

## Development of a compact absolute gravimeter (3)

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Absolute gravimeters are useful instruments for detecting crustal deformation and transfer of underground fluid, especially expected for diagnosing volcanic activity.

We have been developing a compact absolute gravimeter based on (1) highly-sampled interferometric fringe signals, (2) an active isolated reference mirror, and (3) numerical correction of the seismic acceleration.

In our research, it was shown that the rotation of the dropping mirror was a major noise source on the measurements. After improving a dropping mechanism, the measurement accuracy reached  $\sim 10^{-5}$  gal detecting clear tidal signals.

The details of the dropping mechanism and the measured data will be presented.