

The existence of water in the lower crust controls the deformation rate of the crust of island arcs

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In the Japanese island arc, there exist distinct differences in the deformation rate measured by the GPS network and the conductivity structure between in the Chuugoku district and in the Kinki-Chuubu district. These indicates that the existence of water in the lower crust controls the deformation rate of the crust of the island arc.