Geophysical Research Abstracts
Vol. 16, EGU2014-9387, 2014
EGU General Assembly 2014

Monitoring Lake Level Variations in Yangtze River Basin Derived from Multi- Mission Satellite Altimetry

Geli Wu (1), Mohammad Tourian (2), and Nico Sneeuw ()

(1) Institute of Geodesy, University of Stuttgart, Stuttgart, Germany (geli.wu@gis.uni-stuttgart.de), (2) Institute of Geodesy, University of Stuttgart, Stuttgart, Germany (mohammad.tourian@gis.uni-stuttgart.de), (3) Institute of Geodesy, University of Stuttgart, Stuttgart, Germany (nicolaas.sneeuw@gis.uni-stuttgart.de)

Several satellite altimetry missions have been launched during the past decades and have demonstrated the accuracy level and the effectiveness of satellite altimetry as a technique to monitor water level variations of inland water bodies. The objective of the present study is to detect the water level fluctuations from a multi- mission approach for a better understanding of the behavior over long periods and obtain a better time resolution when overlaps exist, while trying to improve the accuracy improvement. We choose several major freshwater lakes located in the Yangtze River basin in China: Dongting Lake, Poyang Lake, Chao Lake, Hongze Lake and Taihu Lake. The altimetry data are obtained from the complete missions of Envisat, Topex and Jason-2. The timeseries of each target lake is achieved under the consideration of the error assessment between different missions.