

## **DISTANCE OF THE EARTH AND MOON THROUGH THE GEOLOGICAL TIME**

The distance of the Earth and Moon changed from about 55 Earth's equatorial radius to 60 equatorial radii today through the upper part of Proterozoic Eon and Phanerozoic Eon (for approximately  $1,4 \cdot 10^6$  years). Based on ocean model of Meyers and Malinverno (2018) we shown active Earth-Moon distance through the Phanerozoic Eon, especially for K-T boundary, J-K boundary, P-T boundary, boundary of Proterozoic Eon - Phanerozoic Eon and modern perigee and apogee. Distance between the Earth and Moon is changed for  $545 \cdot 10^6$  years and was constant bigger for  $22,72 \cdot 10^6$  m, but Lunar nodal tide was smaller. In Cretaceous Period, for example, distance between the Earth and Moon changed for 4,38 cm every year or 0,1 mm daily. The most complex and challenge work will be determination of the distance between the Earth and Moon during Proterozoic Eon because we will must find very quality and very protected layers in cratons, something like Xiamaling Formation of the North China Craton. It is one way to develop young and new method for determination of age or astrochronology or like Milankovitch cycle of insolation before Phanerozoic Eon.

**Key words:** Earth-Moon system, Milanković's cycles