HIPPARCOS Astrometric Observations of Symbiotic Stars *(Abstract)*

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Abstract The HIPPARCOS astrometric satellite has observed a number of symbiotic stars which are also known for being mapped at radio wavelengths. The radio emission generally arises from matter ejected by the binary system, which is made visible by the ionizing radiation of the system's hot component.

HIPPARCOS has provided the astrometric position (with milliarcsecond precision), proper motion, and distance (or a lower limit to it) of a few symbiotic stars. The most interesting results are those for CH Cygni and R Aquarii, for which there is a significant displacement of the radio-continuum and optical position. The position of the radio maser emission of R Aqr is also discussed.

We shall also report on the HIPPARCOS data for EG Andromedae, AG Draconis, AG Pegasi, and other peculiar variables.

The Ultraviolet History of the Outbursting Symbiotic Stars Z Andromedae and AG Draconis *(Abstract)*

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Abstract Thanks to its long lifetime, the astronomical satellite IUE (International Ultraviolet Explorer) has monitored the ultraviolet spectrum of many symbiotic stars during different phases of their activity. The cases of Z And and AG Dra are described.

*deceased March 22, 2004

Periodic and Aperiodic Variability of Symbiotic Stars *(Abstract)*

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Abstract Time series and correlation analysis is made for the characteristics of the individual cycles R Aql, V1329 Cyg, TX CVn, V1016 Cyg, and UX Aur. The light curves were smoothed by the method of "running parabolae." We propose a supplementary method of "running sines" which is more effective for the data with large gaps. For asymmetric curves it may be extended to a method of "running multi-harmonic fit." The statistical properties of these fits are studied on the observations of these stars and on analytical and numerical models. The mean curve is determined by multi-harmonic fit with determination of the number of statistically significant harmonics and correction of the period by differential corrections. Extreme values and cycle lengths vary with time, their characteristics are tabulated.