



On the hydrological mass variations in Sudan: Based on GRACE satellite gravimetry and global hydrological models

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The legacy of the GRACE (Gravity Recovery and Climate Experiment) dedicated satellite mission is now up to 170 monthly gravity field solutions available from different geodetic centers (CSR, GFZ and JPL) for GRACE satellite data processing. The accumulated satellite data make it possible to observe the periodic and temporal hydrological changes in the earth over different spans of time. In this study, we utilize the least-squares spectral method to analyze mass changes over Sudan to determine the major temporal variations in that region. GRACE results are compared to the hydrology models GLDAS and WGHM, analysis for the mass variations is also discussed.