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A POSSIBLE VARIABLE STAR INSIDE THE ERROR BOX  
OF GRBS 790331

A possible unknown variable star has been found inside the error box of the gamma-ray burst source 790331 (Laros et al., 1985).

The faint star at RA =  $19^{\text{h}} 25^{\text{m}} 25.4(+1.3)$ ,  $\delta = +03^{\circ}35'40''(+20'')$  (1950.0) having normally  $m_{\text{pg}} \sim 15.7$  shows increased brightness at  $m_{\text{pg}} \sim 14.6$  on the plate taken by the 40 cm astrograph at the Sonneberg Observatory of the Central Astrophysical Institute of the Academy of Sciences of the GDR on July 26, 1962 (JD 243 7872.468). The plates taken by the same instrument  $\sim 1$  h before and  $\sim 2$  d aftershow the star at the normal, fainter light.

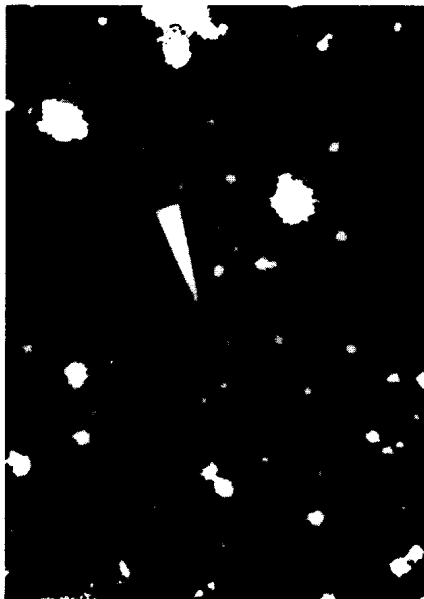


Figure 1 : Finding chart for the suspected variable star. Size of the frame represents  $9 \times 6$  arcmin $^2$ .

The investigation of this star using more than 400 astrograph plates from the Sonneberg collection has revealed no other brightening in the time interval 1928 - 1987, although low-amplitude ( $\sim 0.3 - 0.4$  mag.) magnitude variations cannot be ruled out. The examination of the POSS prints has revealed no remarkable color of the star.

More optical data are needed to confirm the variability found, to make a classification of this suspected variable star and to clarify the possible relation to the GRBS 790331.

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Reference:

Laros J.G. et al.: 1985, *Ap. J.* 290, 728.