

Characteristic behavior of asperity

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During 20th century there occurred many large earthquakes in Japan, which were recorded at observatories of Japan Meteorological Agency (JMA) and Universities. In Japan, the strong motion observation was made from the beginning of 1900's. Using the strong motion record we try to obtain source process of large earthquakes around Japan to make the asperity map. The characteristics of asperity obtained in this study are as follows:(1)The location is fixed in space.(2) The size of asperity is characterized in source regions. (3) Aftershocks occur around the asperity. (4)Episodic slip is often observed to occur in surrounding area of asperity. (5) The spatial distribution of asperities seems to be well correlated with the intensity of the reflected wave from the plate interface, the low seismicity, and the low b-value area.