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Title:	Multi-wavelength temporal and spectral studies of magnetic cataclysmic variables: BL hyi, tv col and swift j0503. 7-2819
Authors:	G Pradeep, Kala
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Abstract:	Magnetic cataclysmic variables (MCVs) are accretion powered semi-detached binary systems comprising of a main-sequence star in orbit with a white dwarf (WD), with the former accreting matter onto the latter. Due to the interaction between the constituent stars these systems are highly variable, with respect to time and wavelength. Thus, to understand the nature of these exotic objects it is necessary to study them across wavebands. In this thesis, I discuss my temporal and spectral study of three MCVs vis-à-vis BL Hyi, TV Col and Swift J0503.7-2819 in the far-UV, near-UV and soft X-ray, using the multi-wavelength satellite, AstroSat. For each of these systems timing analysis was carried out. The light curves in all the wavelengths the systems were investigated in are reported. Plausible periodicities underlying these curves were identified via power spectrum analysis. Soft X-ray spectral data was extracted for the energy range 0.35-7.1 keV and fitted with optimal spectral models. For the polar BL Hyi, an orbital period, P orb of 1.9 hrs was obtained, and the spectral analysis yielded a blackbody temperature of 0.12 keV. For the intermediate polar, TV Col, the UV light curves are observed to be modulated by a P orb value of 5.5 hrs whereas in the soft X-ray curve an additional modulation, by the spin period, P spin of 30 mins is pronounced, a blackbody temperature of 1.6 keV is obtained from spectral analysis. For the newly discovered intermediate polar, Swift J0503.7-2819, both the UV and soft X-ray light curves are observed to be attuned to the systems' P orb and P spin of 1.5 hrs and 55 mins respectively, spectral fit reveal a blackbody temperature of 14 eV.
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