

STUDY OF THE SOLAR ECLIPSE PHENOMENA OF DWARF PLANET PLUTO

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Pluto was discovered in 1930. In 2006, by the International Astronomical Union's decision it was referred to the class of dwarf planets.

The largest satellite of Pluto was discovered in 1978 as a dwarf planet was approaching perihelion at a distance of 29.7 AU. Another 4 satellites was opened to the summer of 2012.

This distant system is not available for qualitative observations from Earth. In July 2015 the spacecraft "New Horizons" approached Pluto at a minimum distance of 12.5 thousand km away from its surface. Because of this, quantitative description of the eclipse in the Pluto system becomes possible.

Pluto satellites are positioned so that the eclipse is only possible near perihelion and aphelion of the dwarf planet. A series of eclipses in the Pluto-Charon system lasted from February 1985 to October 1990, the following series of eclipses will take place from 2108 to 2112.

We have found the angular diameters of celestial bodies that may be involved in eclipses both near perihelion and aphelion of the orbit of Pluto. We have identified the possibility of occurrence of repeated multiple eclipses, those involving more than three celestial bodies. Using the results of the mission "New Horizons", we have determined resonances for Hydra and Cerberus 19:16, Charon, and Hydra 6:1. We have established the duration of the central eclipse of the Charon 1 hour 42 minutes on 11 February 2110, Nix - 6 minutes, 10 March 2110. Eclipses that involve remaining satellites will not be observed. We have also examined the eclipse of satellites by Pluto. Pluto shadows long enough for eclipsing satellites. The beginning of eclipse era and duration of satellites eclipse are found. Also consider various mutual configurations of the satellites in the shadow of Pluto.