

Measurement of Earth Tidal Strain at Amagase Observatory

Masatake Harada[1], Tamotsu Furuzawa[2], Fumio Ohya[2], Wataru Morii[3], Masaru Yamada[4]

[1] RCEP, DPRI, Kyoto Univ, [2] RCEP,DPRI,Kyoto Univ, [3] RCEP, DPRI, Kyoto-Univ., [4] RCEP, DPRI, Kyoto Univ.

In Amagase Observatory, the continuous observation of ground strain has been carried out since 1967 by "roller" super-invar-bar extensometers. But Takemoto (1975) reported that apparent displacement is smaller than that obtained laser interferometer due to the frictional resistance arising from detector with roller type magnifier. Therefore we have been employing the detector with differential transformer and supporting the super-invar-bar with stainless wire since 1995. In order to define tidal factors, especially O1 and M2 constituents, we used the new system data from January 1, 1997 to December 31, 1999. And we compared the observed tidal factor with theoretical it, which including ocean loading effect.