

QUAKE BULLETIN

Monthly Bulletin

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EARTHQUAKE EVENTS:

This database will give the information about the earthquakes that occurred worldwide and India wide in the month of August-2013. The list of the earthquakes is as follows:

Worldwide:

(Source: <http://earthquake.usgs.gov/earthquakes/>)

| Date | Time (UTC) | Lat | Long | Depth (km) | Mw | Location |
|------------|------------|----------|-----------|------------|-----|-----------------------|
| 13/09/2013 | 15:43:15 | 5.78°N | 78.174°W | 12.0 | 6.6 | Mutis, Colombia |
| 16/09/2013 | 02:31:07 | 41.767°S | 174.061°E | 10.0 | 6.5 | Blenheim, New Zealand |
| 21/09/2013 | 12:38:30 | 16.917°N | 99.381°W | 20.0 | 6.2 | San Marcos, Mexico |
| 30/09/2013 | 16:25:02 | 51.610°N | 175.361°W | 33.5 | 7.0 | Adak, Alaska |

India wide:

(Source: Indian Meteorological Department, IMD,
<http://www.imd.gov.in/section/seismo/dynamic/CMONTH.HTM>)

| Date | Time (UTC) | Lat | Long | Depth (km) | Mw | Location |
|------------|------------|--------|--------|------------|-----|--------------------------------|
| 01/09/2013 | 03:35:39 | 26.4°N | 93.5°E | 30 | 3.0 | Karbi Anglong, Assam |
| 03/09/2013 | 08:06:18 | 33.2°N | 75.8°E | 10 | 4.4 | Kishtwar, Jammu & Kashmir |
| 05/09/2013 | 16:40:11 | 17.3°N | 73.9°E | 10 | 4.0 | Koyna Region, Maharashtra |
| 05/09/2013 | 18:11:28 | 33.3°N | 75.7°E | 10 | 4.5 | Kishtwar, Jammu & Kashmir |
| 05/09/2013 | 18:35:42 | 30.9°N | 78.5°E | 11 | 3.5 | Uttarkashi, Uttarakhand |
| 08/09/2013 | 13:40:57 | 25.6°N | 91.9°E | 10 | 3.5 | East Khasi Hills, Meghalaya |
| 09/09/2013 | 11:58:17 | 27.4°N | 92.4°E | 33 | 4.8 | West Kameng, Arunachal Pradesh |
| 23/09/2013 | 13:26:07 | 26.2°N | 79.4°E | 05 | 3.5 | Jalaun, Uttar Pradesh |
| 25/09/2013 | 16:47:40 | 30.9°N | 76.7°E | 10 | 3.0 | Rup Nagar, Punjab |
| 25/09/2013 | 19:28:02 | 26.0°N | 90.5°E | 15 | 3.9 | East Garo Hills |
| 26/09/2013 | 05:30:07 | 24.1°N | 93.3°E | 15 | 3.5 | Churachandpur, Manipur |
| 26/09/2013 | 02:47:43 | 12.7°N | 79.3°E | 05 | 3.3 | Tiruvannamalai, Tamil Nadu |

GROUND MOTION RECORDS:

In our centre around 403 ground motion records are available. Since 1973 the ground motions are available with N-S, E-W and U-D components. The updated ground motions are listed.

(Source: PESMOS-IITR)

| S No | Earthquake | Date | Station | Component |
|------|------------|-------------|-------------|-----------|
| 1 | Bhutan | 21 Sep 2009 | Boko | E-W |
| 2 | Bhutan | 21 Sep 2009 | Boko | N-S |
| 3 | Bhutan | 21 Sep 2009 | Boko | U-D |
| 4 | Bhutan | 21 Sep 2009 | Bongaigaon | E-W |
| 5 | Bhutan | 21 Sep 2009 | Bongaigaon | N-S |
| 6 | Bhutan | 21 Sep 2009 | Bongaigaon | U-D |
| 7 | Bhutan | 21 Sep 2009 | Cooch Vihar | E-W |
| 8 | Bhutan | 21 Sep 2009 | Cooch Vihar | N-S |
| 9 | Bhutan | 21 Sep 2009 | Cooch Vihar | U-D |
| 10 | Bhutan | 21 Sep 2009 | Darjeeling | E-W |
| 11 | Bhutan | 21 Sep 2009 | Darjeeling | N-S |
| 12 | Bhutan | 21 Sep 2009 | Darjeeling | U-D |
| 13 | Bhutan | 21 Sep 2009 | Diphu | E-W |
| 14 | Bhutan | 21 Sep 2009 | Diphu | N-S |
| 15 | Bhutan | 21 Sep 2009 | Diphu | U-D |
| 16 | Bhutan | 21 Sep 2009 | Gangtok | E-W |
| 17 | Bhutan | 21 Sep 2009 | Gangtok | N-S |
| 18 | Bhutan | 21 Sep 2009 | Gangtok | U-D |

The records are available at server ([\\10.2.28.225](http://10.2.28.225))

EERC LIBRARY:

Publications:

The following publications are very useful for research and are available in server

- ❖ Vasudeo Chaudhari., Venkata Dilip Kumar P., and Ramancharla Pradeep Kumar (2013), "Finite element analysis of buried continuous pipeline subjected to fault motion", International Journal of Structural Engineering, Vol. 4, No. 4, pp. 314-331.
- ❖ Sushma Pulikanti., and Ramancharla Pradeep Kumar (2013), "SSI Analysis of Framed Structures Supported on Pile Foundations: A Review", Frontiers in Geotechnical Engineering, Vol. 2, No. 2, pp. 28-38.
- ❖ Ayala D.D., and Speranza S., (2003), "Definition of Collapse Mechanisms and Seismic Vulnerability of Historic Masonry Buildings", Earthquake Spectra, Vol. 19, No. 3, pp.479-509.
- ❖ Calvi G.M., Pinho R., Magenes G., Bommer J.J., Restrepo L.F., and Crowley H., (2006), "Development of Seismic Vulnerability Assessment Methodologies over the Past 30 Years", ISET Journal of Earthquake Technology, Vol. 43, No. 3, pp.75-104.
- ❖ Edoardo Fusco., Andrea Penna., Andrea Prota., Alessandro Galasco., and Gaetano Manfredi (2008), "Seismic Assessment of Historical Natural Stone Masonry Buildings through Non-Linear Analysis", Proceedings of 14th World Conference on Earthquake Engineering, Beijing, China.

- ❖ Romeu Vicente., Sonia Parodi., Sergio Lagomarsino., Humberto Varum., and Mendes Silva (2011), "Seismic vulnerability and risk assessment: case study of the historic city centre of Coimbra, Portugal", Bulletin of Earthquake Engineering, Vol. 9, pp.1067-1096.

Reports:

The following reports are very useful for research and are available in server

- ❖ Wang G and Sitar N (2006)., "Nonlinear Analysis of a Soil-Drilled pier System under Static and Dynamic Axial Loading", PEER Report 2006/06, Pacific Earthquake Engineering Research Centre, College of Engineering, Univ. of California, Berkeley.

The publications and reports are available at server ([\\10.2.28.225](#))