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Experiments on Long-term Geodetic Monitoring by Low-cost GNSS Receivers and GoGPS Positioning Engine

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Abstract

This paper describes experiments of GNSS-based monitoring by means of different models and brands of low-cost receivers. Single-frequency observations were processed by Open Source goGPS Positioning Engine, in relative positioning mode with respect to a virtual reference station and three physical permanent stations. The experiments were carried out in Osaka, Japan and the results here described cover a timespan of eight months. The daily solutions show standard deviations ranging from about 1mm to 1cm, mainly depending on the base station observations quality.

Academic Discipline and Sub-Disciplines : Geodesy

Keywords : GNSS; low-cost receivers; monitoring; goGPS; Open Source

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