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Establishment of Permanent GPS Network For Crustal Deformation Monitoring in Iran

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Abstract:

A dense and wide permanent GPS station network has been established in Iran (Tabriz-Tehran-Mashhad) and other active parts of the country by National Cartographic Center of Iran (NCC). Since first of the 2005 this network is designed both for crustal deformation monitoring and to serve as a highly precise geodetic network in Iran and consist of 107 permanent stations in first phase. Average distance between dense parts is about 25 to 30 km.

Since we have collected about 1 year data , we estimated horizontal crustal

Displacement and velocity field with respect to the stable Eurasian plate. This new

Network will bring us more precise information on crystal information and

Geophysical phenomena such as ionosphere disturbances and water vapour too.

Finally this network serves as active controlling system in Iran by GPS.