TABLE. VELOCITIES IN KM/SEC OF ABSORPTION COMPONENTS, NOVA LACERTAE 1950

Date, U.T. 1950	Premax. I	II ₁	Principal II ₂	II ₃	III ₁	Diffuse III ₂	Enhanced† III ₃	III ₄ H	Orion OII, He
Jan. 27.0	-699	-965	-1160						
28.0	-683	-878	-1150		-1340:				
Feb. 1.1	-712	-870	-1190		-1400	-1620			
2.0	-727	-878	-1200		-1400	-1630	-1850		-1780
3.0	-735	-900	-1140	-1290	-1470	-1630	-1810		-2010
4.0		-905	-1180	-1270	-1500	-1690	-1880		-1830:
5.0	-770	-890	-1105	-1255	-1490	-1660	-1900		-1880:
8.0		-1040*	Note*	-1235	-1510	-1640	-1800	-1930	-1820:
18.0	-860		-1245				-1985	-2280	-2260
26.0		-1160	-1325					-2240	-2320:
27.0		-1120	-1315			-1860		-2140	-2110
Mar. 3.0		-1170	-1375			-1915		-2500	-2560:
May 11.3		-1180	-1430					-2600	-2500

* Blend of II₁ and II₂.

† Velocities of components III are mostly rounded off to the nearest 10 km/sec.

Component II₂ was the stronger on February 26 and March 3, but with a brightening of the star February 27, II₁ became the stronger. Since lowered excitation accompanied the subordinate light maxima, as in several other novae, it is suggested that the strengthening of II₁ was due to recombination of ionized atoms in the inner part of the principal shell, while the weakening of II₂ represented increased shielding of the outer layer by the inner.

It is further suggested that many changes of absorption velocities in novae represent shifting of locations of effective absorbing layers due to changes of excitation, rather than true changes of velocity. Calculations of masses of novae from supposed "deceleration" of gases are therefore of doubtful validity.

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MacRae, Donald A. Stellar spectra and colors in an intermediate latitude field.

The stellar distribution at right angles to the galactic plane is being investigated through the use of objective prism spectra to the twelfth magnitude in regions at intermediate latitudes where the absorption is small. Spectra and colors for 939 stars in a field at latitude +14° in Cygnus are now available as the first step in this program. The spectral classification is on the system of the Yerkes Atlas. Magnitudes and colors are based on a photoelectric sequence on the international system provided by Dr. Kron at the Lick Observatory.

The intrinsic colors of stars of various spectral classes in the main sequence are necessary in order to determine the interstellar absorption. Recent publications by Eggen¹ provide accurate

photoelectric data. Spectral types of Eggen's stars which were not already published were determined from plates taken at the Warner and Swasey Observatory. The Pleiades stars show the effect of a reddening of .05 mag. After this effect is allowed for there is agreement in the intrinsic colors of the Pleiades, the Hyades, the Ursa Major nucleus, and some nearby dwarf stars,² and definite evidence of a dispersion of intrinsic colors of .03 or .04 mag. for stars of a given spectral subdivision. The absolute magnitudes of main sequence stars in the clusters from B8 to Ko show a similar dispersion of .3 mag. about a single sequence.

The color excess-distance relation in the field in Cygnus is poorly determined because of the dispersion in the intrinsic colors. However a linear increase in the total photographic absorption to a value of 0.5 mag. at 1200 parsecs satisfies the observed photoelectric and photographic colors. Probably the absorption beyond this distance is negligible.

1. *Ap. J.* **111**, 65, 81, 414, 1950.

2. Weaver, Harold F., *Pub. A. S. P.* **62**, 50, 1950.

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Markowitz, Wm. and John S. Hall. Photographic measurements of polarization in the multiple systems β Monocerotis, h Persei, and NGC 1502 (ADS 2984).

A knowledge of the polarization of faint stars in large fields is useful in studying problems such as (1) the extent of galactic clusters and determination of their members, (2) the effects of absorption on star counts, and (3) the phenomenon of polarization itself. It was decided to try