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A Basic for Gravity Measurement Performance of Simple Gravimeter Using a Force-Balanced-Type Accelerometer on a Carrier

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The gravity survey is applied often to model a ground structure. Forthis purpose, a spring-type relative gravimeter is usually used. Thoughthis type of gravimeter can provide very accurate data, it is veryexpensive and difficult to handle. In the engineering field, especially,for the estimation of earthquake ground motion, a model of groundstructure is needed for large area. This means that a simple and inexpensive sensor to measure the gravity is required. For this, we began to develop a new gravimeter using a force-balanced-type accelerometer. In this study, we examine basic performance of same sensors. Firstly, we develop a preliminary system and calibrate it. Then, a simple measurements was carried out using a Ferris wheel, and some other carrieres.

Keywords: gravity survey, force-balanced-type accelerometer, mobile carrier, Independent Component Analysis