not completely observed and we cannot obtain any evidence whether the numbers will decrease again. The position of these stars in our diagrams indicates that their absolute visual magnitude is about + 1.5. This certainly is the correct value.

In neither cloud do F and G giants occur, and the numbers representing these types are therefore rather small. Even in the Mount Wilson diagram, in which the numbers of giant stars must be enormously exaggerated, the F and G giants are relatively scarce [1]).

Comparing the general shape of our curves with those obtained by HESS [2]) and VAN RHIJN [3]) for the stars in the neighbourhood of the sun, we see that the different curves have the same general characteristics. The apparent larger slope to the right in our diagram is caused by the fact that the photographic scale has been used. Therefore it seems probable that the general distribution of stars in the Milky Way clouds at least is the same as for the stars near the sun.

The absolute luminosity curve.

SHAPLEY [4]) has suggested, that globular clusters might ultimately develop into Milky Way clouds. The HESS diagrams derived here seem not to support this view. On the other hand the apparent luminosity curves have a striking resemblance to those of the globular clusters. In the luminosity curve of the globular clusters occurs a secondary maximum about 1 magnitude and a minimum 2 magnitudes fainter than the absolute luminosity of the cluster type variables (— 0.23).

From the absolute luminosity curves in Auriga and Scutum it appears, that this maximum and minimum have the absolute magnitudes + 1.0 and + 1.5 respectively (see figure 3). The corresponding values in the globular clusters are + 0.7 and + 1.7.

Summary.

1. — A HESS diagram has been drawn for the galactic star-clouds in Auriga and Scutum.

2. — In the Milky Way clouds the general distribution of the stars over magnitudes and spectral types seems to be the same as for the stars in the neighbourhood of the sun.

3. — In the absolute luminosity curves of the Auriga and Scutum clouds a secondary maximum and minimum occurs which co-incides with the corresponding maximum and minimum in the curve of the globular clusters.

The HESS diagram however is quite different.

1) E. P. HUBBLE. *Carnegie Instit. Year Book*, No. 20, page 270, 1921.
2) *l. c.*
3) *l. c.*
4) *Cont. Mount-Wilson.*

Remark on the star Scutum B6 (α 1900 = $18^h38^m0^s.3$; δ 1900 = $-6°35'14''$ m = 12.7), by Dr. *E. A. Kreiken.*

When investigating the colours of the faint stars in the Scutum cloud the colour of one star appeared to be of a very remarkable character. Attention has been drawn to this star previously [1]).

The star is situated just on the edge of the field investigated by us but was well measurable on 6 different plates. The results of the individual measures were $I_\lambda = -0^m.84$; $-0^m.70$; $-0^m.86$; $-0^m.91$; $-0^m.95$ and $-0^m.85$.

As weighted mean the value $I_\lambda = -0^m.87 \pm 0^m.05$ (probable error) was obtained.

SCHWARZSCHILD [2]) arrived at the conclusion that for $I_\lambda = -0^m.81$ the temperature of a star becomes infinitely high. The peculiar colour of the star may be caused by a bright emission line of short wavelength. If it is supposed, that when measuring this star we pointed on this emission line, its hypothetical wavelength would be $\lambda = 4037$ Ångström.

As the photographic magnitude of this star is 12.7, it falls quite outside the ordinary colour-luminosity diagram.

If the star is an ordinary O star it must be far beyond the limits of the Scutum cloud. If on the other hand it is supposed to be a planetary nebula of very small dimensions, the star might be a white dwarf, which would agree with the results obtained by BECKER and GROTIAN [1]).

H. KIENLE [2]) remarked, that a photographic dwarf may be a bolometric giant. The bolometric correction for the effective temperature T_e 200000 viz. $\Delta m = 10.3$ would bring this star quite up to the main series and more.

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Lembang. Java.

Febr. 1929.

1) See the preceeding paper.
2) *Gött. Aktinometrie, Teil B.*

1) *Ergeb. Exact. Naturw.* 7, 1928.
2) *Ergeb. Exact. Naturw.* 1, 1929.