



## Disclaimer

To the extent possible under law, neither the Commonwealth of Australia nor Geoscience Australia will be liable to you on any legal theory (including, without limitation, negligence) or otherwise for any direct, special, indirect, incidental, consequential, punitive, exemplary, or other losses, costs, expenses, or damages arising out of the use of the material on the Earthquakes@GA website. Where a limitation of liability is not allowed in full or in part, this limitation may not apply.

**Date Prepared:** time stamped on the publication under “Solution Status”.

**Expiry date:** The parametric information for each event on the NEAC website is subject to revision periodically. The website always presents the latest revision. All event data are archived and incorporated in the Geoscience Australia Earthquake Catalogue. These data are also made available to several regional and global catalogues.

**Purpose:** This information is intended for public use and general interest, and provides context for an earthquake event that may have been felt. These data are also used in earthquake alerting for the National Earthquake Alerts Centre and the Joint Australian Tsunami Warning Centre.

**Data provenance:** The parametric data representing each earthquake is based on seismic observations sourced from the Australian National Seismograph Network operated by Geoscience Australia as well as from other seismic networks in Australia and overseas, operated by third parties.

**Level of accuracy:** Earthquake parametric data is a mathematical estimate of a real physical phenomenon. The ‘accuracy’ of the parametric data presented is dependent on several factors, including: the physical energy release and radiation pattern of the earthquake, the proximity and azimuthal coverage of the observing seismic stations relative to the earthquake’s true location, the number of observations, the type of observing instrument(s), local noise and other site effects at each observing station, the contributing velocity, dispersion and attenuation models, location and magnitude algorithms

Australian earthquake magnitudes are typically reported as ‘MLa’ (local Australian magnitude). 95% of published Australian earthquakes larger than MLa 2.5 have a magnitude uncertainty less than 0.6 magnitude units. 95% of published Australian earthquakes larger than MLa 2.5 have a reported location uncertainty less than 13 km, noting that actual location is not ‘ground-truthed’ except in circumstances where a surface rupture is identified. Geoscience Australia may use other techniques such as InSAR to refine locations of significant Australian events, where possible.

Magnitudes for regional events in SE Asia, Fiji-Tonga, Kermadec, and New Zealand regions are reported with a range of magnitude types depending on the energy emitted during the earthquake, its location, available station data etc. For magnitude types mb and Mwp, 95% of published regional earthquakes have magnitude uncertainty less than 0.6 magnitude units. Magnitude types Mw and Mww have uncertainties expressed as percentage of misfit of observed waveforms to synthesized waveforms. Across magnitudes Mw and Mww, 95% of published regional earthquakes have misfit less than 50%.

**Known limitations:** The information provided on this website is for general purposes only. Earthquake parametric information is not a measure of, and does not describe, the impact of an earthquake to the community or environment (built or natural). The information provided should not be solely relied upon by any entity for decision-making including, but not limited to, commercial or design decisions. Users of this information should undertake their own due diligence to ensure it is fit for their purpose.

Contact: [clientservices@ga.gov.au](mailto:clientservices@ga.gov.au)

See also: [GA Copyright and Disclaimer](#)