

$\alpha=2$   $n=44$   $m=3$   $\delta=60^\circ$   $\theta=0$

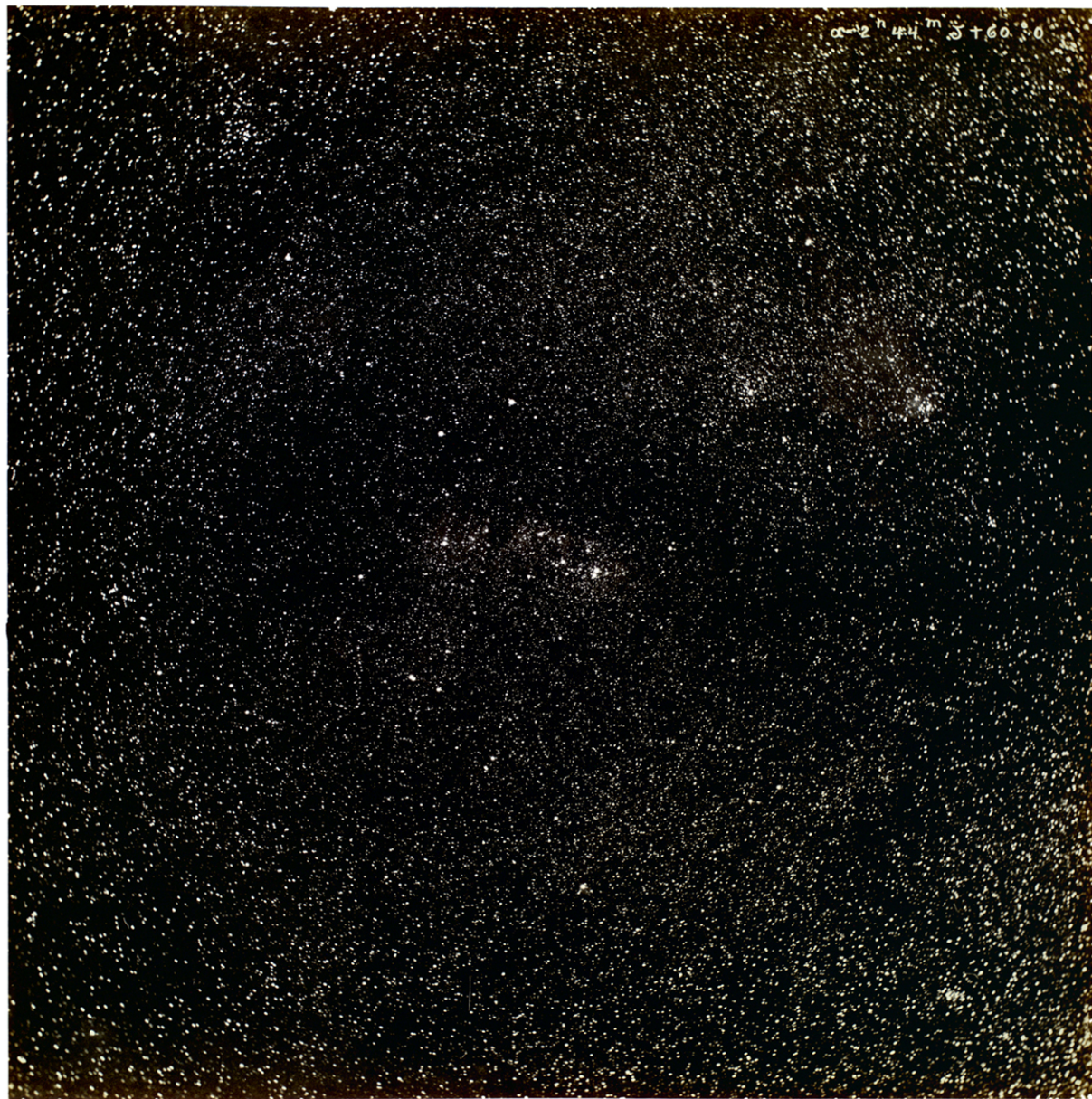
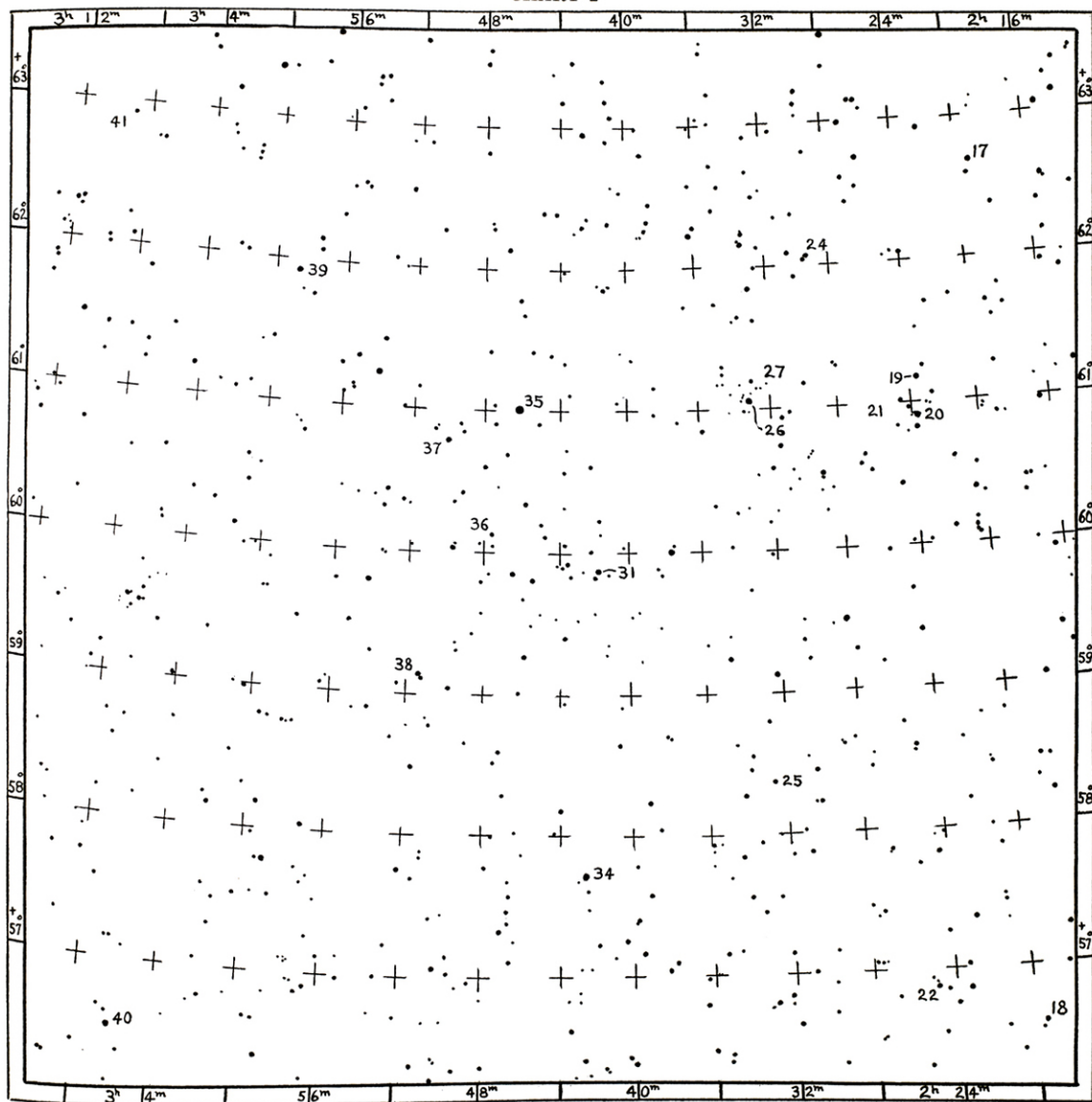


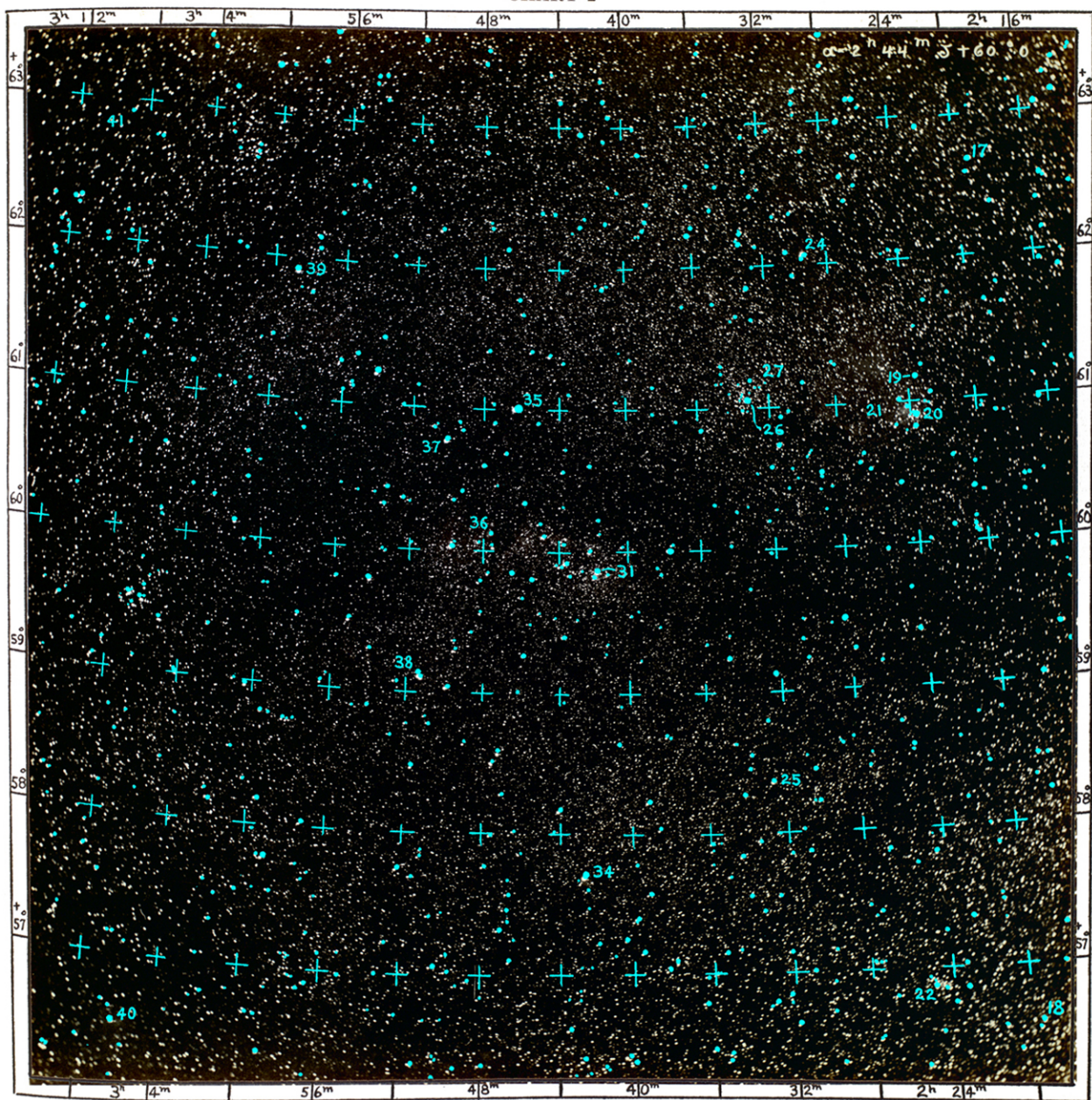
CHART 2



IN PERSEUS AND CASSIOPEIA

 $\alpha = 2^{\text{h}} 44^{\text{m}} 20^{\text{s}}$      $\delta = +60^{\circ} 0'$

CHART 2



IN PERSEUS AND CASSIOPEIA

 $\alpha = 2^h 44^m 20^s$   $\delta = +60^\circ 0'$

TABLE 2  
OBJECTS ON PLATE 2 INDICATED ON CHART 2

No.	OBJECT	D.M. MAG.	$\alpha$ 1875.0	$\delta$ 1875.0	H.D. MAG.		SPEC- TRUM	REMARKS
					Ptm.	Ptg.		
17	B.D.+62°402	7.2	2 <sup>h</sup> 19 <sup>m</sup> 2.2	+62°37'5	7.41	7.41	A0	
18	B.D.+56°631	9.0	2 19 25.6	+56 40.0	9.2	9.3	A3	
19	B.D.+61°424	7.0	2 23 11.7	+61 10.7	7.40	7.68	F0	
20	B.D.+60°502	7.5	2 23 16.0	+60 54.0	7.82	7.58	B	In cluster
21	N.G.C. II 1805	Cl.	2 24 0	+60 55	....	....	...	
22	N.G.C. 957	Cl.	2 24 33	+56 58.3	....	....	...	
24	B.D.+61°444	6.5	2 29 15.3	+62 2.9	6.80	6.78	B9	
25	B.D.+58°504	7.0	2 32 22.3	+58 26.3	7.18	7.60	F5	
26	B.D.+60°548	7.1	2 32 57.4	+61 3.5	6.99	7.3	F0	In cluster
27	N.G.C. 1027	Cl.	2 33 9	+61 0.5	....	....	...	N.G.C. II 1824
31	B.D.+59°552	6.9	2 41 30.6	+59 53.9	7.11	6.87	B0	
34	B.D.+57°651	6.2	2 42 24.0	+57 47.7	6.27	6.27	A0	
35	B.D.+60°591	5.9	2 46 3.6	+61 0.5	5.63	6.05	F5	
36	B.D.+60°596	9.3	2 47 23.6	+60 9.3	....	....	...	Nebulous
37	B.D.+60°608	7.2	2 49 54.7	+60 47.2	7.00	6.81	B2	
38	B.D.+59°582	7.0	2 51 13.5	+59 10.0	7.35	7.35	A0	
39	B.D.+61°525	6.5	2 58 43.0	+61 54.1	6.54	6.30	B0	
40	B.D.+56°798	6.0	3 6 14.1	+56 40.4	5.92	5.92	A0p	
41	B.D.+62°544	8.8	3 8 58.6	+62 54.6	8.9	9.0	A2	
46	B.D.+58°607	5.0	3 19 56.9	+58 26.6	4.76	4.76	A0p	

None of the dark objects of the Barnard catalogue occurs within the limits of this plate.

## PLATE 2

### IN PERSEUS AND CASSIOPEIA

$\alpha = 2^h 44^m 20^s$ ,  $\delta = +60^\circ 0'$   
1907 December 1.640

Galactic Long. =  $105^\circ$ , Lat. =  $+2^\circ$   
Exposure =  $5^h 15^m$

Scale: 1 cm =  $19'.9$ , or 1 inch =  $50'.4$

This photograph was specially made to show the two clusters which appear in the upper part of Plate 1, and which are involved in faint and diffused nebulosities. In the center of this plate are a number of clusters, or masses of brighter stars with many smaller ones, covering nearly  $2^\circ$  in right ascension. This whole group is immersed in a bed of very feeble nebulosity which seems to conform in extent and position with the two or three groupings of stars, but it is really greater in all directions. Although the nebulosity covers their full extent, it more strongly affects the western portion. There seem to be only one or two places in which it condenses about the individual stars.

The two clusters in the upper right quarter of the plate are N.G.C. II 1805 (No. 21 of the list of stars in Part II) and N.G.C. 1027 (No. 27). The eastern cluster is free of any nebulosity and contains more stars, the brightest one being B.D.  $+60^\circ 548$  (No. 26) of magnitude 7.1. The western of the two clusters, the principal star of which is B.D.  $+60^\circ 502$  (No. 20) of magnitude 7.5, is involved in a roundish mass of diffused nebulosity about  $50'$  in diameter, beginning near the middle of the cluster and extending one-half way to the eastern group. In the eastern edge of the nebulosity is a deep indentation which is more definite than any other portion of its outline. [Unfortunately many of the prints are so dark that the nebulosity around the clusters, here and near the center of the plate, does not show.]

There is apparently a small, bright condensation close east of the bright stars of the western cluster, which may be due to a small group of faint stars. Both these clusters, especially the eastern one, seem to be simply condensations in the slightly

richer parts of the Milky Way. A dark vacancy south and west of the eastern cluster separates the two from a large mass of small stars some  $53'$  in diameter. A considerable region nearly  $2^\circ$  in diameter, just east of the center of the plate, is also rather lacking in stars. The distribution of the stars of this whole region is decidedly unequal and the stars show the same tendency to clustering as do those in Plate 1, although (with the exception of the principal clusters already described) in a less marked degree. We have examples in  $\alpha = 2^h 21^m$ ,  $\delta = +60^\circ 5'$ ;  $\alpha = 2^h 25^m$ ,  $\delta = +56^\circ 50'$  (N.G.C. 957);  $\alpha = 2^h 25^m$ ,  $\delta = +59^\circ 30'$ ;  $\alpha = 3^h 2^m$ ,  $\delta = +62^\circ 45'$ ;  $\alpha = 3^h 7^m$ ,  $\delta = +59^\circ 30'$ .

In the lower left corner of the plate, in  $\alpha = 3^h 7^m$ ,  $\delta = +56\frac{1}{2}^\circ$ , there seems to be another patch of faint, diffused nebulosity similar to that in and near N.G.C. II 1805.

A nebulous strip in  $\alpha = 2^h 42^m 20^s$ ,  $\delta = +57^\circ 41'$ , close to and south of the star B.D.  $+57^\circ 651$  (No. 34) of magnitude 6.2, seems partly to involve that star. The star B.D.  $+60^\circ 596$  (No. 36), of magnitude 9.3, is nebulous. About  $5'$  north of it is a fainter nebulous star. South of it, in  $\alpha = 2^h 47^m 30^s$ ,  $\delta = +60^\circ 2'$  is a star, perhaps as bright as magnitude  $8\frac{1}{2}$ , which is not on the B.D. charts nor in the catalogue.

On the original negative, beyond the east margin of the print, the star B.D.  $+58^\circ 607$  (No. 46) of magnitude 5.0, is involved in very feeble nebulosity nearly  $\frac{1}{2}^\circ$  in diameter.

The brighter stars show a slight trail, due to trouble with the driving clock.

The original negative, No. 439, was made at the Yerkes Observatory.