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ABSTRACTS

Monitoring of the church tower in Herrenberg with Low-Cost GNSS

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Keywords: Low Cost GNSS, Monitoring, Deformation Analysis

Abstract

The church tower in Herrenberg (nearby Stuttgart) was monitored with leveling to identify the vertical sinking of the church tower. In recent years, some new cracks can been found on the church tower wall, which could be caused by the horizontal deformation of the church tower. To identify the both horizontal and vertical deformation of the church tower, the Low Cost GNSS receivers were used. The key limitation factor for accuracy of GNSS (for short baselines) is the multipath effect. The influence of the multipath effect should be analyzed and mitigated. Two epochs measurements were realized in May and July 2018, deformation analysis was done and results will be shown in this paper.