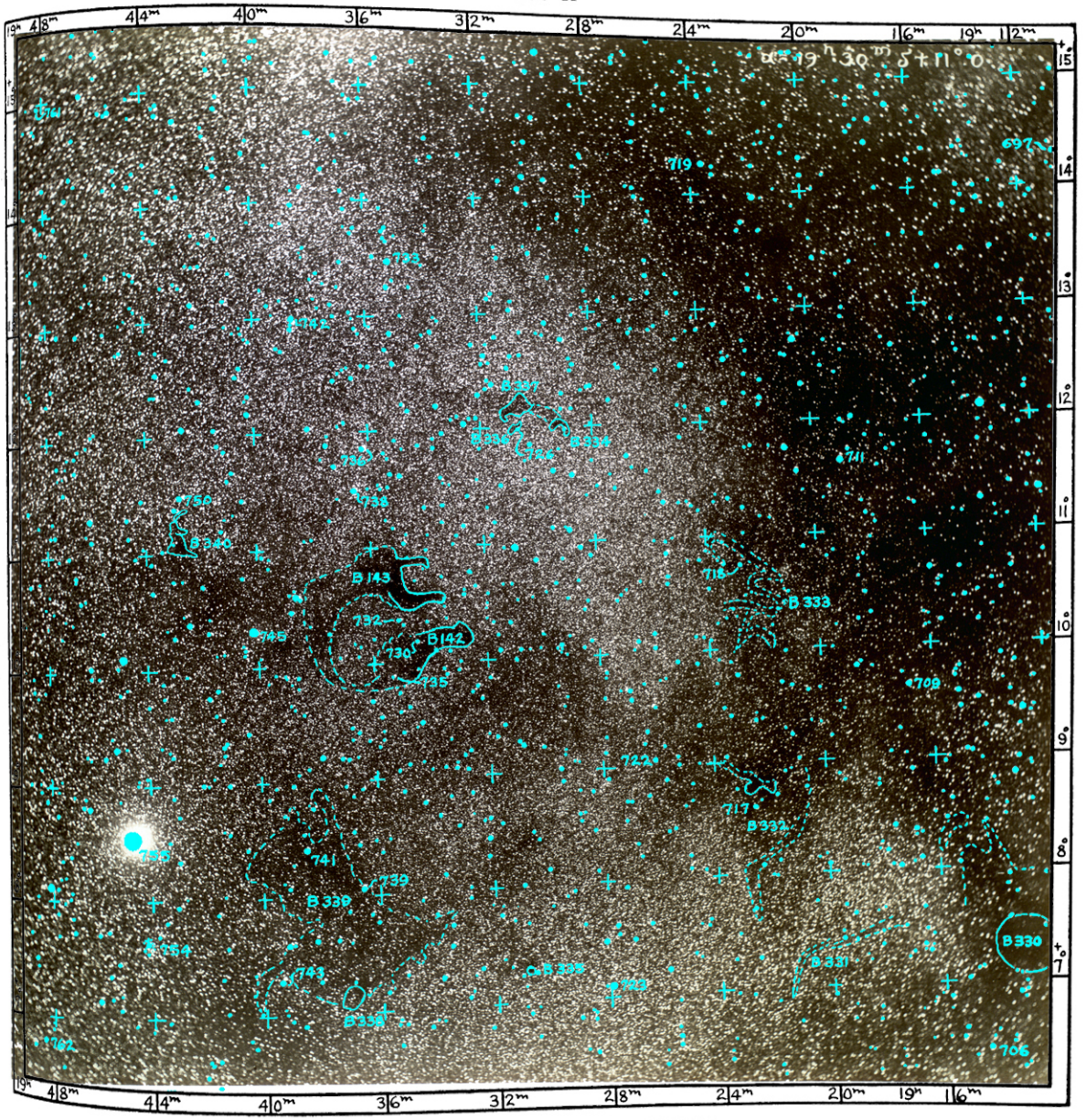
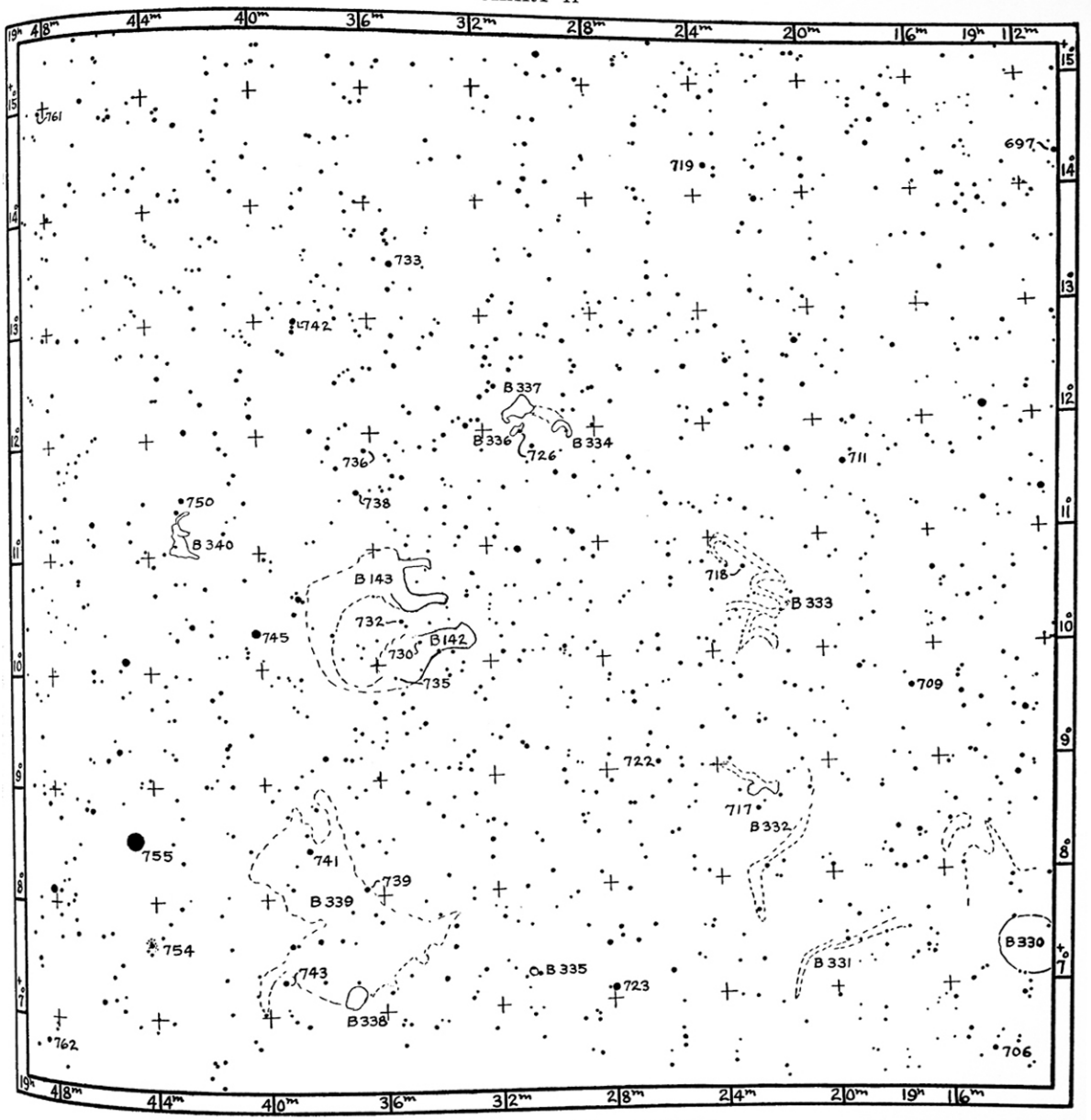
α=19h 30m δ+11° 0'



IN AQUILA, NORTHWEST OF ALTAIR

$\alpha = 19^h30^m25^s$ $\delta = +10°50'$

CHART 41



IN AQUILA, NORTHWEST OF ALTAIR

$\alpha = 19^h30^m25^s \qquad \delta = +10°50'$

TABLE 41

OBJECTS ON PLATE 41 INDICATED ON CHART 41

No.	Object	D.M. Mag.	α 1875.0	δ 1875.0	H.D. Mag. Ptm.	H.D. Mag. Ptg.	Spectrum	Remarks
697	B.D.+14°3852	5.9	19h10m43s4	+14° 19′5	5.46	5.46	A0	
706	B.D.+ 6°4099	7.3	19 14 30.5	+ 6 24.9	7.80	8.30	F8	
709	B.D.+ 9°4081	6.5	19 16 51.2	+ 9 40.3	6.25	6.75	F8	
711	B.D.+11°3833	5.5	19 19 0.4	+11 40.7	5.23	6.01	G5	31 *b* Aquilae
717	B.D.+ 8°4112	7.5	19 22 35.6	+ 8 36.6	7.36	7.64	F0	
718	B.D.+10°3913	7.5	19 22 52.3	+10 46.4	7.39	8.17	G5	
719	B.D.+14°3936	6.0	19 23 37.6	+14 20.4	5.73	6.73	K0	
722	B.D.+ 9°4139	7.0	19 26 13.5	+ 9 4.2	6.93	6.93	A0	
723	B.D.+ 7°4132	4.8	19 27 59.2	+ 7 6.9	4.65	5.65	K0	38 μ Aquilae
726	B.D.+11°3912	8.6	19 30 44.9	+12 2.4	8.6	9.4	G5	
730	B.D.+10°4016	8.7	19 34 34.7	+10 11.4	8.67	8.73	A2	
732	B.D.+10°4020	7.7	19 35 11.2	+10 23.6	7.93	8.43	F8	
733	B.D.+13°4098	5.8	19 35 18.3	+13 31.6	5.84	5.67	B3	
735	B.D.+ 9°4212	8.2	19 35 26.8	+ 9 54.3	8.57	8.57	A0	
736	B.D.+11°3954	6.9	19 36 21.0	+11 54.1	6.26	6.24	B9	46 Aquilae
738	B.D.+11°3955	5.7	19 36 41.0	+11 32.0	5.32	5.74	F5 / A3	47 χ Aquilae
739	B.D.+ 8°4190	7.0	19 36 43.4	+ 8 5.3	6.83	7.25	F5	
741	B.D.+ 8°4200	7.0	19 38 39.6	+ 8 25.7	6.52	7.52	K0	
742	B.D.+12°4059	6.0	19 38 45.4	+13 0.3	6.12	6.07	B8	48 ψ Aquilae
743	B.D.+ 7°4210	6.0	19 39 35.1	+ 7 18.7	5.72	5.78	A2	
745	B.D.+10°4043	3.0	19 40 19.0	+10 18.6	2.80	3.87	K2	50 γ Aquilae
750	B.D.+11°3994	5.8	19 42 48.7	+11 30.4	5.70	6.04	F2 / A2	52 π Aquilae
754	N.G.C. 6828	Cl.	19 44 14	+ 7 35.8	....	....	....	
755	B.D.+ 8°4236	1.2	19 44 41.1	+ 8 32.4	0.89	1.03	A5	Altair, 53 α Aquilae
761	B.D.+14°4083	6.5	19 48 17.9	+14 58.1	7.04	7.54	F8	
762	B.D.+ 6°4351	7.0	19 48 33.9	+ 6 48.9	5.97	5.97	A0	

DARK OBJECTS

B 330	19h13m5	+ 7°3	B 337	19h31m2	+12°1
331	19 20	+ 7.3	142	19 33.8	+10.2
332	19 22	+ 8.5	143	19 35.5	+10.7
333	19 23	+10.4	338	19 37.0	+ 7.2
334	19 29.2	+12.0	339	19 38	+ 8.0
335	19 30.8	+ 7.3	340	19 42.8	+11.1
336	19 30.8	+12.1			

PLATE 41

IN AQUILA, NORTHWEST OF ALTAIR

$\alpha = 19^h\ 30^m\ 25^s$, $\delta = +10°\ 50'$ Galactic Long. = 16°, Lat. = −6°
1905 August 27.772 Exposure = $4^h\ 5^m$
Scale: 1 cm = 24′.4, or 1 inch = 62′.0

The first-magnitude star Altair, in the lower left part of the plate, lies in a specially dense stratum of small stars in which are some very curious dark markings. In its immediate region on this plate the stars appear coarser, but this is mainly because it is in the region of poor definition causing slightly larger images. Near the right lower corner, on the edge of the great cloud, is a headlike projection of stars 1°40′ in diameter. This somewhat closely resembles the great "head" of the star cloud in Scutum shown on Plate 37.

The dark markings are perhaps the most important features of the plate. The fact that they occur in so rich a region of the sky, where the depth of the star stratum must be very great, leads to the belief that they are not real vacancies penetrating through the entire cloud, but that they are more probably obscuring matter of some kind. These spots were shown on my earliest photographs made at the Lick Observatory. It was on a plate of this region, taken on October 12, 1892, that the trail of Comet V 1892—the first comet discovered by photography—was impressed (see Plates 71 and 101, *Lick Observatory Publications*, **11,** 1913).

One inch (2.5 cm) above the middle of the lower edge of the plate is a very small black spot, B 335, which looks like a defect, but is not. It is probably of the same nature as the larger ones just mentioned. It can hardly be a hole through the star cloud.

Along the western edge of the cloud are many interesting, irregular, dark lanes having a uniform width of about 2′ or 3′. These are especially striking in $\alpha = 19^h 23^m$, $\delta = +10°25'$, where they cover a space over 1° wide and form a rather complicated system of twistings and turnings of dark lanes. This region (B 333) is 2½ inches, or 6 cm, from the right edge and 4 inches, or 10 cm, from the lower edge of the print. Another area of these queer markings (B 332) lies about 1½° south of B 333. One of these lanes is like part of the Greek letter ω. The strange thing about all such lanes is that they always are of uniform width throughout their ramifications. This must have some meaning beyond mere chance.

The great mass, or cloud of stars, that covers more than half the plate ends toward the west rather definitely, but irregularly. Beyond this the rest of the plate is covered with a very thin sprinkling of stars until a denser mass begins again in the upper right corner.

Beginning at about $\alpha = 19^h 32^m$, $\delta = +14°$ (1½ inches, or 4 cm, from the top and 4 inches, or 10 cm, from the left edge of the print), three slightly diverging lines of small stars run south for about 2° to the group of small, dark spots, B 334, 336, and 337. Their south ends are approximately in $\alpha = 19^h 28^m 10^s$, $\delta = +12°25'$; $\alpha = 19^h 29^m 30^s$, $\delta = +12°20'$; and $\alpha = 19^h 31^m 40^s$, $\delta = +12°10'$. By tilting the print and looking in the direction of these lines they come out quite strongly. They seem to be partly dark lanes and partly lines of stars.

The original negative, No. 294, was made at Mount Wilson.