



## Hydrological excitation of polar motion

J. Nastula , B. Kolaczek

Space Research Center PAS, Warsaw, Poland, (nastula@cbk.waw.pl) / Fax: +48 22-8403131 /  
Phone: +48 22-8403766

Hydrological excitation of the polar motion (HAM) were computed from the available recently hydrological data series (NCEP, ECMWF, CPC water storage and LaD World simulations of global continental water). These HAM series and their seasonal spectra were compared showing big differences in temporal characteristics even in the strongest annual oscillation.

The spectra of the seasonal spectra of these HAM were compared to the seasonal spectra of the geodetic excitation function of polar motion GEOD computed from the polar motion COMB03 data. Seasonal oscillations of the global geophysical excitation functions (AAM+OAM+HAM) in all cases besides the NCEP/NCAR model are smaller than the geodetic excitation function and only slightly improves the agreement between the observed geodetic excitation function and the geophysical excitation function of polar motion.

Analyzes of agreement between geodetic and joint hydrological atmospheric and oceanic series may serve as estimation of accuracy of the HAM model solutions which need further improvements.