A new solution for Moon's planetary perturbations

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Comparisons of the semi-analytical solution ELP2000-82B (M. Chapront-Touzé, J. Chapront) of the lunar orbital motion to numerical integrations of the Jet Propulsion Laboratory and to observations of the Lunar Laser Ranging of the CERGA, have shown deficiencies resulting mainly from planetary perturbations series computed twenty years ago. Numerical complements are then introduced to improve the solution.
The aim of the computation of a new solution for planetary perturbations is to reduce the contribution of these complements. A new planetary solution VSOP2000 has been undertaken by X. Moisson (IMCCE-BdL) Besides, improvements in numerical tools should contribute to improve the precision of our series.
We present here the results of our computation and comparisons to ELP2000-82B planetary perturbations solution and to JPL numerical integration DE403.