INPE-5340-PRE/1739

THE ECLIPSING CATACLYSMIC VARIABLE AY PISCIUM*

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INPE
São José dos Campos
Setembro de 1991

SECRETARIA DA CIÊNCIA E TECNOLOGIA
INSTITUTO NACIONAL DE PESQUISAS ESPECIAIS

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ASTRONOMY
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the standard deviation for this ephemeris is 0.0025 cycles and the residuals are shown in Fig. 2. The eclipses are $1^{\mathrm{m}}.75$ deep in integral light and the full width at half depth is 0.05 cycle. The shape of the eclipse is typical of eclipsing accretion disks. There is no evidence for presence of a compact central source in the average eclipse profile (Fig. 3) nor in the individual eclipses. The measurements in the U, B, V, R, and I passbands indicate that the eclipses are deeper in short wavelengths (Fig. 4). An increase in the width of the eclipse towards the red is also seen in October 7 data, resembling other long period eclipsing systems.

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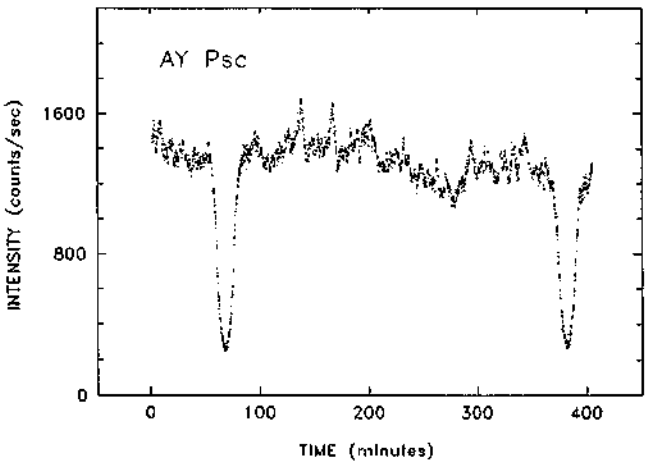

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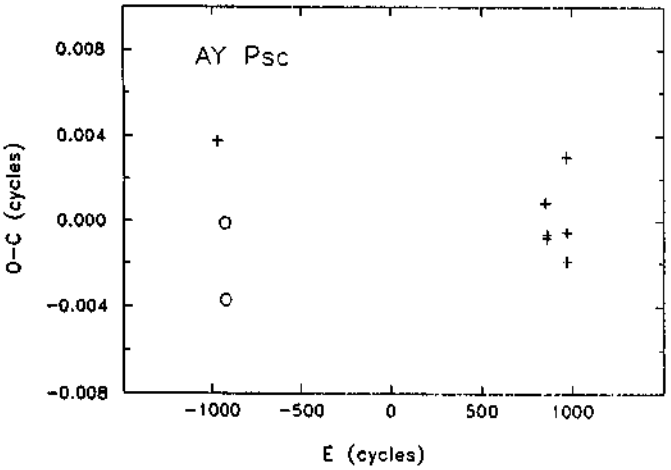
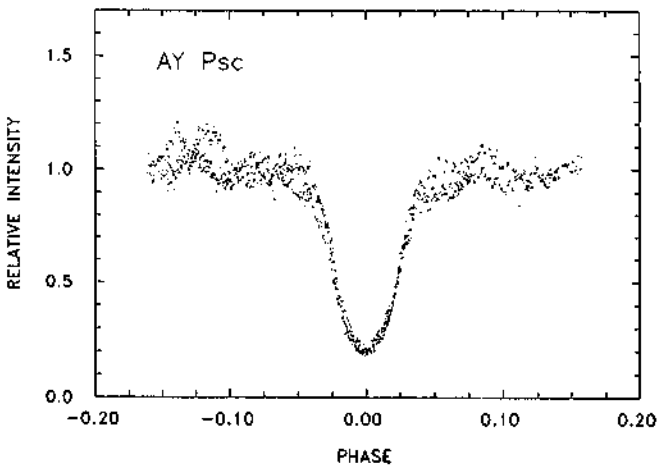


Fig. 2. O−C diagram for the adopted ephemeris. Circles indicate timings taken from Figs 9a and 9b in Szkody et al. (1989)



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The observations of high excitation emission lines motivated a search for short pulsations in the system, possibly caused by a magnetized white dwarf. For this purpose, the eclipses were removed and periodograms were calculated for the 1988 and 1989 data. No significant peak was found. In the periodograms of October and November 1989, non-significant peaks with periods of 1310(±60) and 1285(±40) s respectively are visible in the red noise region of the periodogram; no periodicities with semiamplitude greater than 0^m008 are present for periods in the range 40–550 s.

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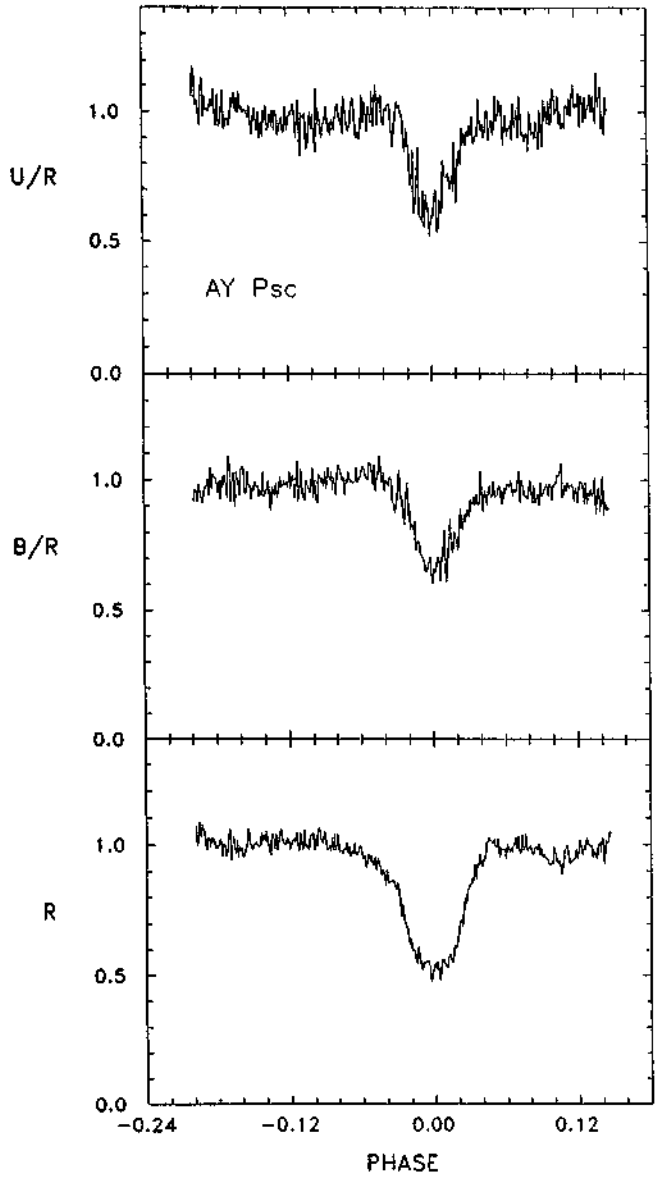

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TÍTULO

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TRADUTOR

EDITOR

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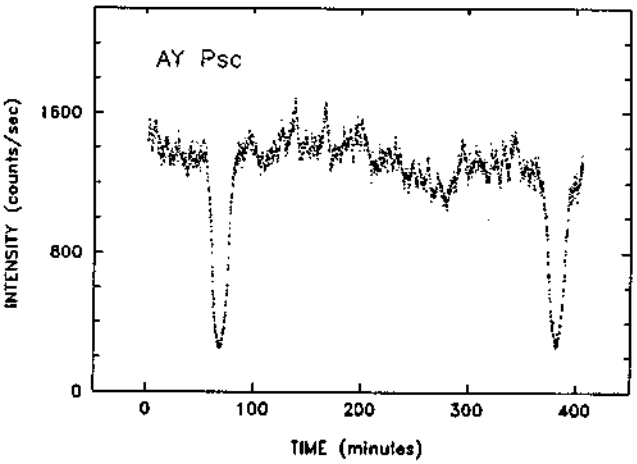

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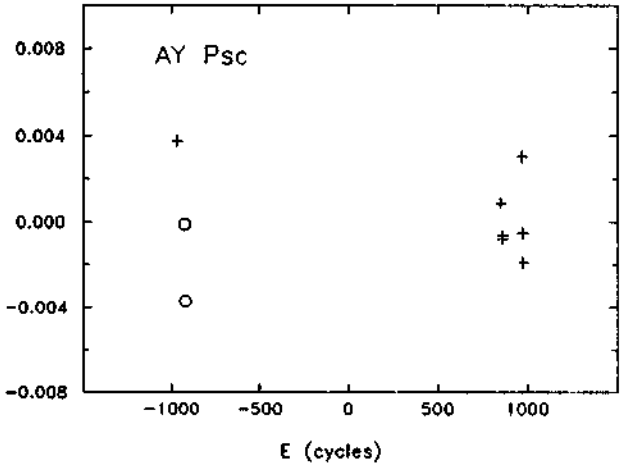

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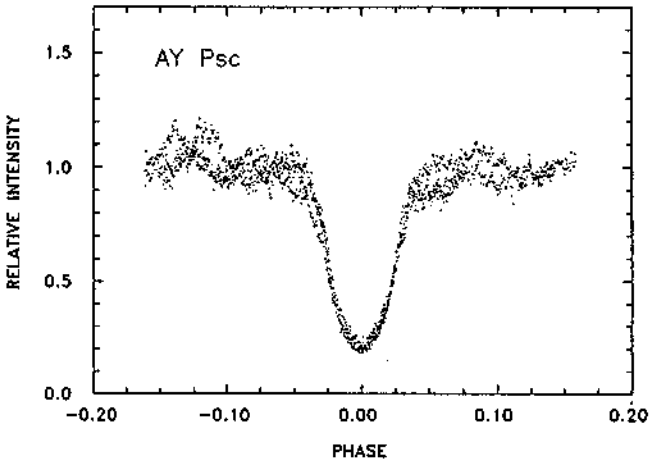

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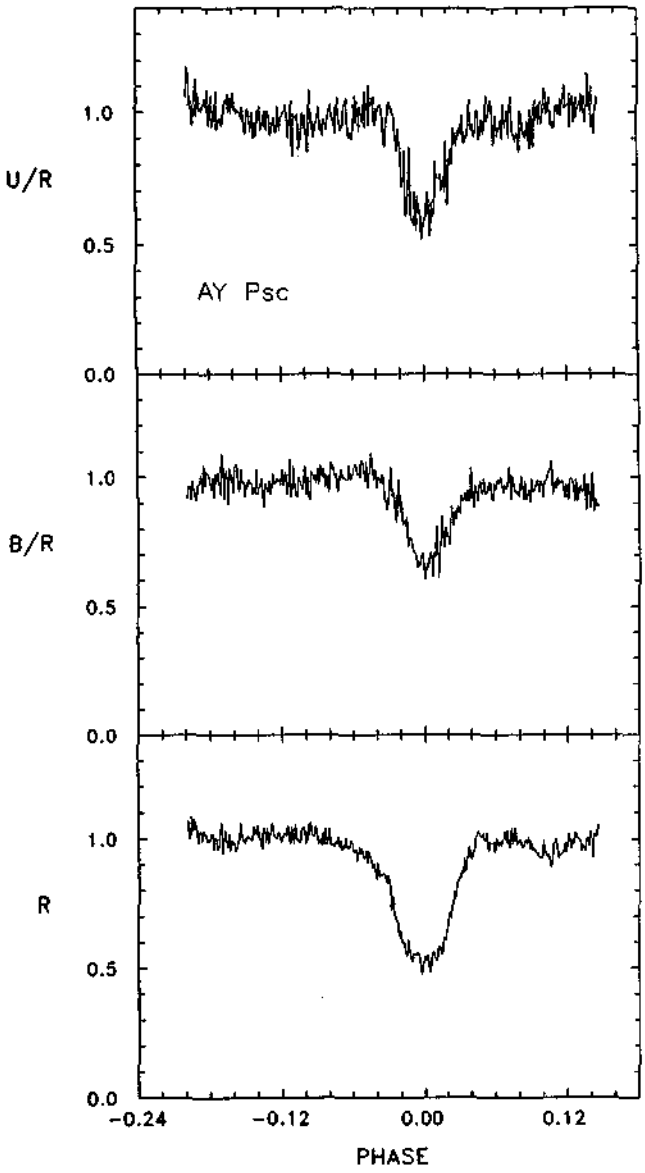

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