

SEARCH FOR THE SHORT-PERIOD VARIABILITY IN SS CYG SYSTEM BASED ON NEW DATA

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The results of photometric observations of the well-known dwarf nova, the SS Cyg X-ray source, conducted in 2019–2021 are presented. Observations were made at various moments of the outburst cycle using several CCD cameras on two telescopes, 50 and 60-cm (about 47,000 measurements). Based on the data obtained, the system's light curves in filters V, R were constructed. According to the new data, the orbital period SS Cyg was determined, the value of which turned out to be 0.4% less than previously determined by Voloshina & Lyutyi (1992). The search for photometric variability, carried out after taking into account the orbital variability of SS Cyg, made it possible to detect pulsations on the light curves and determine their periods amplitudes. The analysis of the obtained values of the periods and amplitudes of pulsations allowed us to reveal the dependencies of these values on the brightness of the system at the stage of the brightness decrease after the maximum, - there is a clear increase in the period of pulsations with a decrease in the radiation flux. With a decrease in brightness, their amplitude also increases, i.e., as SS Cyg returns to normal brightness after an outburst. At the end of April 2020 SS Cyg had an X-ray outburst. The results of optical photometry conducted in May 2020 at the end of this outburst and later in 2021 show that the behavior of SS Cyg after the end of the X-ray outburst fits into the framework of the usual behavior of the system at this stage of the outburst cycle.