AN OPTICAL BURST IN Sco X-1

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Sco X-1 is known to show periods of correlated X-ray and optical activity on a timescale of minutes to days, see e.g. Ilovaisky et al.,1980. The rapid optical variations show typically an amplitude of about 5%. During the 1979 campaign on Sco X-1, blue band observations were obtained on several nights with the ESO 1 m photometric telescope with a time resolution of 2 seconds.

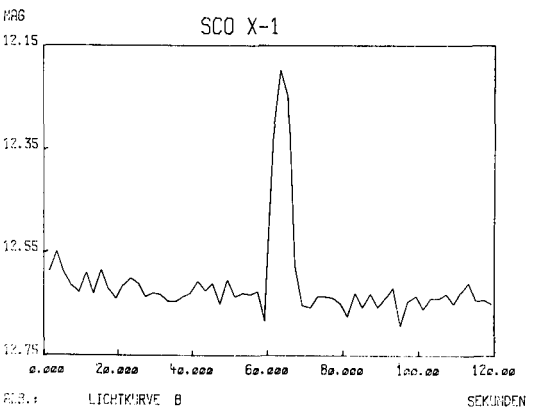

Figure:

An optical burst in Sco X-1

On March 13th,1979, Sco X-1 was in the normal active state. However, at $7^h\ 29^m\ 49^s$UT a burst event was observed, as is shown in the figure. This optical burst is very similar to the optical bursts of X-ray bursters, lasting for only about 10 seconds with an amplitude of almost 0.5 mag. Thus it seems possible that Sco X-1 shows at least occasionally the characteristics of normal X-ray bursters.

Reference:

S.A.Ilovaisky,C.Chevalier,N.E.White,K.O.Mason,P.W.Sanford,J.P.Delvaille and H.W.Schnopper,1980, MNRAS 191,81

Z. Kopal and J. Rahe (eds.), Binary and Multiple Stars as Tracers of Stellar Evolution, 445.