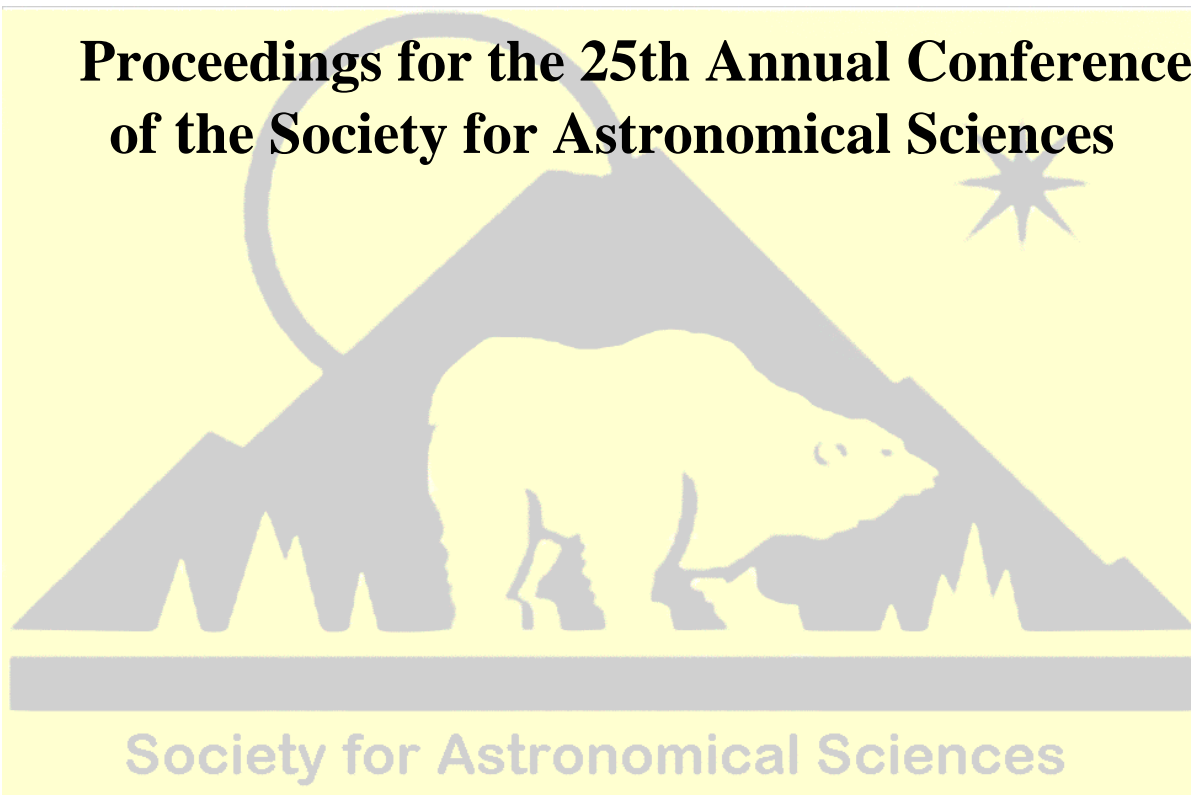


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**Symposium on Telescope Science**

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## **Superhumps in Cataclysmic Variables**

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### **Abstract**

The individual telescopes of the CBA produce fast (<1 min) photometry of variable stars. With runs of >5 hours and spliced data from many longitudes, we aim to assemble long light curves with nearly continuous coverage. This is an ideal data base for period and other timing studies. I have found it to be many times more effective than one large telescope proudly performing its hijinks on one mountaintop. I'll give a brief account of how this enterprise has evolved from one CCD in a tuna fish can to the world's leading supplier of periodic signals in cataclysmic variables. The most interesting and productive research program has been the discovery and study of "superhumps", mysterious large-amplitude waves at a period slightly offset from the true orbital period of the binary. These result from the "precession" of the accretion disk. The disks appear to wobble and precess in a manner similar to the Moon's orbit, and we can use this as a tool for weighing the unseen secondary stars. I'll describe the superhumps, and their fascinating astrophysical uses. © 2006 Society for Astronomical Sciences.

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