

Very Fast Photometric Observations of the Intermediate Polar V2069 Cyg

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Özet We present fast timing photometric observations of the intermediate polar (IP) V2069 Cygni (RX J2123.7+4217) using the Optical Pulsar Timing Analyzer (OPTIMA) at the Skinakas Observatory 1.3 m telescope. OPTIMA is a single-photon counting aperture photo-polarimeter with a timing accuracy of about 4 microseconds and absolute (GPS) tagging of photon arrival-times. The optical light curve of V2069 Cygni was measured with sub second resolution during July 2009. We discovered a double-peaked pulsation with 743.385-s period, presumably the spin of the white dwarf, in the optical band (450-950 nm). Soft X-ray emissions (XMM-Newton and Swift observations) show sinusoidal modulation at the white dwarf spin period. In a $P_{orb} - P_{spin}$ diagram of all IPs V2069 Cyg is a rather undistinct member of this population. It has however a rather low spin to orbit ratio of ~ 0.027 .

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