

# SPECTROSCOPIC OBSERVATIONS OF THE SANDULEAK-SEGGEWISS STARS IN NGC 6231

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**Abstract.** Sanduleak and independently Seggewiss discovered a very red star near the open cluster NGC 6231. Bessell and collaborators concluded it to be a variable of the R Coronae Borealis type.

A pair of spectrograms of this object were obtained in July 1970. The spectrograph dispersion in the range of 3800–4500 Å is around  $80 \text{ Å mm}^{-1}$  and in the range of 4500–7000 Å  $155 \text{ Å mm}^{-1}$ .

An outstanding feature of the spectrograms is their 'veiled' aspect, making it rather difficult to observe the lines. We observe the 4226 Å of Ca I, H and K of Ca II, 4030/4034 Å of Mn I, the G band; and several lines belonging to the Fe I multiplets. The H $\alpha$  and H $\beta$  lines are clearly seen in emission. H $\delta$  is absent or very faint. A spectrogram of RY Sagittarii taken in July 16, 1971, when the visual magnitude of the star was around 4 mag. below its maximum light, shows some similarities with the spectrograms of the Sanduleak-Seggewiss star, e.g. they do not show the ultraviolet CN absorption bands and in the spectra of both stars a line is seen at approximately 3896 Å, which may be H8.

If we accept that the star belongs to NGC 6231, its distance modulus is 11.5. Its intrinsic color may be assumed to be close to  $(B-V)_0=1.0$  (G or K star). The observed color is  $(B-V)=3.5$ . Adopting  $R=3$ , the visual absorption is 7.5. As the visual magnitude of the star is  $V=12.5$ , its absolute magnitude becomes  $-6.5$ .

Details will be published elsewhere.