

Determination of the transfer functions for OSG-057 (Lhasa) and OSG-065 (Wuhan)

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The amplitude response of a cryogenic gravimeter is proved to be frequency-dependent for period shorter than 1000s. Therefore, determination of the transfer function should be carried out before processing the ambient noise data recorded by a cryogenic gravimeter. In this paper, the transfer functions for the OSG-057 at Lhasa station and the OSG-065 at Wuhan station have been experimentally determined by injecting known step-function voltages into the recording system. By analyzing the experiment data, the amplitude responses for period less than 1000s are given for the two OSGs. The time lags (or phase lag) of them are computed with a precision better than 0.01s, which in agreement with the Global Geodynamics Project (GGP) requirements.