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## **A comparative study among computation techniques for deformation analysis based on repeated geodetic observations**

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Considering the relative movement of points on the Earth's surface as a source of information for deformation analysis of the crust via strain analysis, geodetic observations (ground based, and satellite) can provide the required geometrical data. In the literatures so far various computational techniques have been introduced to the deformation analysis based on repeated geodetic observations. In this paper we present a comparative study over those computations techniques. Strain component computations based on displacement vector, strain component computation based on changes in the distances and angles between geodetic network stations in two epoch of time, strain component computation on the topographic surface of the Earth, and strain component computation on the map projection planes are among the those computational techniques that have been studied for their efficiency and reliability in deformation analysis, in this paper.