

Energy, magnitude and intensity of tectonic earthquakes

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Abstract: In this introductory and tutorial presentation we explain the basic concepts and quantities to characterize and quantify the energy released by a tectonic earthquake and thus the “size” of the earthquake. We also explain the concept of the macroseismic intensity and the most used macroseismic scales. Eventually we illustrate all the concepts and quantities on the examples of the greatest and most damaging earthquakes.

Key words: energy of tectonic earthquake, classical magnitudes, seismic moment, moment magnitude, macroseismic intensity, macroseismic scales, EMS98

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