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Smoothing satellite altimetry data using Kalman and wiener filters

M. Jafari and M.A. Sharifi

Department of Surveying and Geomatics Eng., Center of Excellence in Geomatics Eng. and Disaster Management, University of Tehran, Iran (mzjafari@ut.ac.ir / Fax: +98 2182084509 / Phone: +98 2182084510)

The satellite altimetry data is infected by systematic and random errors. The systematic errors, i.e., tropospheric, ionospheric, tidal effects and so on are corrected using the existing models. Therefore, it can be supposed the time series of observations are only noise-affected measurements. In this paper we purpose a procedure to filter the time series of Topex-Poseidon in-situ measurements using the extended Kalman and Wiener filters both in spatial and frequency domains.