



Monitoring Yazd subsidence, central Iran, by precise levelling and D-InSAR

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D-InSAR technique has been widely adopted to monitor land subsidence caused by withdrawal of water, oil, gas, and other minerals. Many cities in Iran have seriously suffered from land subsidence caused by ground water over-extracting, that some of them detected by repeated first order precise levelling network. We assessed Yazd subsidence with levelling and InSAR data. However, D-InSAR is liable to be contaminated by atmosphere delay, temporal decorrelation and baseline errors. As these errors cannot be removed by SAR data processing, some auxiliary data such as leveling data and DEM data have been introduced into D-InSAR data processing. A linear subsidence detected from InSAR time series. Analysis of groundwater tables of piezometric records at this area indicates that subsidence most likely results from overdrafting of the underground aquifer system.