

Fault slip around the initiation point of the 2005 Fukuoka earthquake inferred from focal mechanism data

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Fault slip was found at deeper part of the earthquake fault of the 2005 Fukuoka earthquake by Matsumoto et al. (2012). The slip was estimated by the focal mechanism data of the aftershock, implying post-seismic stress field still has strong heterogeneity at the deeper part. According to studies that estimated fault slip based of GPS data, the co- and post-seismic fault slip only occurred at the shallow part of the fault. These results suggest a possibility that the fault at the deeper part slipped prior to the main shock occurrence and stress accumulated at the initiation point of the earthquake. Based on the GPS data around the area before the earthquake occurrence, No large slip within short term variation less than a day are found, suggesting very slow slip occurred at the deeper part of the fault.

Keywords: Inland earthquake, focal mechanism, fault slip, GPS, 2005 Fukuoka earthquake, stress field