



New ephemeris of Phobos and Mars Express close flybys

V. Lainey (1), V. Dehant (1), P. Rosenblatt (1), T. Andert (2) and M. Paetzold (2)

(1) Royal Observatory of Belgium, 3 Avenue Circulaire, B1180 Bruxelles (2) Institut fuer Geophysik und Meteorologie Zuelpicherstr. 49 a 50674 Koeln

Several close flybys of Mars Express at the moon Phobos will occur in 2005. Such events are the opportunity for an improved estimate of Phobos gravity field. To achieve this goal, an ephemeris of Phobos at high precision is required. We present a new dynamical model of the motion of Phobos, fitted on observations from spacecraft and the latest Earth-based observations.