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GRACE and LAGEOS missions contribution in the interpretation of polar motion

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Gravity solutions from Gravity Recovery and Climatic Experiment (GRACE) and LAser GEOdynamics Satellite (LAGEOS) missions allow us to compute mass term of polar motion excitation function. In this way we have a new estimation of the mass term which can be compared to the geodetic mass term obtained from measured Earth's rotation variations and to the modelled mass term estimated from geophysical fluids models. Here we study the information that gravimetric missions provide to polar motion interpretation. The gravimetric mass term derived from GRACE RL04 is significantly better correlated with the geodetic mass term than using the previous GRACE data release (RL01, RL02 and RL03) and the mixed LAGEOS-GRACE solution. After accounting for mass effects derived from the combination of atmospheric, oceanic and hydrological excitation, excitation residuals are smoother than those computed from gravimetric data.