

日向灘における相似地震活動と準静的すべり(2)

Small repeating earthquake activity and interplate quasi-static slips in the Hyuga-nada, SW Japan (2)

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Abstract

The Hyuga-nada region, a high-angle subduction zone belong the Kyushu-Ryukyu arc, is one of the most seismically active area in Japan. In this region, the Philippine Sea Plate subducts northwestward beneath the Eurasian Plate at a rate of 5 - 7cm/year, and earthquakes with magnitude from 6.5 to 7.5 usually occur at dozens of years interval.

We have reported the small repeating earthquake activity and interplate quasi-static slips in this region [Yamashita et al. (2009)]. Our results show that small repeating earthquake activity and quasi-static slip rate reflects the changing of interplate coupling.

On the plate boundary of the off east Osumi peninsula, an earthquake swarm with $M_{MAX}4.4$ occurred in February 2010. Some small repeating earthquakes occurred in this region before-and-after the swarm activity. Such activities sometimes have occurred in the past decades. Although the long-term average of interplate quasi-static slip rate in this region is roughly comparable to the plate convergence rate, this slip rate exhibit large temporal fluctuation. These series of earthquake activities may indicate the acceleration of quasi-static slip.

We will report on the spatio-temporal change of quasi-static slips in the Hyuga-nada region, especially in the off east Osumi peninsula, revised by analyzing the resent activities of small repeating earthquakes.

Acknowledgments

In this study, we have used the data of Kyushu University, Kagoshima University, Japan Meteorological Agency, University of Tokyo, and Kochi University.

Reference

Yamashita et al. (2009), Eos Trans. AGU, 90(52), Fall Meet. Suppl., S23B-1745.

キーワード:日向灘,相似地震,準静的すべり

Keywords: Hyuga-nada, small repeating earthquake, quasi-static slip