



## **Comparison of the geophysical excitation of the polar motion from the period: 1980.0 to 2007.0**

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The changes in the global balance of the Earth angular momentum due to the mass redistribution of geophysical fluids are still tested to understand the observed polar motion.

The impact of continental hydrologic signals, from land water, snow and ice on polar motion excitation HAM (Hydrological Angular Momentum) is inadequately known so well as atmospheric and oceanic ones.

Hydrological angular momentum have been estimated in several models of global hydrology. The model based on the observed distribution of surface water, snow, and soil moisture.

In our consider we make use of the following global models of hydrology: NCEP/NCAR, CPC, GLDAS, HAM GFZ and data from the Gravity Recovery and Climate Experiment (GRACE).

We have compared this geophysical excitation from the period 1980.0 to 2007.0. The results are compared with observed excitations of polar motion and contributions from the atmosphere and ocean. Assumedly the hydrological excitation of polar motion play a significant role in closing the excitation budget for prograde and retrograde direction.

We want to demonstrat in this study, that the models of global hydrology improv the excitation budget closing for prograde and retrograde direction.