19^h36^m , $+30^\circ$ in Cygnus. Color excesses for the early type stars in each region indicate moderate interstellar absorption.

Densities for individual spectral groups have been computed and used to derive by summation a general luminosity function at 100, 200, 400, and 600 parsecs in each region.

Comparison of these functions with the standard luminosity function generally used in star count analyses indicates:

(a) At 100 parsecs an excess of 0.3 in $\log \Phi(M)$ for $M < 2$; for $3 < M < 6$ there is a corresponding deficiency compared to the standard van Rhijn function.

(b) The values of $\log \Phi(M)$ decrease on the average by 0.7 in the distance interval 100 to 600 parsecs in LF1, while the shape of the (M , $\log \Phi(M)$) curves remains sensibly the same.

(c) At $M = 0$ in LF2 a small excess over the standard function is present at distances 200, 400, and 600 parsecs. For $1 < M < 5$ the observed functions are deficient by about 0.4 in $\log \Phi(M)$.

Details of the investigation will be published elsewhere.

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McLaughlin, Dean B. The absorption spectra of Nova Persei 1901.

Nova Persei showed the normal complement of absorption spectra for a rapid nova, though its "diffuse enhanced" spectrum was weak and its Orion spectrum rather variable in strength. Velocities of all measured components are given in Table I.

The pre-maximum spectrum (I) on Feb. 22 was class B9p, with lines of NII and OII. The next night it was A0, and by February 25 it was about A5. The lines quickly weakened, but some remained visible until March 22.

The principal absorption (II) was about class A5 when first seen (Feb. 24) and was very diffuse, due to three blended components which became plainly separated at the hydrogen lines after March 7. On March 27 a strong "shell" line, H ϵ 3889, was present after other lines had disappeared.

The diffuse enhanced spectrum (III) included hydrogen, MgII, and perhaps NaI. The Orion spectrum consisted of a few lines of H ϵ I, OII, VII, and the strong NIII pair, 4097, 4103.

The use of Harvard, Yerkes and Lick spectrograms is gratefully acknowledged.

TABLE I. VELOCITIES OF ABSORPTION LINES IN KM/SEC
(ALL ARE NEGATIVE)

Date	I	IIa	IIb	IIc	II'	III	Orion
Feb. 22.6	651						
23.5	710						
24.6	882	1320	1450			3130	
25.6	1027	1354	1536			3460	
26.6	1024	1334		1599		3490	
27.6	1062	1336	1474	1661	2235	3600	
28.6	1069	1329	1484		2111	3500	3460
Mar. 1.4	1044	1396		1730		3510	3760
2.5	1074	1395	1548		2147	3600	3310
4.5	1044	1416		1662	2327	3510	3610
5.5	1090	1417	1606	1687		3750	3555
6.4	1090	1440	1567	1673	2295	3540	3285
7.4	1072	1444	1536	1680		3635	3580
11.5	1077*	1510	1702	1818	2327		
12.6	1067	1490	1771	1923		3680	3665
13.6	1133	1487	1754	1931			3565
14.3	1037	1502	1751				
15.5	1045*	1486	1776				3760
17.6	1012	1479	1764			3555	3690
18.6		1500	1798			3737	
20.3		1518	1754				
21.3	1058	1526					3470
22.3	1078*	1556					3445

* Mean of two components, separation about 180 km/sec.

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McMath, Robert R., Leo Goldberg and Orren C. Mohler. Evidence for coronal absorption on the solar disk.

A broad, diffuse absorption line at 6374.45 Å. ± 0.01 has been found in the spectrum of the solar disk on plates obtained with the McGregor spectrograph and the 70-ft. tower telescope of the McMath-Hulbert Observatory. Its width has been estimated at 0.3 to 0.4 Å. The line is seen very faintly at the center of the disk, becoming strongly accentuated at the limb. It appears equally intense all around the limb and no significant variations in intensity or in wave length have been found. The appearance of the line and the closeness of its position to that of the red coronal line (given by Lyot as $\lambda 6374.51 \pm 0.03$) suggest the possibility that the absorption line arises from atoms of Fe x.

The evidence for or against the identification as Fe x is discussed, the results at present being inconclusive. If the line is due to Fe x, its intensity and distribution around the limb are such that a considerable abundance of Fe x must be present in the chromosphere. In this connection attention is called to the observation by H. D. and H. W. Babcock¹ of a similar diffuse absorption line at $\lambda 6374.40$ in the flash spectrum outside of eclipse. The Babcocks reported that the line was flanked by emission components on either side. A predicted line of Fe I ($z^5G_2^0 - e^7G_2$)