

Crustal thermal regime and its relationship to seismogenic layer

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The high-quality database of seismicity of Japan (JMA, Japan Meteorological Agency) and an extensive compilation of thermal measurements are used to quantify the concept of temperature as a fundamental parameter for determining the thickness of the seismogenic zone. Qualitative comparisons between each data of heat flow and geothermal gradient, and the lower limit of crustal earthquake hypocentral distributions beneath the Japanese Islands show that, as expected, the lower limit of seismicity is inversely related to heat flow and geothermal gradient. We show the relationship between large earthquake and thermal structure.