

Non-gravitational Perturbations acting on CHAMP - comparison between perturbation model and onboard accelerometer data -

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Accelerometers onboard CHAMP and GRACE can measure non-gravitational perturbation such as atmospheric drag and solar radiation pressure directly. Their data can be used as an effective substitute for the perturbation models implemented in orbit analysis software. In this work, the accelerometer data onboard CHAMP was corrected by using the scale factor and bias estimated in the orbit determination process and was compared with the non-gravitational perturbation model in orbit analysis software 'concerto ver. 4'. Two different satellite shape models, cannonball model and box-wing model, are also compared.