

Asperity Map based on the analysis of historical seismograms: Tohoku version

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In an attempt to examine the characteristic behavior of fault asperities (large slip areas), we studied source processes of large interplate earthquakes occurred in Tohoku district in Japan. In Japan, the seismic observation by strong motion seismometer has been carried out by Japan Meteorological Agency since the beginning of 1900's. We collected these seismograms, and the analysis was made by the conversion of these records in digital data. Based on the analysis, we have made asperity map of Pacific plate in Tohoku. Our result indicates that individual asperity has its own size and location. It may cause an earthquake of the M7 class independently, while earthquake of the M8 class can be caused when several asperities are linked.