18            | 25.2              | 15            | 3.4            |                                  |
| 2015 | 7     | 5   | 4    | 20     | 26     | 41.19            | 24.89             | 12            | 3.4            |                                  |
| 2015 | 7     | 15  | 8    | 30     | 37     | 43.34            | 28.37             | 28            | 4.2            |                                  |
| 2015 | 7     | 16  | 3    | 33     | 42     | 41.96            | 23.27             | 10            | 3.4            |                                  |
| 2015 | 7     | 16  | 10   | 13     | 4      | 42.66            | 26.29             | 10            | 3.4            |                                  |
| 2015 | 7     | 24  | 15   | 42     | 34     | 41.33            | 24.46             | 10            | 3.4            |                                  |
| 2015 | 7     | 28  | 1    | 3      | 47     | 41.27            | 24.47             | 13            | 3.5            |                                  |
| 2015 | 7     | 30  | 9    | 32     | 23     | 42.26            | 24.88             | 15            | 3.2            |                                  |
| 2015 | 8     | 5   | 13   | 53     | 42     | 41.78            | 22.8              | 7             | 3.2            |                                  |
| 2015 | 8     | 16  | 9    | 39     | 5      | 41.42            | 22.46             | 16            | 3.3            |                                  |
| 2015 | 8     | 29  | 12   | 47     | 55     | 41               | 27.64             | 10            | 3.6            |                                  |
| 2015 | 10    | 5   | 0    | 40     | 13     | 42.76            | 23.71             | 15            | 3.3            |                                  |
| 2015 | 10    | 10  | 17   | 6      | 51     | 41.63            | 23.8              | 18            | 3.2            |                                  |
| 2015 | 10    | 20  | 22   | 40     | 28     | 41.6             | 24.01             | 12            | 3.3            | 4                                |
| 2015 | 11    | 14  | 20   | 44     | 11     | 43.4             | 27.27             | 21            | 3.3            |                                  |
| 2015 | 11    | 21  | 0    | 42     | 35     | 41.16            | 22.32             | 2             | 3.6            |                                  |
| 2015 | 12    | 4   | 23   | 4      | 16     | 41.29            | 24.48             | 10            | 3.2            |                                  |
| 2015 | 12    | 15  | 1    | 13     | 39     | 42.43            | 29.52             | 21            | 3.8            |                                  |
| 2016 | 1     | 27  | 21   | 31     | 0      | 43.35            | 28.59             | 13            | 3.6            |                                  |
| 2016 | 2     | 2   | 12   | 10     | 45     | 41.38            | 22.68             | 8             | 3.5            |                                  |
| 2016 | 2     | 28  | 11   | 17     | 17     | 41.46            | 22.84             | 12            | 4.1            |                                  |
| 2016 | 3     | 2   | 23   | 44     | 50     | 41.28            | 24.47             | 13            | 3.4            |                                  |
| 2016 | 4     | 1   | 19   | 51     | 12     | 42.55            | 25.75             | 17            | 3.4            |                                  |
| 2016 | 4     | 18  | 6    | 46     | 14     | 42.51            | 26.03             | 12            | 4.3            |                                  |
| 2016 | 5     | 6   | 2    | 46     | 50     | 41.78            | 22.78             | 12            | 3.4            | 5.5                              |
| 2016 | 5     | 13  | 14   | 6      | 12     | 43.51            | 29.99             | 6             | 3.5            |                                  |
| 2016 | 5     | 22  | 8    | 58     | 30     | 41.6             | 23.27             | 21            | 4.5            |                                  |
| 2016 | 5     | 30  | 21   | 52     | 12     | 41.15            | 24.65             | 10            | 3.2            |                                  |
| 2016 | 6     | 19  | 5    | 54     | 18     | 41.39            | 23.22             | 20            | 3.2            |                                  |
| 2016 | 7     | 11  | 22   | 18     | 51     | 41.15            | 23.76             | 9             | 4.0            |                                  |
| 2016 | 7     | 12  | 0    | 1      | 47     | 41.14            | 23.76             | 9             | 3.9            |                                  |
| 2016 | 9     | 18  | 8    | 28     | 13     | 41.34            | 23.36             | 15            | 3.6            |                                  |
| 2016 | 9     | 18  | 10   | 26     | 45     | 41.3             | 23.33             | 13            | 4.0            |                                  |
| 2016 | 9     | 24  | 22   | 4      | 23     | 41.83            | 22.65             | 2             | 3.2            |                                  |
| 2016 | 9     | 29  | 8    | 41     | 32     | 41.12            | 23.36             | 2             | 3.2            |                                  |
| 2016 | 10    | 17  | 13   | 2      | 33     | 41.29            | 22.7              | 8             | 3.8            |                                  |
| 2016 | 11    | 10  | 4    | 40     | 27     | 41.47            | 23.17             | 16            | 3.5            |                                  |
| 2016 | 11    | 16  | 7    | 38     | 50     | 41.01            | 22.79             | 14            | 3.7            | 6                                |
| 2016 | 11    | 16  | 9    | 15     | 14     | 41.01            | 22.73             | 19            | 4.3            |                                  |

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 2016 | 11    | 19  | 1    | 44     | 20     | 41.01            | 22.76             | 3             | 3.5            |                                  |
| 2016 | 11    | 21  | 8    | 42     | 33     | 41.02            | 22.64             | 6             | 3.2            |                                  |
| 2016 | 11    | 22  | 3    | 47     | 31     | 41.02            | 22.65             | 2             | 3.3            |                                  |
| 2016 | 11    | 24  | 1    | 25     | 38     | 41.03            | 22.75             | 22            | 3.8            |                                  |
| 2016 | 11    | 24  | 1    | 56     | 47     | 41.91            | 22.16             | 13            | 3.2            |                                  |
| 2016 | 12    | 15  | 4    | 4      | 39     | 41.61            | 23.51             | 18            | 3.3            |                                  |
| 2017 | 1     | 3   | 22   | 2      | 32     | 43.2             | 25.83             | 16            | 3.8            | 4.5                              |
| 2017 | 3     | 15  | 11   | 20     | 43     | 41.95            | 23.26             | 13            | 3.3            | 3                                |
| 2017 | 3     | 24  | 17   | 40     | 27     | 42.41            | 23.52             | 13            | 3.2            | 4.5                              |
| 2017 | 4     | 29  | 0    | 7      | 44     | 41.34            | 22.72             | 3             | 3.2            |                                  |
| 2017 | 7     | 29  | 3    | 31     | 39     | 41.02            | 22.75             | 18            | 3.6            |                                  |
| 2017 | 8     | 19  | 13   | 19     | 36     | 43.29            | 26.08             | 14            | 3.2            |                                  |
| 2017 | 8     | 27  | 22   | 12     | 48     | 41.06            | 22.48             | 10            | 3.3            |                                  |
| 2017 | 9     | 14  | 1    | 53     | 18     | 42.58            | 23.03             | 13            | 3.5            | 4                                |
| 2017 | 10    | 4   | 12   | 53     | 24     | 41.83            | 22.83             | 10            | 3.4            |                                  |
| 2017 | 10    | 19  | 8    | 0      | 47     | 41.82            | 22.86             | 20            | 3.2            |                                  |
| 2017 | 10    | 19  | 8    | 27     | 21     | 41.83            | 22.9              | 20            | 3.4            |                                  |
| 2017 | 11    | 10  | 23   | 51     | 5      | 41.04            | 22.78             | 2             | 3.2            |                                  |
| 2017 | 11    | 11  | 4    | 54     | 5      | 42.9             | 23.43             | 17            | 4.0            | 5                                |
| 2017 | 11    | 24  | 12   | 12     | 59     | 43.33            | 27.01             | 13            | 3.2            |                                  |
| 2017 | 11    | 24  | 17   | 26     | 50     | 41.66            | 24.6              | 13            | 3.5            | 4.5                              |
| 2017 | 11    | 26  | 19   | 1      | 31     | 42.7             | 24.4              | 14            | 4.1            | 5                                |
| 2017 | 12    | 7   | 23   | 50     | 14     | 42.19            | 25.19             | 14            | 3.2            |                                  |
| 2017 | 12    | 8   | 4    | 5      | 57     | 41.42            | 23.4              | 15            | 3.9            |                                  |
| 2017 | 12    | 18  | 17   | 51     | 11     | 41.66            | 23.99             | 20            | 3.5            |                                  |
| 2017 | 12    | 29  | 23   | 9      | 19     | 41.82            | 22.83             | 11            | 3.2            |                                  |
| 2018 | 1     | 1   | 22   | 13     | 51     | 41.23            | 22.85             | 11            | 4.3            |                                  |
| 2018 | 1     | 1   | 22   | 16     | 12     | 41.23            | 22.86             | 12            | 4.0            |                                  |
| 2018 | 1     | 1   | 22   | 19     | 12     | 41.21            | 22.86             | 11            | 3.7            |                                  |
| 2018 | 1     | 1   | 23   | 0      | 46     | 41.24            | 22.86             | 12            | 4.0            |                                  |
| 2018 | 1     | 2   | 4    | 24     | 16     | 41.18            | 22.82             | 9             | 5.1            | 5                                |
| 2018 | 1     | 2   | 4    | 28     | 41     | 41.2             | 22.79             | 9             | 4.0            |                                  |
| 2018 | 1     | 2   | 15   | 40     | 14     | 41.22            | 22.84             | 11            | 3.4            |                                  |
| 2018 | 1     | 2   | 17   | 36     | 33     | 41.2             | 22.86             | 13            | 4.5            |                                  |
| 2018 | 1     | 2   | 19   | 23     | 17     | 41.25            | 22.88             | 10            | 3.2            |                                  |
| 2018 | 1     | 5   | 3    | 6      | 13     | 41.29            | 22.86             | 7             | 4.0            |                                  |
| 2018 | 1     | 5   | 9    | 50     | 54     | 41.23            | 22.87             | 20            | 3.5            |                                  |
| 2018 | 1     | 7   | 12   | 32     | 11     | 41.23            | 22.86             | 2             | 3.2            |                                  |
| 2018 | 1     | 7   | 22   | 57     | 8      | 41.23            | 22.87             | 12            | 3.5            |                                  |
| 2018 | 1     | 16  | 3    | 47     | 55     | 41.25            | 22.86             | 20            | 3.3            |                                  |
| 2018 | 2     | 5   | 9    | 13     | 7      | 41.23            | 22.88             | 13            | 4.4            |                                  |

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>w</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 2018 | 2     | 21  | 23   | 41     | 58     | 42.07            | 24.91             | 14            | 4.7            | 5                                |
| 2018 | 2     | 22  | 8    | 3      | 42     | 41.24            | 22.89             | 10            | 3.2            |                                  |
| 2018 | 2     | 22  | 23   | 15     | 4      | 42.05            | 24.89             | 14            | 3.8            | 4                                |
| 2018 | 3     | 7   | 22   | 13     | 38     | 43.14            | 27.48             | 9             | 3.7            | 4.5                              |
| 2018 | 3     | 25  | 15   | 1      | 59     | 41.64            | 26.79             | 16            | 3.7            |                                  |
| 2018 | 4     | 2   | 19   | 23     | 22     | 41.2             | 23.75             | 12            | 3.4            |                                  |
| 2018 | 4     | 10  | 9    | 49     | 22     | 42.1             | 29.31             | 52            | 3.6            |                                  |
| 2018 | 4     | 26  | 0    | 45     | 2      | 42.75            | 29.88             | 20            | 3.6            |                                  |
| 2018 | 5     | 11  | 7    | 26     | 54     | 43.14            | 27.48             | 6             | 3.4            | 4                                |
| 2018 | 5     | 12  | 6    | 30     | 51     | 42.16            | 25.17             | 15            | 3.5            | 4                                |
| 2018 | 6     | 6   | 7    | 38     | 40     | 41.63            | 23.68             | 15            | 3.2            |                                  |
| 2018 | 6     | 18  | 9    | 0      | 29     | 41.79            | 23.74             | 18            | 3.5            | 4                                |
| 2018 | 8     | 2   | 14   | 17     | 37     | 41.69            | 23.6              | 19            | 4.3            | 4.5                              |
| 2018 | 8     | 2   | 15   | 2      | 58     | 41.68            | 23.62             | 7             | 3.3            |                                  |
| 2018 | 8     | 25  | 10   | 3      | 33     | 41.94            | 23.13             | 15            | 3.2            |                                  |
| 2018 | 8     | 30  | 0    | 10     | 40     | 41.39            | 22.7              | 10            | 3.4            |                                  |
| 2018 | 11    | 17  | 12   | 9      | 27     | 41.05            | 23.44             | 11            | 4.1            |                                  |
| 2018 | 11    | 19  | 14   | 35     | 20     | 42.49            | 23.53             | 15            | 3.3            |                                  |
| 2018 | 11    | 30  | 13   | 18     | 43     | 41.03            | 23.46             | 9             | 3.2            |                                  |
| 2019 | 2     | 6   | 5    | 15     | 27     | 41.52            | 22.91             | 13            | 3.4            |                                  |
| 2019 | 2     | 9   | 20   | 59     | 18     | 41.23            | 24.73             | 9             | 3.4            |                                  |
| 2019 | 2     | 27  | 9    | 13     | 35     | 41.22            | 23.73             | 15            | 3.3            |                                  |
| 2019 | 2     | 27  | 16   | 41     | 19     | 41.21            | 23.74             | 13            | 4.0            |                                  |
| 2019 | 3     | 19  | 3    | 30     | 33     | 41.13            | 23.34             | 11            | 3.6            |                                  |
| 2019 | 3     | 25  | 0    | 27     | 53     | 41.95            | 23.28             | 20            | 3.2            |                                  |
| 2019 | 4     | 25  | 1    | 11     | 53     | 41.02            | 22.69             | 16            | 3.2            |                                  |
| 2019 | 4     | 30  | 18   | 22     | 35     | 43.16            | 27.47             | 5             | 3.6            | 4.5                              |
| 2019 | 5     | 24  | 8    | 48     | 13     | 42.12            | 25.74             | 17            | 3.3            |                                  |
| 2019 | 5     | 24  | 17   | 29     | 44     | 41.81            | 22.81             | 11            | 3.3            |                                  |
| 2019 | 6     | 9   | 2    | 26     | 50     | 41.79            | 23.76             | 10            | 3.3            |                                  |
| 2019 | 7     | 15  | 13   | 50     | 19     | 41.83            | 22.86             | 8             | 3.2            |                                  |
| 2019 | 7     | 16  | 19   | 17     | 30     | 41.36            | 22.71             | 8             | 3.4            |                                  |
| 2019 | 8     | 6   | 17   | 56     | 56     | 42.53            | 24.41             | 20            | 3.2            | 3.5                              |
| 2019 | 8     | 10  | 6    | 39     | 40     | 41.95            | 26.43             | 20            | 3.5            | 4                                |
| 2019 | 9     | 22  | 12   | 13     | 22     | 41.63            | 25.34             | 13            | 3.6            | 4                                |
| 2019 | 10    | 14  | 7    | 48     | 26     | 41.33            | 22.66             | 2             | 3.2            |                                  |
| 2019 | 10    | 30  | 15   | 50     | 43     | 41.79            | 22.23             | 10            | 3.2            |                                  |
| 2019 | 11    | 28  | 11   | 37     | 50     | 43.4             | 28.69             | 15            | 3.4            |                                  |
| 2019 | 12    | 29  | 17   | 36     | 52     | 41.96            | 23.47             | 17            | 3.8            | 4                                |
| 2019 | 12    | 30  | 18   | 1      | 40     | 42.17            | 23.55             | 12            | 4.4            | 4.5                              |

## Catalogue of earthquakes in Bulgaria and the surroundings since 2020

| Year | Month | Day | Hour | Minute | Second | Latitude<br>(N°) | Longitude<br>(E°) | Depth<br>(km) | M <sub>W</sub> | I <sub>0</sub> /I <sub>max</sub> |
|------|-------|-----|------|--------|--------|------------------|-------------------|---------------|----------------|----------------------------------|
| 2020 | 1     | 8   | 7    | 15     | 5      | 41.79            | 22.24             | 5             | 3.1            |                                  |
| 2020 | 3     | 1   | 20   | 10     | 45     | 42.95            | 23.32             | 15            | 3.4            | 4                                |
| 2020 | 3     | 5   | 6    | 26     | 1      | 41.44            | 22.64             | 17            | 3.2            |                                  |
| 2020 | 3     | 8   | 19   | 45     | 13     | 42.96            | 23.33             | 15            | 3.6            | 4.5                              |
| 2020 | 3     | 27  | 2    | 51     | 59     | 42.12            | 24.37             | 17            | 3.1            |                                  |
| 2020 | 3     | 29  | 10   | 35     | 27     | 41.78            | 22.25             | 20            | 3.6            |                                  |
| 2020 | 4     | 13  | 23   | 56     | 38     | 41.55            | 28.85             | 32            | 3.8            |                                  |
| 2020 | 4     | 15  | 11   | 17     | 4      | 42.48            | 26.04             | 11            | 3.2            |                                  |
| 2020 | 5     | 1   | 11   | 1      | 39     | 42.23            | 24.87             | 18            | 4.6            | 5.5                              |
| 2020 | 5     | 7   | 17   | 9      | 17     | 42.25            | 24.86             | 14            | 3.3            | 4                                |
| 2020 | 5     | 28  | 20   | 52     | 50     | 41.29            | 22.65             | 12            | 3.6            |                                  |
| 2020 | 6     | 7   | 21   | 32     | 41     | 43.28            | 26.03             | 7             | 3.1            | 4                                |
| 2020 | 6     | 25  | 5    | 42     | 40     | 41.21            | 23.55             | 7             | 3.6            |                                  |
| 2020 | 7     | 21  | 3    | 25     | 38     | 41.35            | 23.56             | 12            | 3.5            |                                  |
| 2020 | 8     | 5   | 3    | 12     | 60     | 41.56            | 25.08             | 12            | 3.3            | 3.5                              |
| 2020 | 8     | 5   | 10   | 24     | 8      | 42.26            | 23.89             | 8             | 3.3            | 3.5                              |
| 2020 | 8     | 13  | 14   | 44     | 38     | 41.84            | 22.71             | 5             | 3.5            |                                  |
| 2020 | 8     | 19  | 10   | 25     | 59     | 41.57            | 28.67             | 10            | 3.1            |                                  |
| 2020 | 8     | 21  | 10   | 0      | 22     | 42.11            | 25.71             | 18            | 3.9            | 4                                |
| 2020 | 9     | 1   | 11   | 31     | 22     | 41.88            | 22.84             | 15            | 3.6            |                                  |
| 2020 | 9     | 1   | 17   | 12     | 33     | 43.66            | 25.76             | 13            | 3.6            | 3.5                              |
| 2020 | 9     | 22  | 13   | 30     | 46     | 42.6             | 26.45             | 12            | 3.3            |                                  |
| 2020 | 10    | 4   | 2    | 51     | 17     | 44.16            | 26.33             | 11            | 3.3            |                                  |
| 2020 | 10    | 15  | 13   | 55     | 12     | 41.03            | 28.9              | 18            | 3.2            |                                  |
| 2020 | 11    | 5   | 5    | 46     | 46     | 41.01            | 28.09             | 6             | 3.4            |                                  |
| 2020 | 12    | 7   | 12   | 20     | 7      | 41.22            | 23.57             | 16            | 3.3            |                                  |