

Determination of the orbit of the CHAMP satellite based on the laser observations

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This work presents the results of orbit determination of the CHAMP satellite from observations of 14 the best SLR stations for year 2002. All computations were based on the Earth combined gravity field model EIGEN-CG01C (Reigber et al. 2005). In computations was taken the orbital programme GEODYN-II, created and accesible by NASA. The got RMS value of the orbit of the CHAMP satellite is better than 30 cm. The obtained results show that the orbit of the CHAMP satellite is highly perturbed by the Earth's gravity field and by the atmosphere of the Earth.