

## Temporal gravity change observed on Izu-Oshima Island in 2010's

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We report on the gravity observation on Izu-Oshima Island during 2010's with the aim of detecting mass movement associated with magma accumulation beneath the island. The gravity measurement campaign was performed at around 30 stations on the island in 2012, 2017 and 2018. The result shows a gravity decrease of ~70 microgal at the southern coastal region and a gravity increase of ~90 microgal at the caldera region during 6 years from 2012 to 2018. To interpret these temporal gravity changes into the magma accumulation, the following two gravity contributions must be properly corrected: (i) the free-air gravity change due to the uplift or subsidence of the observation site; (ii) the disturbances caused by rainfall and groundwater. The former can be monitored by performing relative gravity survey at the four GEONET stations on the island. The latter can be corrected with physical modeling and continuous absolute gravity measurements on the island (Nov. 2019 –Mar. 2020).

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