

Observations of Seasonal Translations Between the Earth's Mass Center and Lithosphere

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Observations of geocenter motions from Lageos and Lageos-2 have indicated annual and semiannual motions in both the equatorial and axial. components of 2 to 4 millimeters amplitude. Little work has been done to corroborate these observations with either observations of atmospheric mass or ocean models. We will present improved analyses of the predicted geocenter variations derived from time series of atmospheric pressure fields of the National Meteorological Center (NMC) under both the IB and nonIB assumptions, and from estimates of semiannual and annual ocean tides. Finally, we will discuss the prospect of corroborating observations from GPS with recent improvements made at JPL to the orbit modelling and analysis approach.