[포ST-09] Drastic Brightness and Color Variations of the New Discovered Polar OTJ 071126+440405

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Self-consistent mathematical model of the exotic object OTJ 071126+440405= CSS 081231:071126+440405 is discussed. The system was discovered as a polar at the New year night 31.12.2008/01.01.2009 by D.Denisenko (VSNET Circ), and we have initiated an international campaign of photometric and polarimetric observations of this object (totally ~80 runs in Ukraine, Korea, Slovakia, Finland, USA) as a part of the "Inter-Longitude Astronomy" (ILA) project on monitoring of variable stars of different classes (Andronov et al., 2003).

Here we present the geometrical and physical model of the system in the low luminosity state and in the intermediate luminosity state as well as in the high luminosity state. As the system is of ~20 mag at minimum, no spectral observations were made to determine parameters of the red dwarf. From the statistical relationship, the mass of the red dwarf is estimated to be ~0.165 solar masses, for the white dwarf (from eclipse duration) - from 0.5 to 1.76 solar masses. As the system resembles ER UMa in some characteristics, the lower value may be assumed. The inclination of the system and other physical parameters are estimated. The object is an excellent laboratory to study multiple physical processes in the magnetic systems.