

SOLAR ECLIPSE – COPYING ON THE UNITARY CIRCLE

The solar eclipses role contains in control of the Earth's and Moon's orbital elements, which very slowly change by solar mass decreasing by radiation processes, and in the Earth and Moon interaction with solar wind. Approximately equal apparent angles of the Sun and the Moon shown as an adequate introduction of the "chord function" of visible solar chords into eclipse (Tomić, 1976) for determination of the contact times, moment and maximum phase for given place of the observation. For the total solar eclipse of August 11th, 1999, observed in Palić town in Serbia we demonstrated that external curve in "time – chord function" coordinates, which is parabola, with internal curve are connected by copying on the unitary circle. If the square function decrement is positive (i.e., for total eclipse), internal function is inverse external parabola. Beginning observation of the eclipses as young astronomer, author followed for hidden properties contained in this information, too. A discussion with Milorad Protić, director of Astronomical observatory in Belgrade, one month or two after partial solar eclipse of May 11th, 1975, consolidated author in this opinion for which testing the total solar eclipse needs. So appears 24 years interval to finish confirmation of idea, because astronomical observation was not a primary task for author. In the year 2001th, 90 years from the birth in that time living Milorad Protić, all was finished. This paper is dedicated to the memory of Milorad Protić.