Jumps in the position and velocity of the secular drift of the center of mass of the Moon in 1997–1998

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In this paper we study the observed abrupt change in the position of the center of mass of the Moon in 1997–1998, linear trends in coordinates of the center of mass and the abrupt change of the trend velocity in 1997–1998. These results are based on geodynamic concept of the forced relative displacements and forced vibrations of shells of the planet (satellite) and on the basis of current data of laser observations of the Moon for the last 40 years. We have obtained estimates of the drift parameters and of the center of mass of the Moon. their geodynamic interpretation of relative displacement as a consequence of the shells (core and mantle) was given. Correlations of direction relative displacements of the core and mantle with its geophysical and tectonic structures were found.

Keywords: *shells of the planet, laser observations, space geodesy, the mantle of the Earth, the Earth's core*.

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