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A NOTE ON V Cr A AND W Men

It is well known that V Cr A and W Men belong to the class of the R Cr B stars. The values in Table 1 are quoted from the "General Catalogue of Variable Stars" (Kukarkin et al., 1969).

Table 1

	Max. (1)	Min. (1)	Ampl.
V Cr A	9.4	<14.0	>4.6
W Men	13.8	16.0	2.2

(1) Photographic magnitude, Max=maximum light, Min=minimum, Ampl.=maximum amplitude of the light variation.

The purpose of this note is to show that, according to our observations, these stars have larger light variations than it was previously suspected.

While a UBV-photoelectric photometry program on R Cr B was being developed in July and August 1974, the star V Cr A was not seen visually with the 154 centimeter reflector of the Bosque Alegre Field Station which means that it was fainter than visual magnitude 16.5. As its spectral type is R O (Kukarkin et al.,op. cit.), its colour index ought to be around 1.1 magnitudes (Mendoza and Johnson, 1965), and so its visual magnitude at maximum light approximately equal to 8.3 from which a light variation larger than 8 magnitudes is derived.

In the same way, the variable W Men is not seen on a blue plate taken (on its field) on October 20, 1974*. The magnitude limit on this plate being around 18.3, the light variation of W Men must be larger than 4,5 magnitudes.

Two other well studied stars of the R Cr B-type, R Cr B itself and RY Sgr, have light variations of 9 and 7.5 magnitudes,respectively. These values are quite similar to those found for V Cr A and W Men. If we assume that in these four stars the physical and geometrical conditions in which the absorbing clouds are condensed are nearly the same, their similar light variations (the largest ones) imply that the maximum amount of matter they eject is almost the same.

L.A. MILONE

References:
Kukarkin, B.V.,Kholopov, P.N., et al.1969, General Catalogue of Variable Stars (Moscow).
Mendoza V.,E.E., and Johnson, H. 1965, Ap.J , 141, 161

* Dr.C.U. Cesco was requested to obtain this plate with the Yale-Columbia double astrograph of the astronomical observatory in "El Leoncito", San Juan, Argentina. We express our sincere thanks for his kind cooperation.