

## Heterogeneity of $V_p/V_s$ ratio in the crust along Japanese Island arc inferred from local Wadati-diagram

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We applied to local Wadati diagram method to determine  $v_p/v_s$  ratio in the crust beneath Japanese island arc. We use travel time picks for shallower earthquake than 30km occurred from 2003 to 2005 reported by JMA. Least square fittings are done for the data S-P time are less than 8s. We chose accurate results which show smaller error less than 0.025. More than 30,000 results are obtained. To recognize regional features, we plot these data on the map and plot regional  $v_p/v_s$  vs. depth with comparing entire dataset. Clear regionalities are obtained. In Kyushu, larger  $v_p/v_s$  are obtained in comparison with entire data. In contrast,  $v_p/v_s$  in Kinki and Chubu district, values are characterized as smaller. In Shikoku and Kyushu average but concentrated distribution are obtained. We confirmed this method is available to detect larger scale lateral heterogeneity of the  $v_p/v_s$  distribution.