



Oceanic angular momentum in the study of rapid variations of polar motion excitation.

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It is so far widely accepted that atmospheric and oceanic variabilities play a major role in the excitation of polar motion for periods longer than about 10 days. However disagreements still remain in the spectral range below 4 days. Here we reanalyzed the role of Oceanic Angular Momentum (OAM) combined with Atmospheric Angular Momentum (AAM) on the excitation of high frequency polar motion variations, taking advantage of a recent hourly Oceanic Angular Momentum derived Ponte and Ali. We show that these joint oceanic and atmospheric signals may be significant for excitation of polar motion even for periods between 2 and 4 days. In the paper we also study the consistency between the different AAM + OAM series and between different polar motion solutions, currently obtained by the various analysis centers participating to the IERS Combination Pilot Project. Our results show that such analyses may serve in the future as an assessment of accuracy of different polar motion solutions and geophysical models.