profiles of the λ4227 line of *Ca*I and the λ3933 line of *Ca*II with direct intensity tracings of a spectrogram taken with the 72-inch reflector at Victoria, B. C. by K. O. Wright.

We found that raising the continuum by a factor of 1.5 at λ3933 and by a factor of 1.4 at λ4227 would closely represent the observations. This change in the height of the continuum increases the equivalent widths of both lines considerably, making it clear that any method that employs the equivalent widths of lines for the analysis of atmospheres of late-type stars must be used with caution.

University of Michigan Observatory,
Ann Arbor, Mich.

Limber, D. Nelson. An analysis of Pannekoek's survey of the southern Milky Way.

S. Chandrasekhar and G. Münch have recently proposed a refinement to the current discrete cloud picture of the interstellar medium by describing the fluctuating distribution of the density in the medium in terms of a correlation function. On this latter picture they have determined the correlations in Milky Way brightness in two different directions for the case when the system extends to infinity along the line of sight and have compared their results with correlations in the galactic plane derived from Pannekoek's brightness charts of the southern Milky Way.

In the present paper the analysis has been extended to the case of finite extent of the system. The desired angular correlations have been derived as functions of galactic latitude for the relevant ranges of the parameters. These results have been compared with correlations derived from Pannekoek's charts for the longitudes ranging from 280° to 340° in both the northern and southern latitudes.

Comparison indicates that the general latitude effect given by the theory is present and that the results are consistent with a galactic half-thickness of 0.25 magnitude and an optical thickness $\tau_0 \simeq 0.01$ for the scale defined by the correlation function.

Yerkes Observatory,
Williams Bay, Wis.

McCuskey, S. W. The galactic structure in Camelopardalis.

Spectral types and colors for some 900 stars brighter than photographic apparent magnitude 12.5 have been observed in an area of 16.2 square degrees located at R.A. 3^h51^m, Dec. +56°.8 (1945). An analysis of the red color excesses and of some photoelectric color measures indicates that the region is covered by an obscuring cloud which sets in at 200 parsecs and extends to 500 parsecs. The total absorption in this cloud is 2.0 mag. at 500 parsecs. Thereafter the absorption increases uniformly to 3 mag. at 2500 parsecs.

Space density analyses indicate a condensation of B8-A0 stars and of giant F8 to K3 stars at distances between 200 and 300 parsecs. In this region the density of the former is 4 times the density in the solar neighborhood; the density of giants is 2 to 3 times that near the sun. Beyond this clustering, the density functions decrease to values somewhat less than the density near the sun. The B5 stars and the F0-F5 stars diminish rapidly in number with distance. At 500 parsecs the density is about one-third of that in the solar neighborhood.

A general luminosity function computed from this data shows an excess of 0.4 in log $\varphi(M)$ for stars with $-1 < M < 1$ as compared to the standard van Rhijn function.

Warner and Swasey Observatory,
Cleveland, Ohio.

McDonald, Sophia L. and Thomas B. Steel, Jr. Representations of observations of thirty-four minor planets belonging to a group which includes the group one-half.

This paper is a continuation of a paper presented to the Society in December 1947.[1] The results then reported had been obtained prior to the interruption of the work by the war. Since then, comparisons have been made with recent observations. The present paper adds from eight to seventeen years, depending on the minor planet, to the interval over which the observations have been represented. These results are to be incorporated in the detailed publication of the material in a volume of the Publications of the Lick Observatory.[2]

Particular mention should be made of the very long intervals of solution exhibited. The smallness of the residuals indicates that the general tables will continue to hold many years into the future for most if not all of the minor planets. There is no question but that the shortened tables of general perturbations on which these discussions are based are very accurate. The tables are contained in the forthcoming publication.[2]