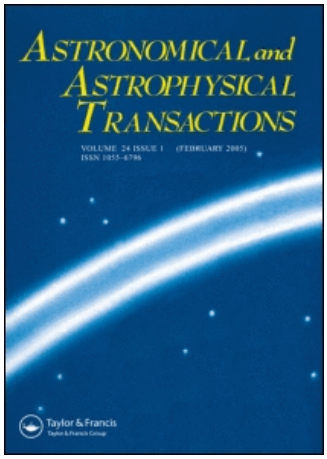

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VARIATION OF SUBFUOR V 1143 ORÍ

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V 1143 Ori during 1982–1990 was in active stage and showed four fuorlike flares. In minimum light V 1143 Ori showed variations of brightness and optical flares. Ultraviolet excess is observed.

KEY WORDS Fuors, flares, UBVR photometry

The fuorlike increase of brightness of V 1143 Ori and V 1118 Ori stars in the Orion association (Marsden, 1983a; 1983b; Natsvlishvili, 1984) and other similar objects (Herbig, 1977) show that some T Tau stars are passing the stage of fuors, while others become the subfuors (Parsamian and Gasparian, 1987).

Observational material for V 1143 Ori was obtained with the 40″ and 21″ Schmidt telescopes of the Byurakan Observatory. Moreover, photographic material, covering observations during 1953–1981 at the Institute of Astronomy in Tonantzintla was reexamined by one of the authors (E.S.P.).

All observational material enables estimation of the brightness variation limits of V 1143 Ori in UBVR. (Table 1)

During 1955–1981 (total observational time 150^h) only on January 20, 1963 did V 1143 Ori show H_α line in emission for about three hours. The absence of the H_α line testifies that the star had no fuorlike increase of brightness in that period.

The observational data obtained in different observatories during 1982–1989 allow us to construct the light-curve of V 1143 Ori (Figure 1).

From the light-curve it follows that during 1982–1989 V 1143 Ori had at least four fuorlike increases of brightness. In the first two cases the period of increase is about three months. In the first case the duration of maximum brightness with a fluctuation of about $0^m.5$ was more than four months and in the second ~3.5 months. The duration of the outburst in 1982 was about 18 months (Gasparian *et al.*, 1990). The outburst of V 1143 Ori in 1984 lasted about 8 months.

The third increase was discovered in November 1986 when the star was already near or past its maximum (Gasparian *et al.*, 1987).

The fourth increase of brightness was discovered on October 11, 1989 when the star had $m_{pg} = 15.6$. There is obviously a decrease of brightness of this object because on the 20th October $m_{pg} = 16.1$ and on the 18th December 1989 $m_{pg} = 17.7$.

During fuorlike flares ultraviolet excess is observed, $U - B \simeq 0.3 \div -0.9$. $B - V \approx 0.3 - 0.6$.

Table 1

U	*B (pg)*	*V*	*R*
17.6–18.6 ±0.2	17.5–18.2 ±0.2	16.3–17.1 ±0.2	15.0–16.0 ±0.2

CONCLUSION

In the minimum light V 1143 Ori shows variation like T Tau stars, and two optical flares have been observed. One more flare has occurred in the H_α line. During 1982–1989 four fuorlike increases of light have been observed in V 1143 Ori. The observational data showed that the durations of these outbursts apparently have a tendency to be shortened, amplitudes on the average about 3^m in the photographic spectrum.

Spectral observations in 1983 and 1989–1990 showed that the spectral type of V 1143 Ori had changed from K7-M0 to M2 (Gasparian *et al.*, 1990).

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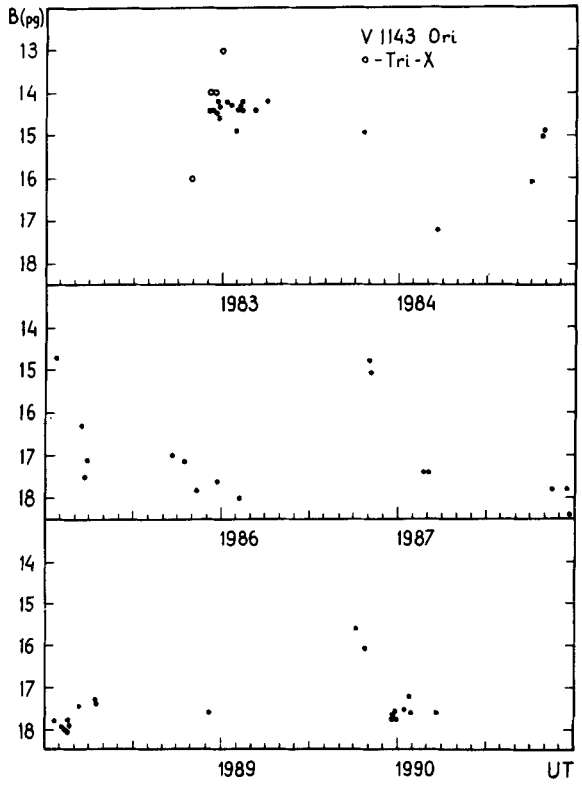

Figure 1 The light curve of V 1143 Ori during 1982–1989 years.

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