



The MPE fast timing photometer OPTIMA (Straubmeier et al., 2001) was used on the 1.3m telescope (Skinakas) and on the 3.5m telescope (CAHA) to record optical lightcurves of selected CV binaries of type AM Her with sub-second temporal resolution. The goals of these measurements are to provide lightcurves of unprecedented temporal resolution and statistics for studies of emission and absorption phenomena around highly magnetic white dwarves, discover new emission features (bursts, QPO's), and correlate the optical data with data from X-rays and other wavelengths.

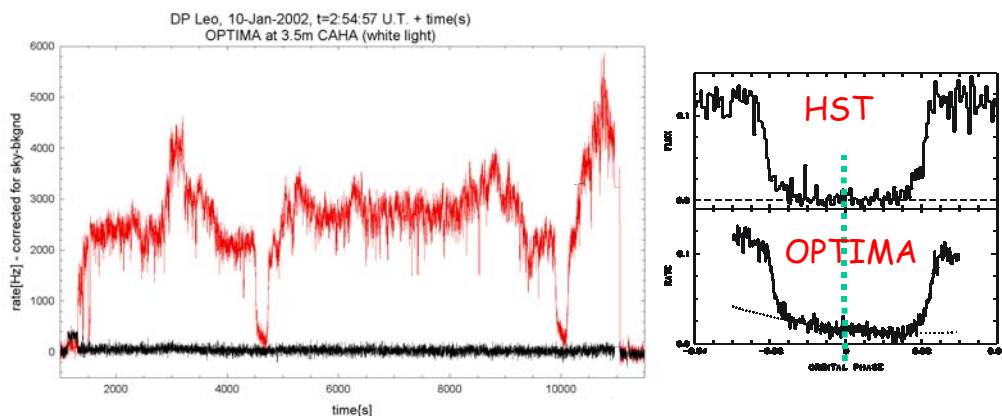


Figure 1: The lightcurve of DP Leo was used to derive a new ephemeris of the binary, covering 1979 to 2002. Schwöpe et al., 2002, discovered a highly significant secular orbital period change.

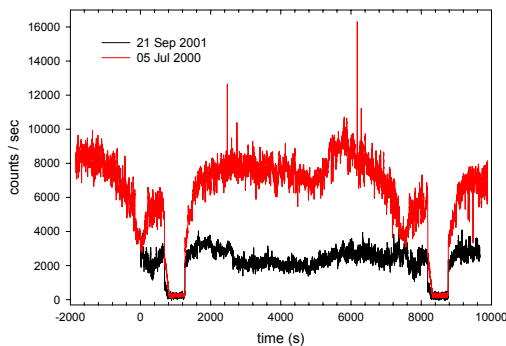


Figure 2: Optical lightcurves of HU Aqr measured in 2000 (red) and 2001 (black). HU Aqr was about 4 times brighter in 2000 (higher accretion state) and showed very short (~sec timescale) optical outbursts (Kanbach et al., in preparation).

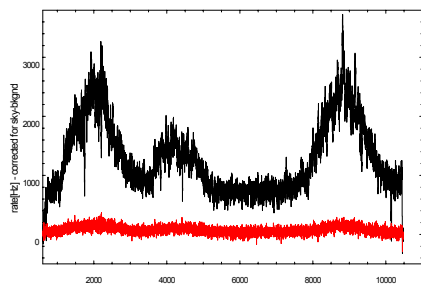
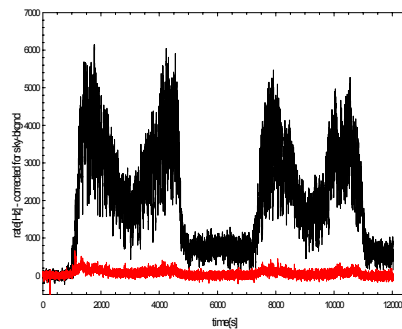


Figure 3: OPTIMA rate (red) over sky background (black)
 left: EK UMa, a ~114 min binary
 right: RX J0953+14, ~104 min binary, with previously low resolution lightcurve (Burwitz et al., in prep.)



References:

- Schwöpe et al., (2002) submitted to A&A
- Straubmeier, C., et al., (2001) Exp. Astron., **11**, 157