

## 30 YARDS OF HISTORY: SS CYGNI 1896 - 1984

ALAN L. KIPLINGER  
NASA Goddard Space Flight Center  
Greenbelt, MD 20771

JANET A. MATTEI  
KEITH H. DANSKIN  
JAMES E. MORGAN  
AAVSO  
25 Birch Street  
Cambridge, MA 02138

TIMOTHY ZACK  
NASA Goddard Space Flight Center  
Greenbelt, MD 20771

### Abstract

AAVSO data files contain several hundred thousand observations on the cataclysmic variable star SS Cygni from its discovery in 1896 to present. One-day means of these observations from 1896 to 1984 have been computerized for statistical analysis. Computer-generated magnitude and intensity light curves extending 30 yards have been displayed. Initial results of auto-correlation and power spectrum analysis of the light curve reflect the behavior of a quasi-periodic oscillator with an approximate period of 50 days. Detailed analysis of the data is continuing.

\* \* \*

## OBSERVATIONS OF THE DWARF NOVA HL CANIS MAJORIS

CHRISTOPHER W. MAUCHE  
Harvard-Smithsonian Center for Astrophysics  
60 Garden Street  
Cambridge, MA 02138

### Abstract

Assisted by AAVSO data, IUE ultraviolet spectra, and x-ray observations from the Einstein Observatory (HEAO-2), we have undertaken an observational and theoretical study of the P Cygni profiles of the dwarf nova HL CMA. The details of this study will be published elsewhere (Mauche and Raymond 1986). Discovered in 1980 as a variable x-ray source, HL CMA has been shown by subsequent AAVSO coverage to be a dwarf nova whose light curve oscillates by  $\approx 3.5$  magnitudes between  $\sim 11$  magnitude and  $\approx 14.5$  magnitude with an average recurrence time of only approximately 17 days. Although classified as a U Gem, HL CMA's short recurrence time, mean absolute magnitude [ $M_V$  (mean)  $\sim 5.8$  magnitude at 250 pc], and (infrequent) short standstills suggest that it is an incipient Z Cam. As such, it warrants continued careful monitoring.

\* \* \* \* \*

### REFERENCE

Mauche, C. W. and Raymond, J. C. 1986, *Astrophys. Journ.*, submitted.

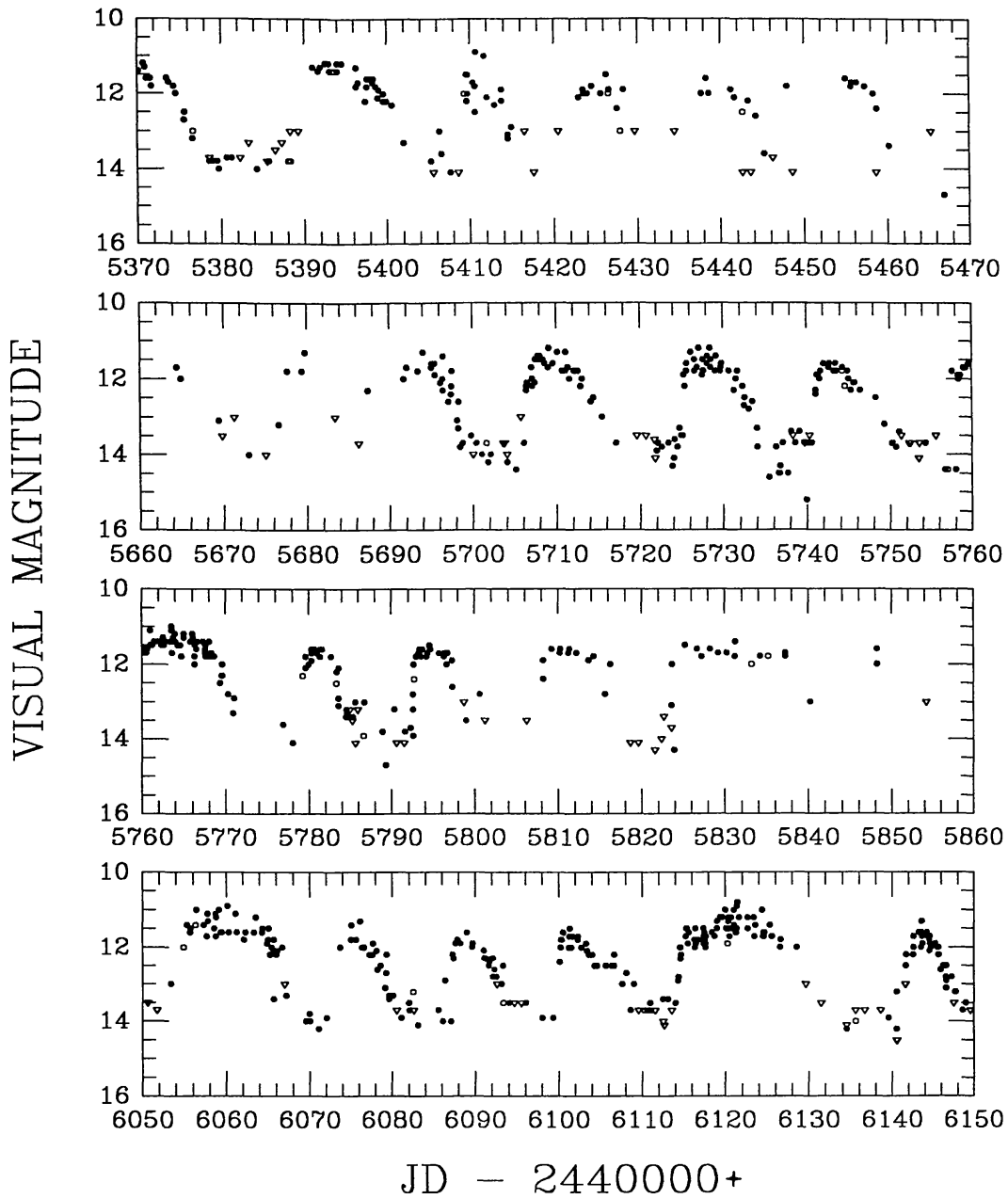


Figure 1. AAVSO optical light curve of HL CMA. Following standard convention, the symbols have the following meanings: closed circles represent positive measurements, open circles represent measurements for which the observer was uncertain for any reason, while inverted triangles represent upper limits.