OSO-8 OBSERVATIONS OF CYGNUS XR-1

J. F. Dolan, B. R. Dennis, C. J. Crannell, K. J. Frost
and L. E. Orwig
NASA-Goddard Space Flight Center, Greenbelt, MD., USA

Cygnus XR-1 was observed Nov. 11 to 18, 1975, in the energy range 20 to 400 keV with a CsI scintillation crystal spectrometer on board the OSO-8 satellite. A drop in the count rate of ~45% between 23 and 153 keV was observed to occur gradually over a full day on Nov. 16. Comparison with 2 to 7 keV proportional counter data taken simultaneously on OSO-8 by P. Serlemitsos et al. (private communication), the count rate of which rose ~40% on Nov. 16, shows the 23 to 153 count rate to be generally anti-correlated with the 2 to 7 keV count rate over the entire 8 days of observation (Fig. 1). The observations are in agreement with the predictions of the two-temperature accretion disk model of Shapiro, Lightman and Eardley (Astrophys. J., 204, 187, 1976).

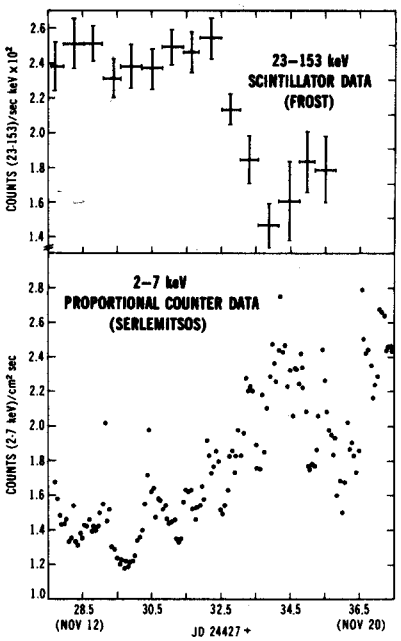

Figure 1. Count rate from Cyg XR-1, November 1975.

Edith A. Müller (ed.), Highlights of Astronomy, Vol. 4, Part I, 99-100.

DISCUSSION

G.K. Miley - [Summarized the radio behaviour of Cygnus X-1 - no text was provided].

D.M. Gibson - I have made 2700 MHz observations at Jodrell Bank on four day during the period of your observations. They show that Cyg X-1 maintained a level of 0.021 $\pm$ 0.005 Jy from 1976 February 22 - 29. Together, our observations show that the radio spectrum is essentially flat after the X-ray outburst.

https://doi.org/10.1017/S1539299600002434 Published online by Cambridge University Press