Abstract

18.6 years of good quality Lageos data are now available and can give us at last some refined value of the lunar node tide ($\Omega$) as well as a better estimation of the secular drift of the dynamical flattening $C_{20}$.

Lageos data from 1985 until 2004, merged with Lageos2 data from 1993, were used to compute the time variations of the degree 2 coefficients of the Earth’s gravitational potential. This was done with recent orbit standards, taking into account the latest developments on geopotential model from the GRACE gravity mission.

Several characteristic periods appear in the $C_{20}$ spectrum which can be correlated mainly with tidal effects. But some inter-annual variations still remain, probably due to water mass displacement in the oceans as well as on the continents.