

On-site Frequency Measurements of a Rubidium Oscillator for Gravimeters

*Kazuma Mochizuki^{1,3}, Kazunari Nawa¹, Tomonari Suzuyama²

1. GSJ, AIST, 2. NMIJ, AIST, 3. Shizuoka Univ.

It is important for precise gravity measurement to calibrate the frequency of a rubidium oscillator as a time frequency standard. We demonstrate simple on-site frequency measurement by using a time frequency calibration tool (FT-001A) with a GPS common view method. We equipped one at F-net IGK station, Ishigaki, Japan and measured frequency variation of the internal rubidium oscillator of gPhone gravimeter (S/N 133). As a result, we could measure its frequency with uncertainty of approximately 10^{-12} (0.01 mHz) on the gravity station 2,000 km apart from AIST Tsukuba where UTC(NMIJ) is maintained.