

COMMISSIONS 27 AND 42 OF THE IAU
INFORMATION BULLETIN ON VARIABLE STARS

Number 3732

Konkoly Observatory
Budapest
27 May 1992

HU ISSN 0324 - 0676

IS V410 CASSIOPEIAE A SYMBIOTIC STAR?

Variability of V410 Cas was discovered by Hoffmeister (1967), who pointed out that the star was bright in 1938-1939 ($15^m.5$ pg). Outside this time interval its brightness was $17^m.5$ - 18^m pg.

We studied this star on 409 photographic plates obtained with the 40-cm astrograph (Crimean Laboratory of Sternberg Astronomical Institute), J.D. 2437912-48180 (1962-1990).

We found that until 1978 the star was fainter than $17^m.5$ B, but after that it brightened to $15^m.5$ B in 1-1.5 years, and remained approximately constant during 10 years except a depression (16^m B) in 1981-82 (eclipse?). This photometric behavior is typical of such symbiotic stars as V1329 Cyg, HM Sge, PU Vul and other similar objects.

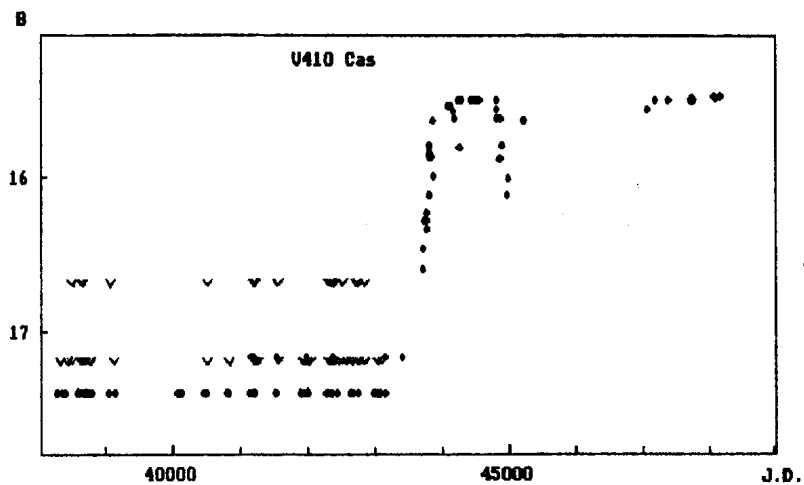


Figure 1. Light curve of V410 Cas in 1962-1990

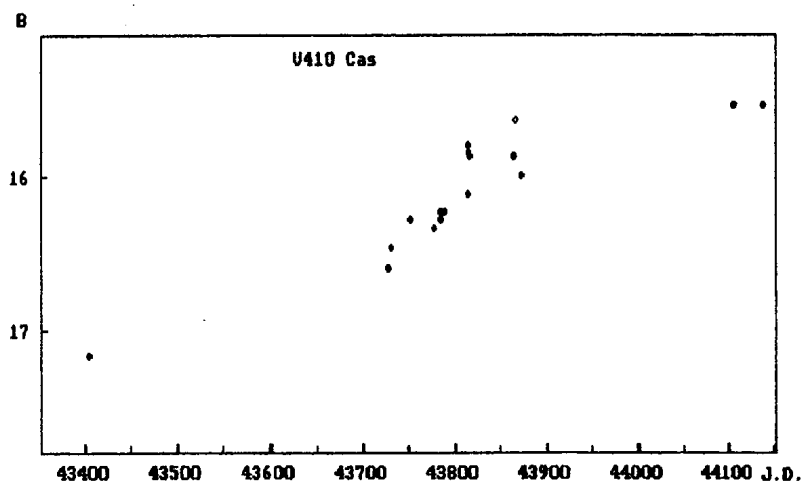


Figure 2. The brightness increase of V410 Cas in 1981-1982

It is significant that this particular star had two outbursts separated by 40 years.

According to the Palomar charts the star was about 18^m pg in 1954, on both the blue- and the red-sensitive prints. For a reliable classification spectral observations are needed.

The light curve and details of the brightness increase are given in Figures 1 and 2 respectively.

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Reference:

Hoffmeister, C.: 1967, *Astron. Nachr.* **290**, 43.