

Stress transferred by the M 7.0 Fukuoka-ken-seiho-oki earthquake: Influence on the Kego fault beneath the city of Fukuoka

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We applied a new method of probabilistic estimate incorporating static stress transfer to the Kego fault that is an active fault and underlies just beneath the city of Fukuoka. We calculated Coulomb stress change on the Kego fault caused by March 20, 2005 M7.0 Fukuoka-ken-seiho-oki earthquake, using a variable slip model proposed by Horikawa (2005). The Coulomb stress on the Kego fault is calculated to have been raised by 2-5 bars on the northern edge of the fault. Together with the paleoseismological data, the earthquake probability for the next 30 years on the Kego fault is now raised up to about 7 % due to the stress transferred from the March 20, 2005 Fukuoka-ken-seiho-oki, Japan, earthquake. Because we do not know the exact elapsed time since the most recent surface-rupturing earthquake on the Kego fault, we suggest additional geological survey on the Kego fault.