[P12-6] Orbital and Spin Variablility of BG CMi

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Results of the CCD study for the variability of the cataclysmic variable BG CMi obtained at Korean 1.8m telescope in 2002-2005 are presented. The "multi-comparison star" method had been applied for better accuracy estimates. The linear ephemeris based on 19 mean maxima for 2002--2005 is HJD 2453105.31448(6)+0.01057257716(198) (E-764707). The period differs from that predicted by the quadratic ephemeris by Pych et al. (1996) leading to a possible cycle miscount. The statistically optimal ephemeris is a fourth-order polynomial, as a quadratic or even a cubic ephemeris leads to unaceptable large residuals. Thus the rate of the spin-up of the white dwarf is decelerating. An alternative explanation is that the spin-up has been stopped during recent years. The deviations between the amplutudes of the spin variability in V and R, as well as between phases are not statistically significant. However, the orbital light curves exhibit distinct differences, the corresponding color index shows a nearly sinusoidal shape with a maximum at orbital phase $\sim0.2.$ The variations of the amplitude of spin waves shows a short maximum at the phase of the orbital dip. We will presend the corrected ephemeris for orbital minima. The rate of the spin period variation seems to be changed, justifying the necessity of regular observations of intermediate polars.

[P12-7] On the Spin-axis Inclination of the White Dwarf of AE Aquarii

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AE Aqr is an unusual nova-like magnetic cataclysmic variable, known as a non-eclipsing close binary system with an orbital period of P_{orb} = 9.88 hr. The primary is a magnetized white dwarf rotating with a period of P_s = 33.08 s, and the secondary is known as a red dwarf of a spectral type of K3 - K5. Most of the system parameters have been measured so far but the spin-axis inclination is not known yet. Through study of pulse profiles for X-ray and optical/UV, we propose that the white dwarf would have a high spin-axis inclination angle, close to 90°, similar to Uranus in the Solar System.