Response to the stress state as fault reactivation in SW Japan

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The stress state in the crust plays an important role in the crustal deformation. Especially, fault reactivation is one of the most important phenomena controlled by the crustal stress. The Japanese islands are located in the subduction zone where Philippine See Plate and Pacific Sea Plate are subducting beneath Eurasian Plate. The subducting system generates a heterogeneous stress state in Japanese islands. Previous studies revealed the distribution of the heterogeneous stress state in the Japanese islands (e.g., Seno, 1999; Terakawa and Mat’ sura 2010; Yukutake et al., 2015). On the other hand, many active faults are known in Japan (The Research Group for Active Faults of Japan, 1991) and the distribution and the type of the fault (i.e., normal, reverse and strike fault) are also heterogeneous. In this presentation, we will discuss the relation between the crustal stress and active faults in Japan. Especially, in order to shed right on the response to the stress state as fault reactivation, we consider about the relation between the crustal stress and the non-active faults, which is not recognized as active faults. The contrast of the response to the crustal stress between the active fault and non-active fault will be the clue to understanding the crustal deformation induced by the heterogeneous crustal stress.

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