

The decreasing trend of M_2 tidal amplitude observed along northwestern Kyushu

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Observations show that M_2 tidal amplitude is decreasing along the northwestern coast of Kyushu. Using JODC and JMA datasets, we found that this decrease in M_2 tidal amplitude from 1980 to 2018 is 4% on average and that the trend is stronger towards the northwest than the southwest. When we further investigated the M_2 tidal amplitude along the coast of the Japan Sea and the Pacific Ocean, we found the decreasing trend to continue along the coast of Japan Sea but not along the Pacific Ocean. The mechanism responsible for this decreasing trend is still unknown. In this presentation, we plan to show the observed spatial distribution in M_2 tidal amplitude trend and the possible mechanisms using a numerical model.

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