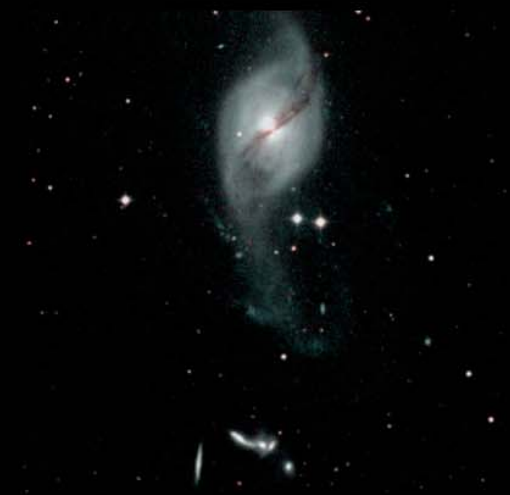


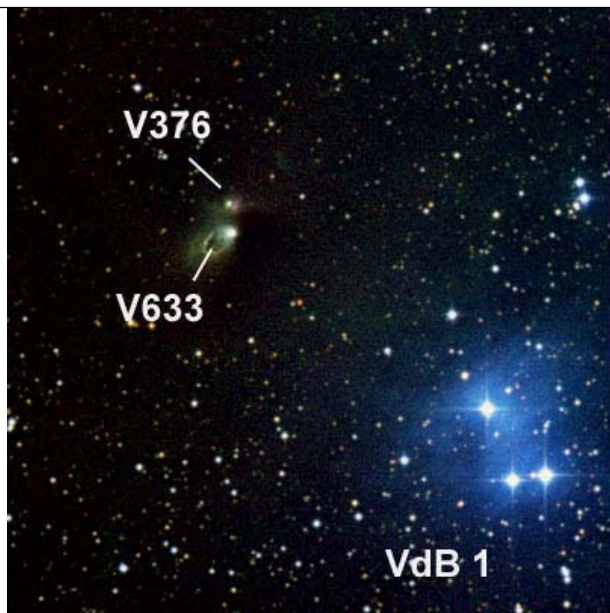
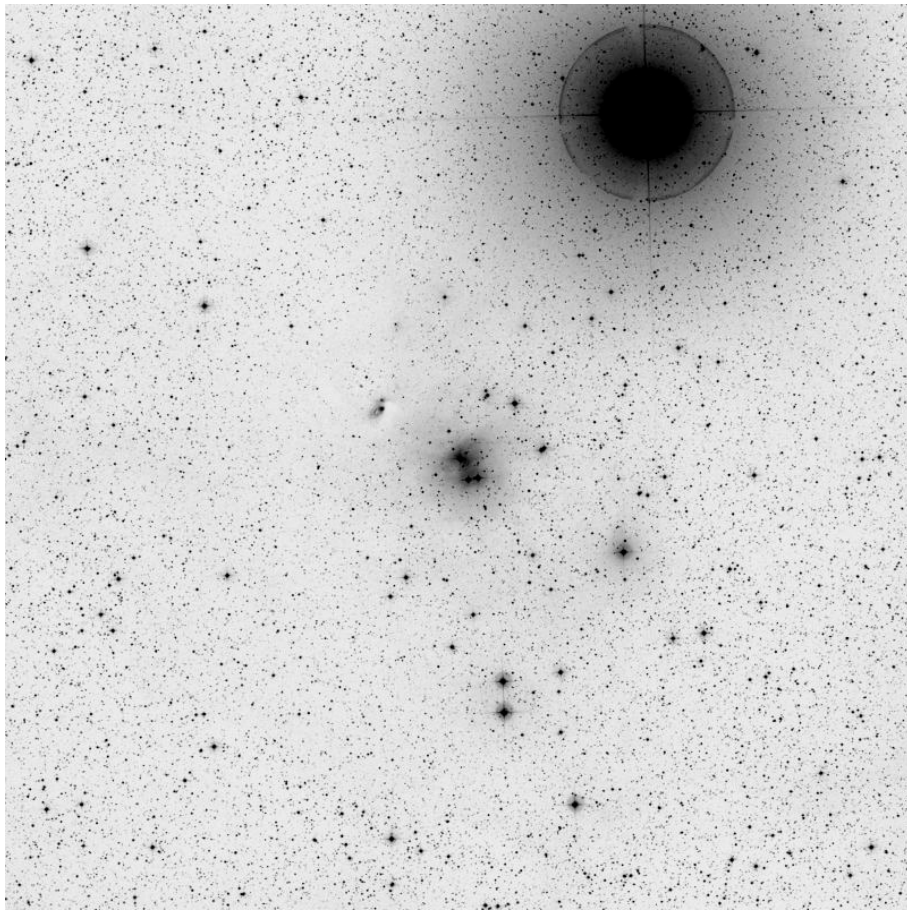


Exotic

Observing Atlas
Reiner Vogel 2012

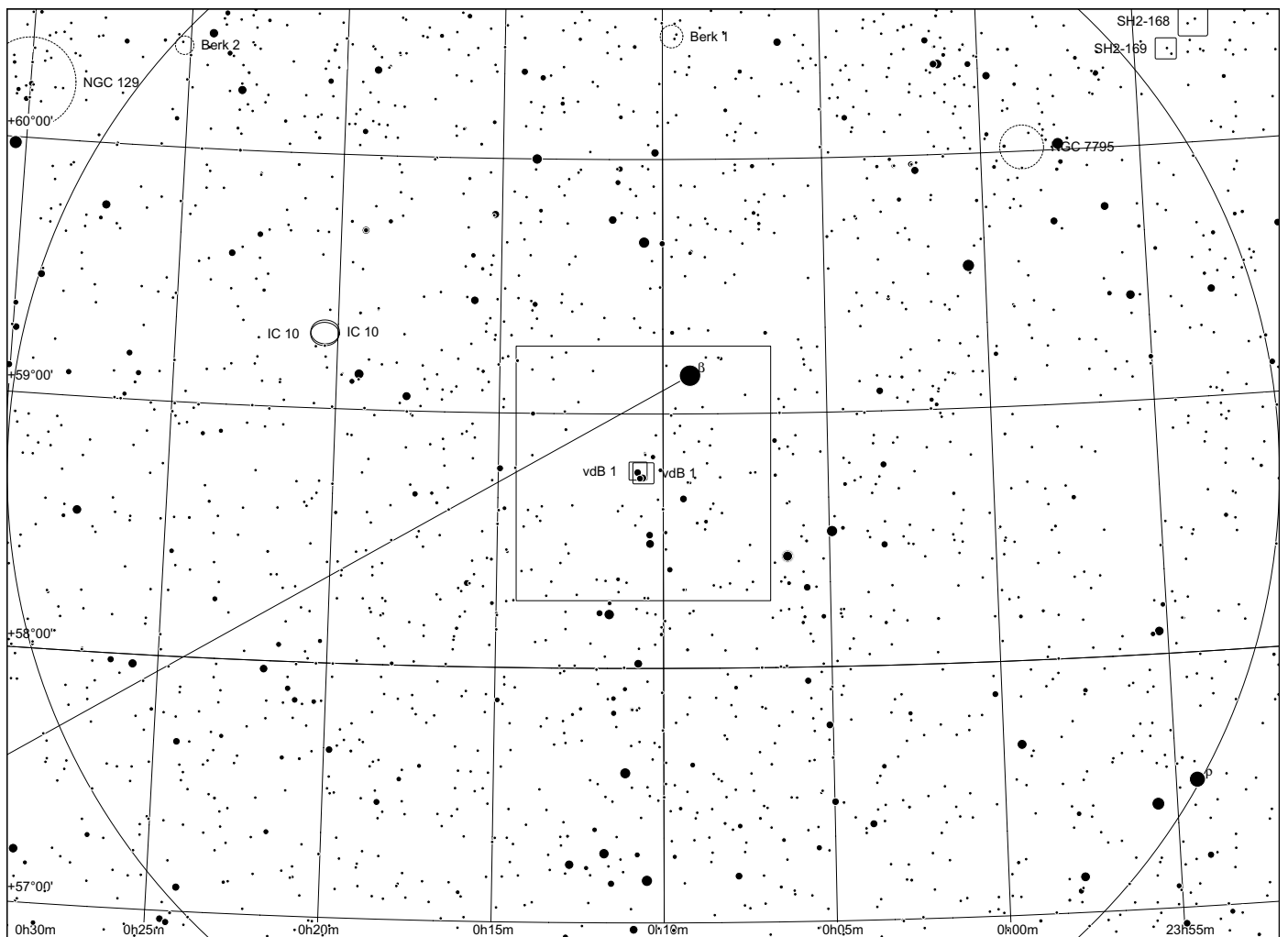
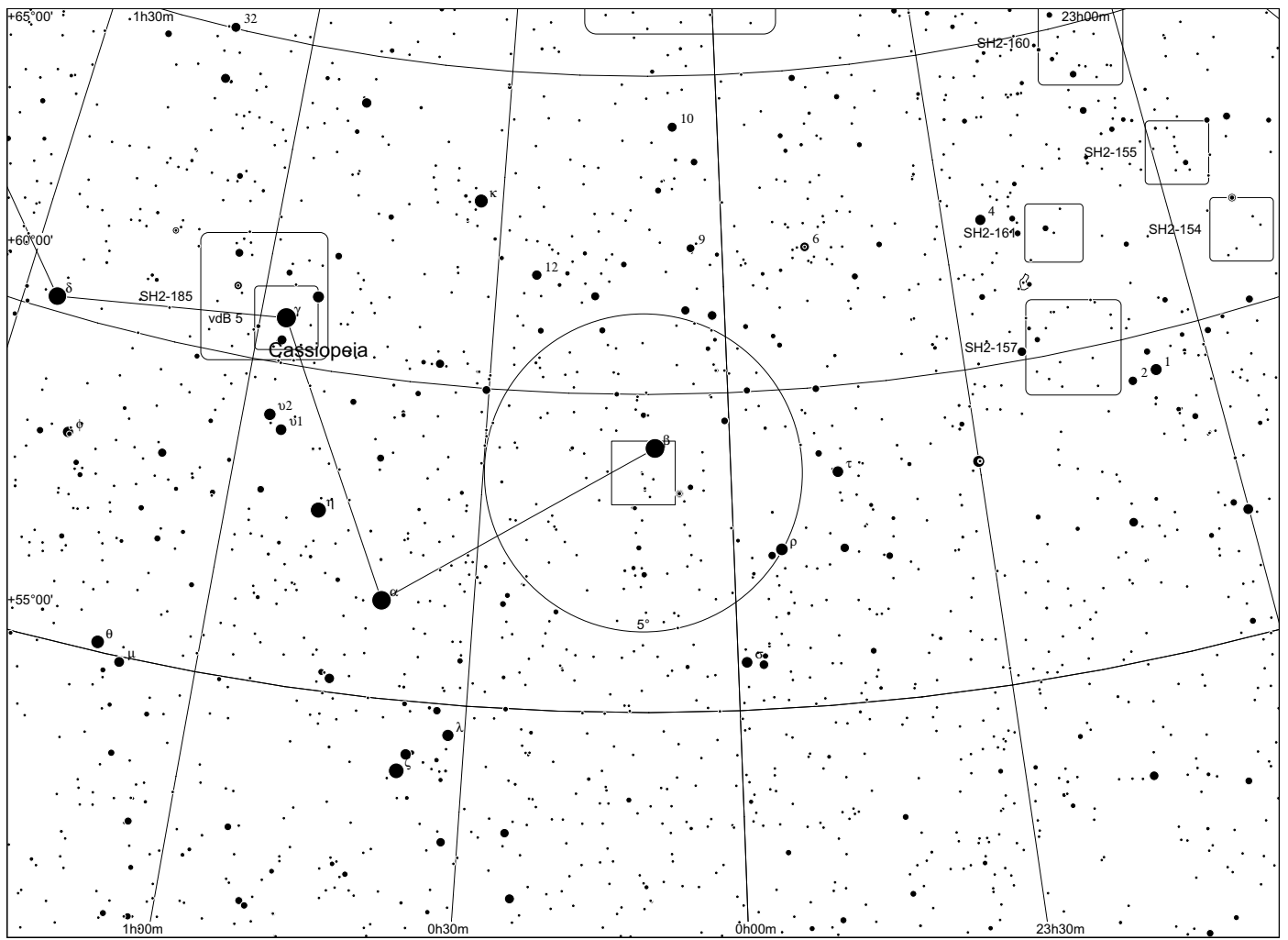


vdB 1 and Friends in Cassiopeia

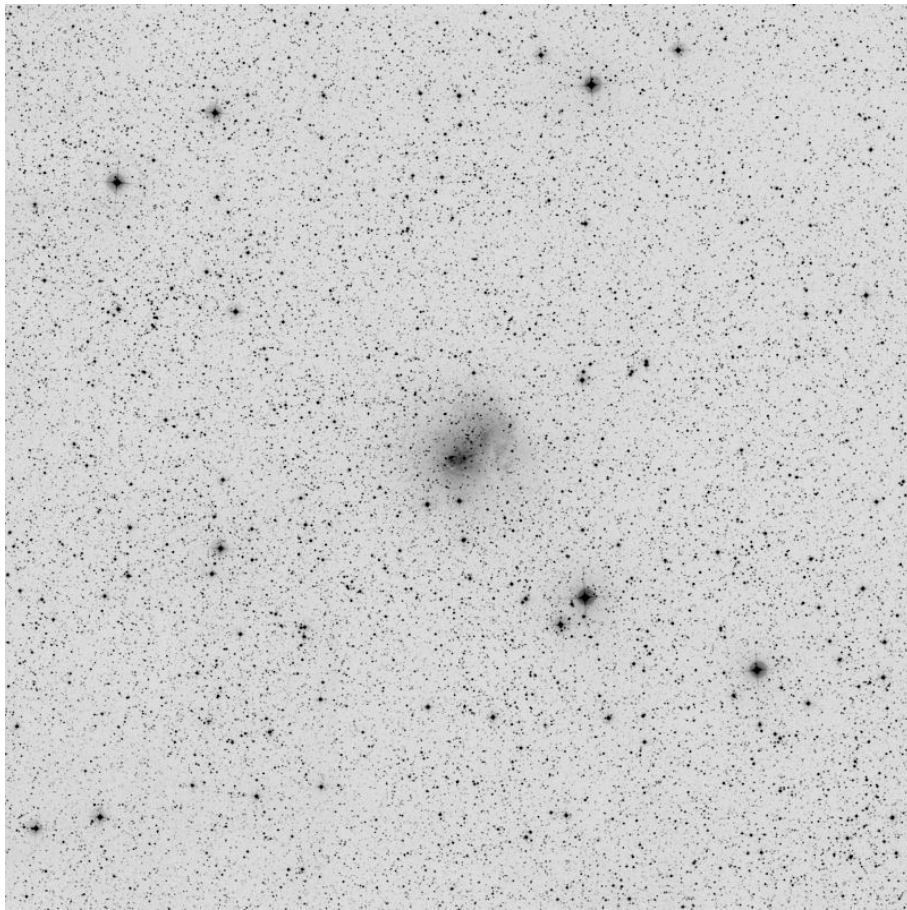


vdB 1

00 10 46.37 +58 46 10.3

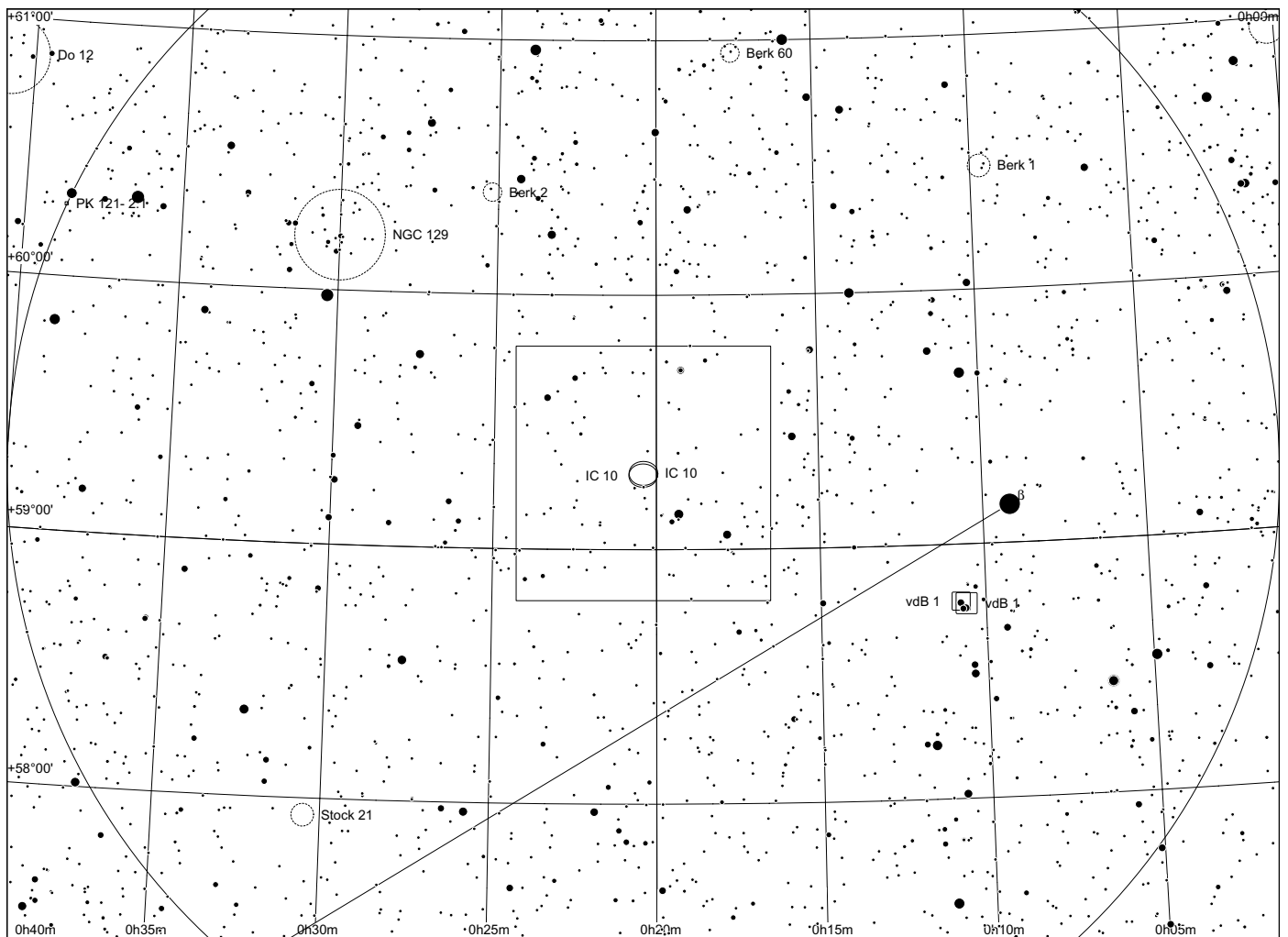
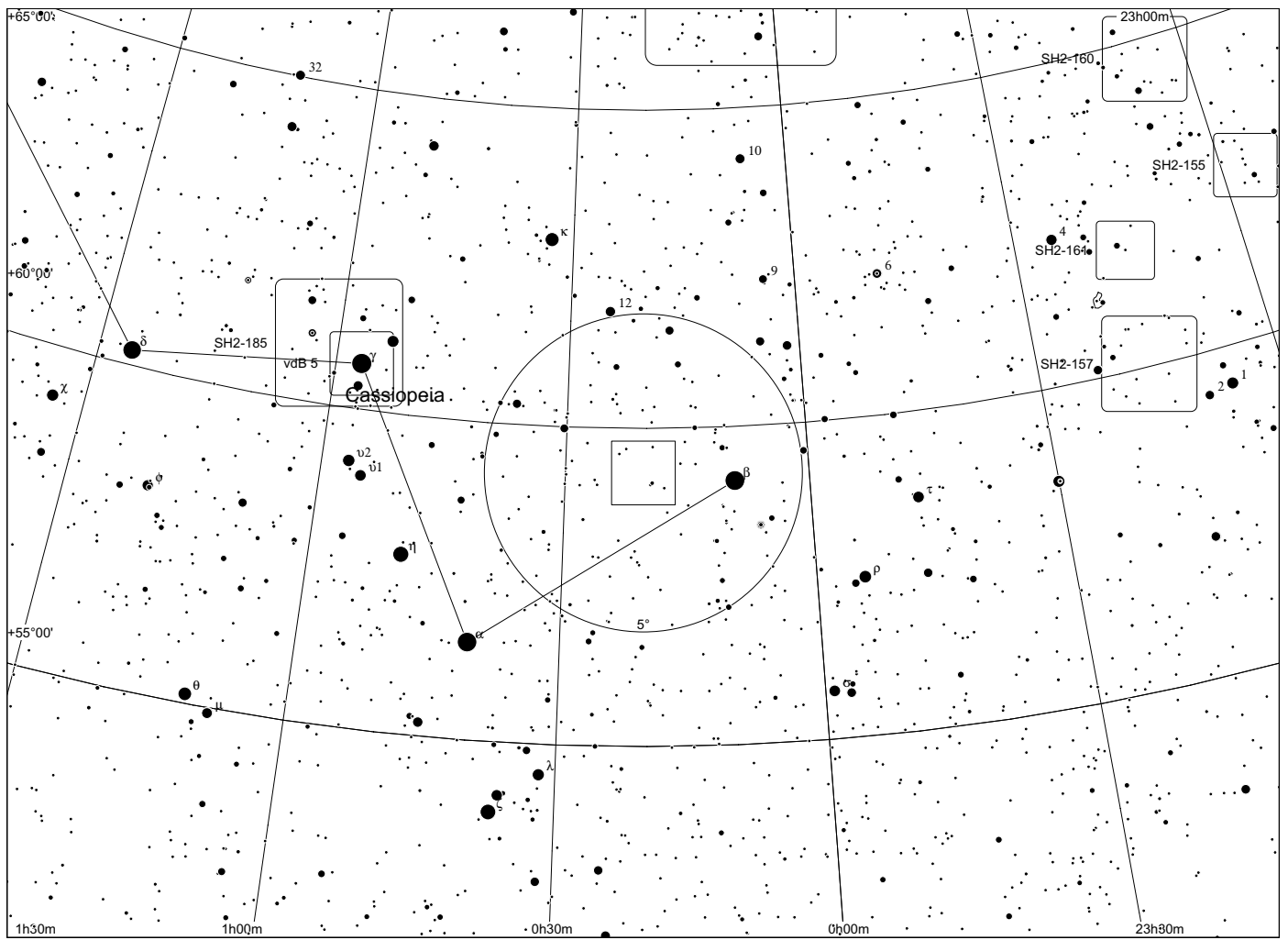


IC 10 in Cassiopeia

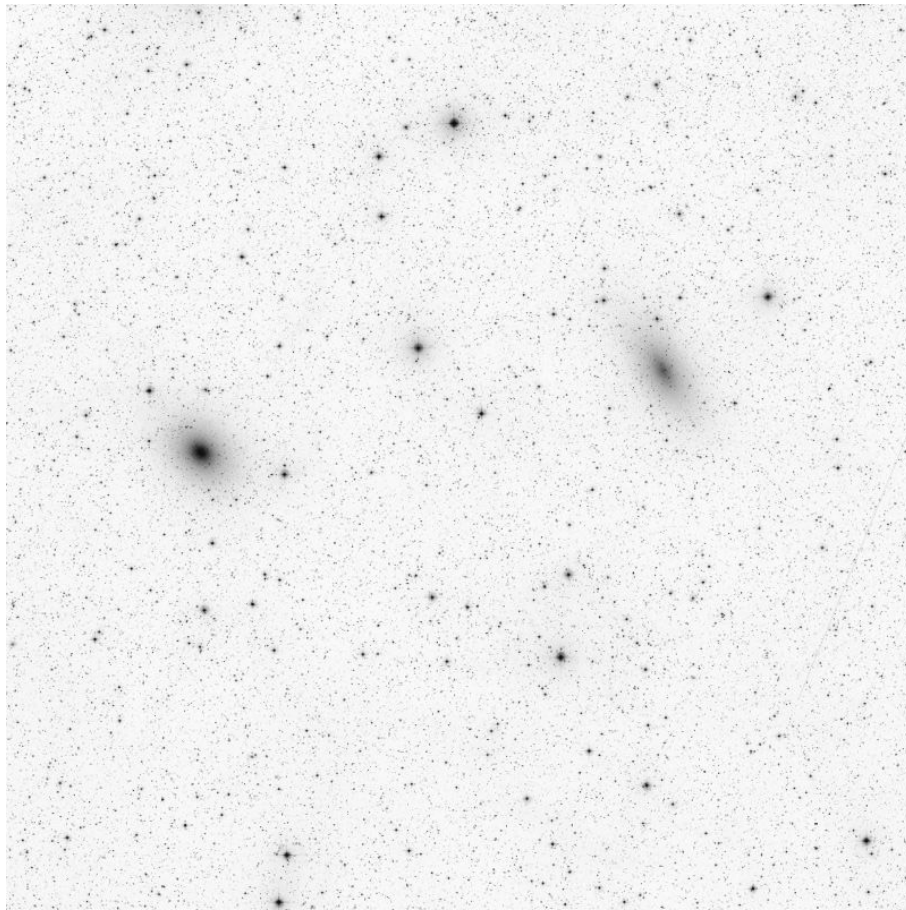


IC 10

00 20 17.34 +59 18 13.6



NGC 147/185 in Cassiopeia

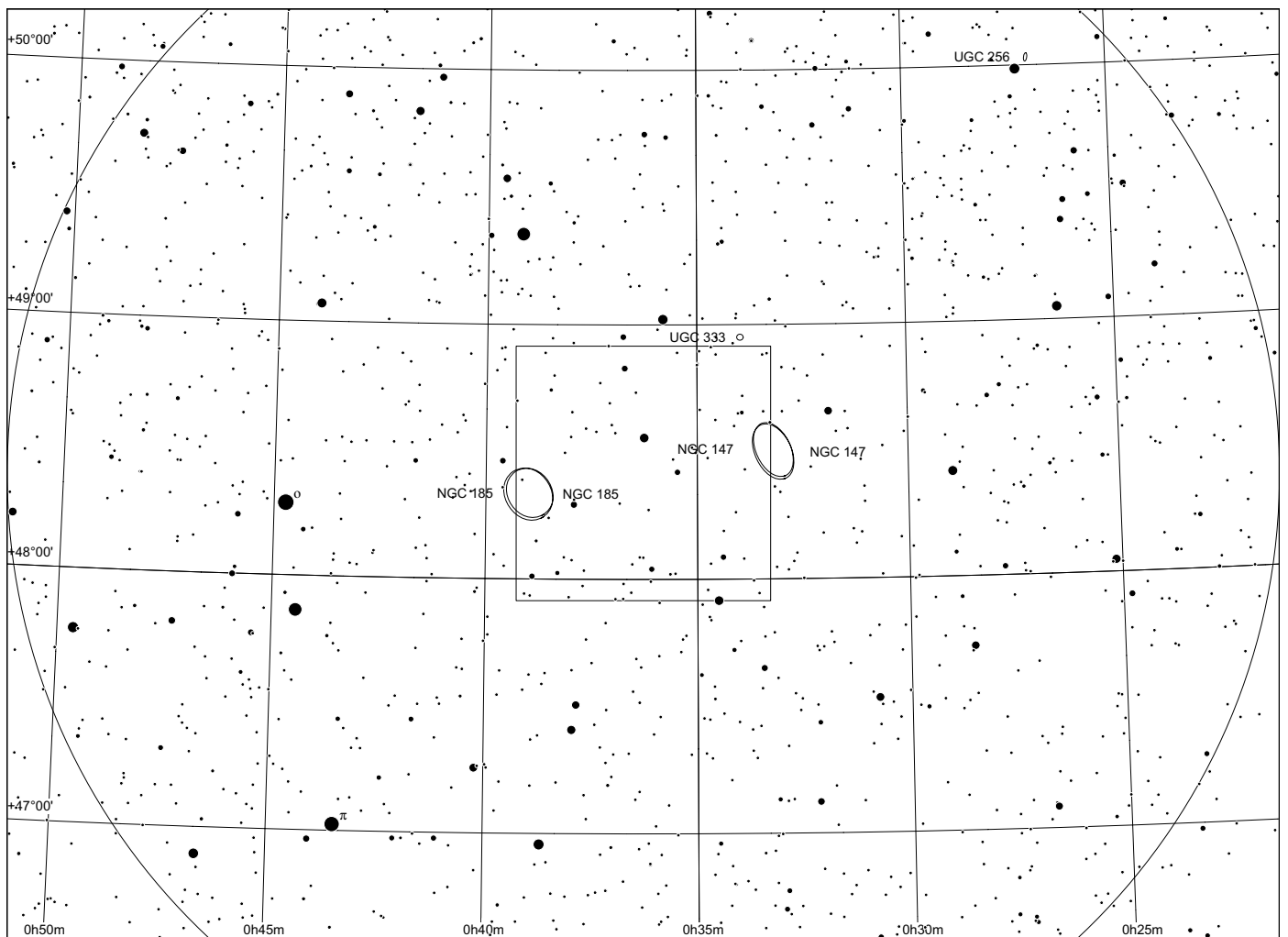
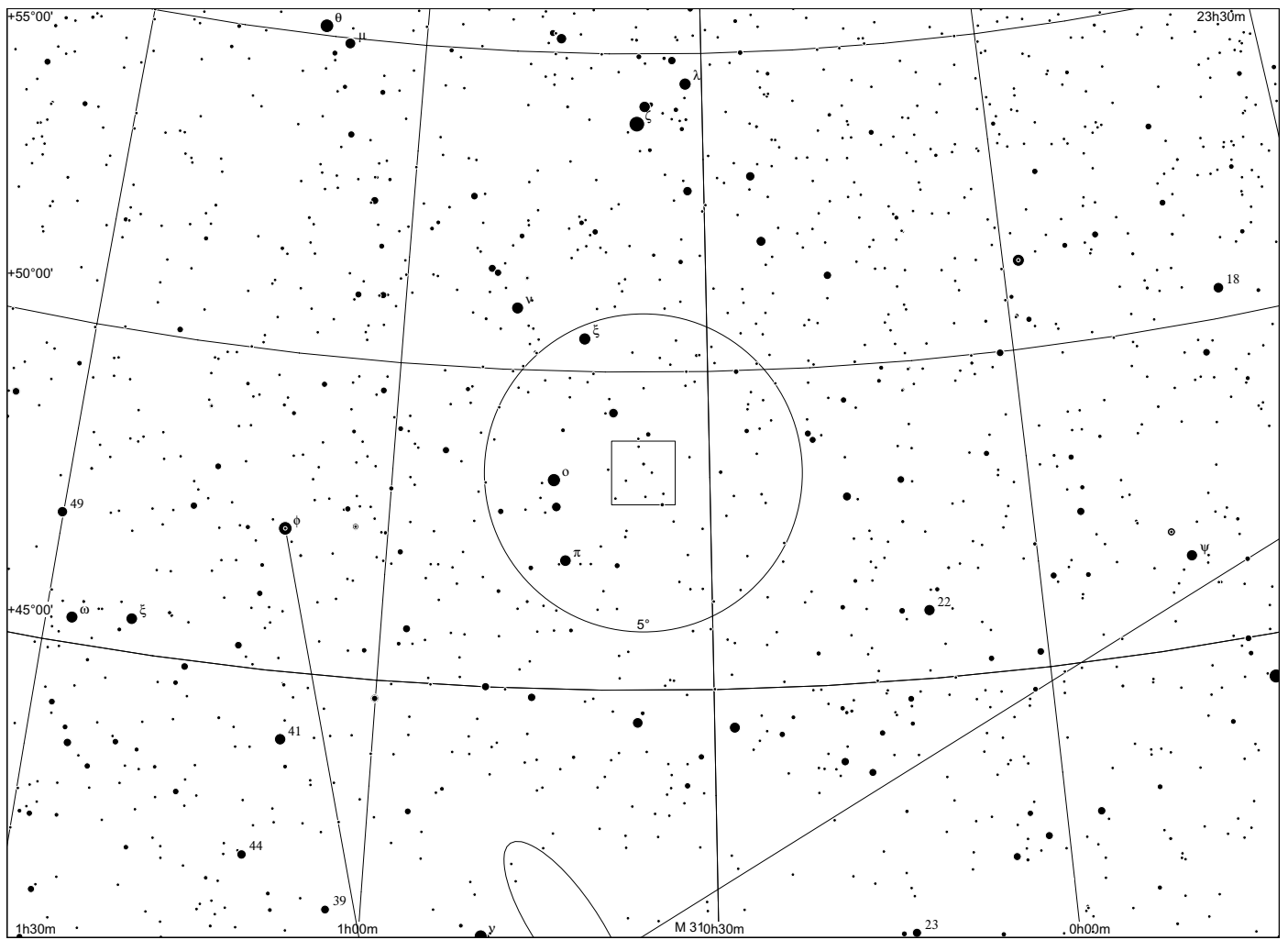


2°x2°

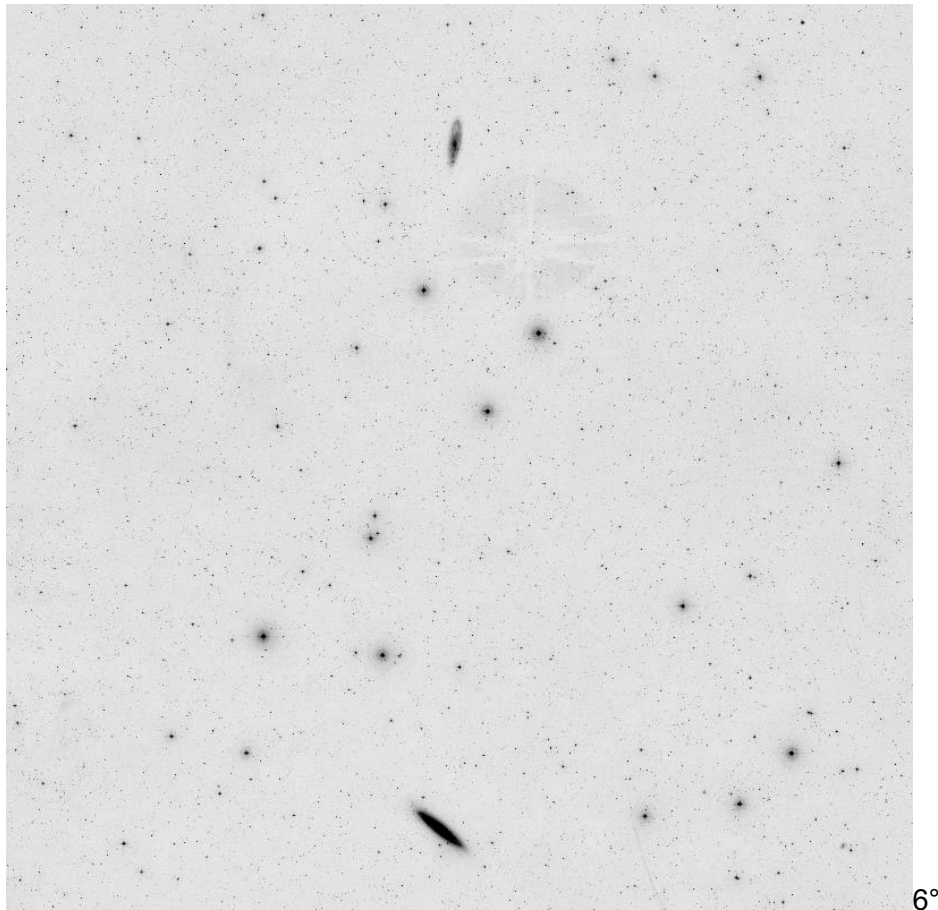


NGC 147 und NGC 185

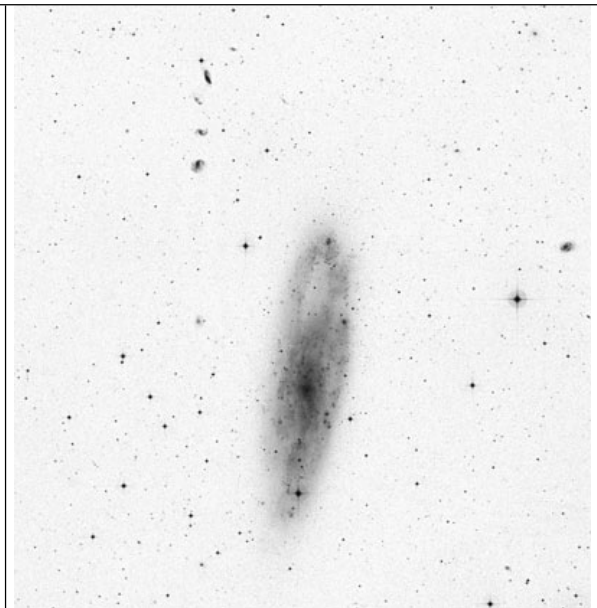
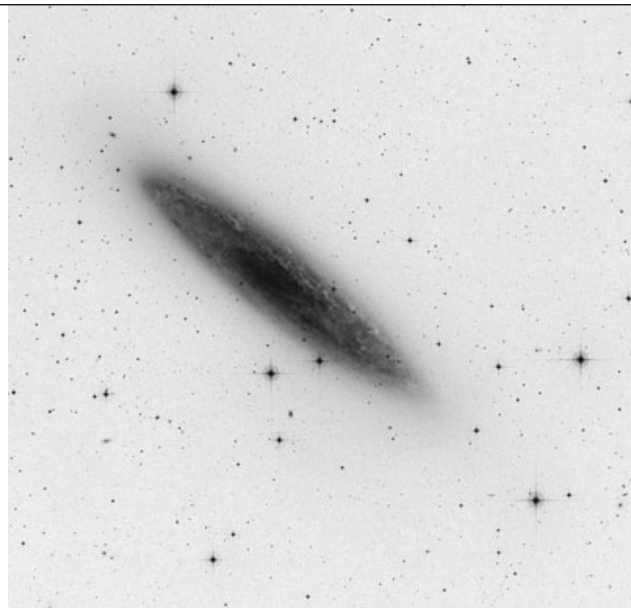
00 38 57.97 +48 20 14.6 und 00 33 12.12 +48
30 31.5



NGC 253 und 247 in Sculptor

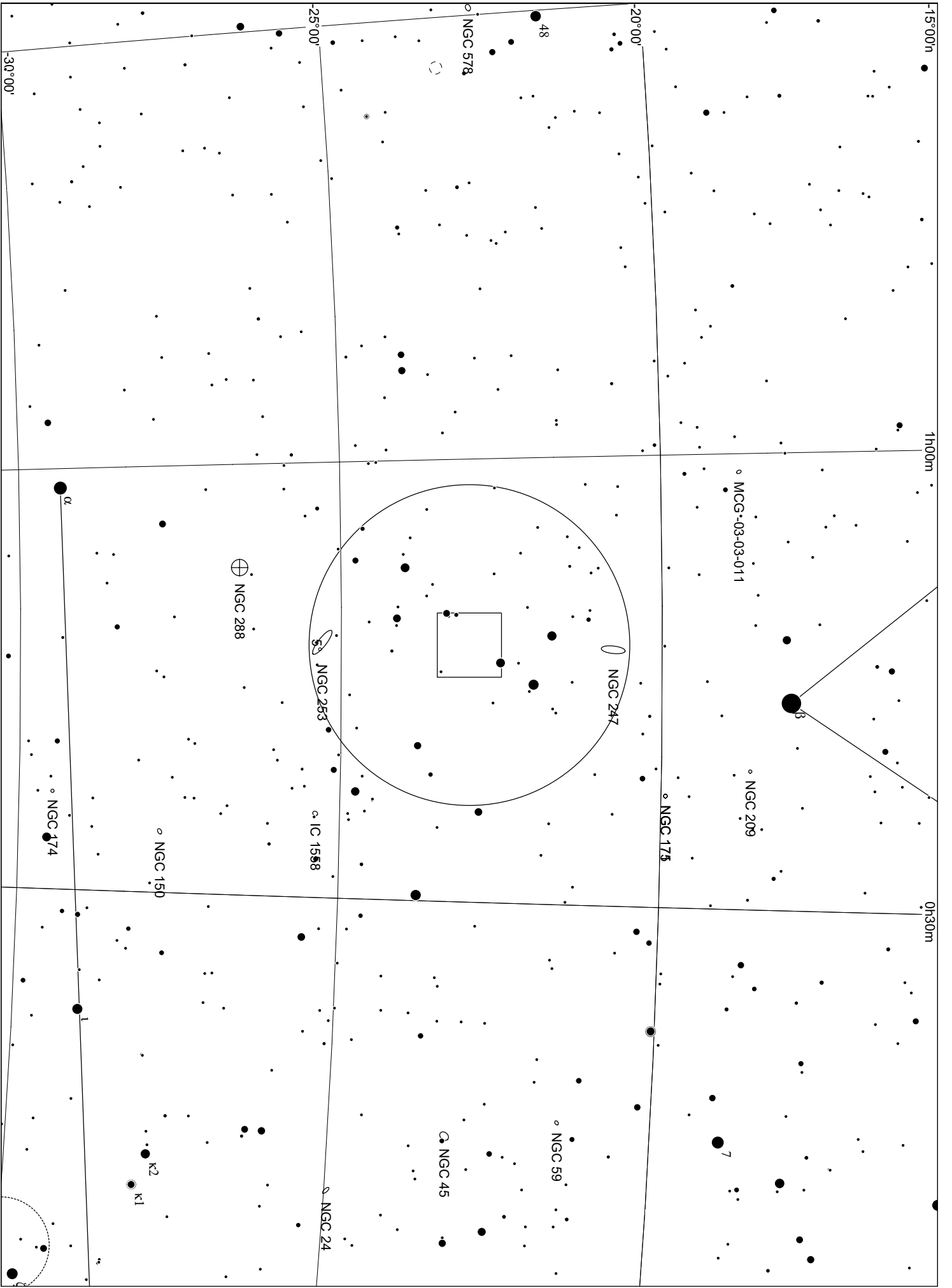


6°

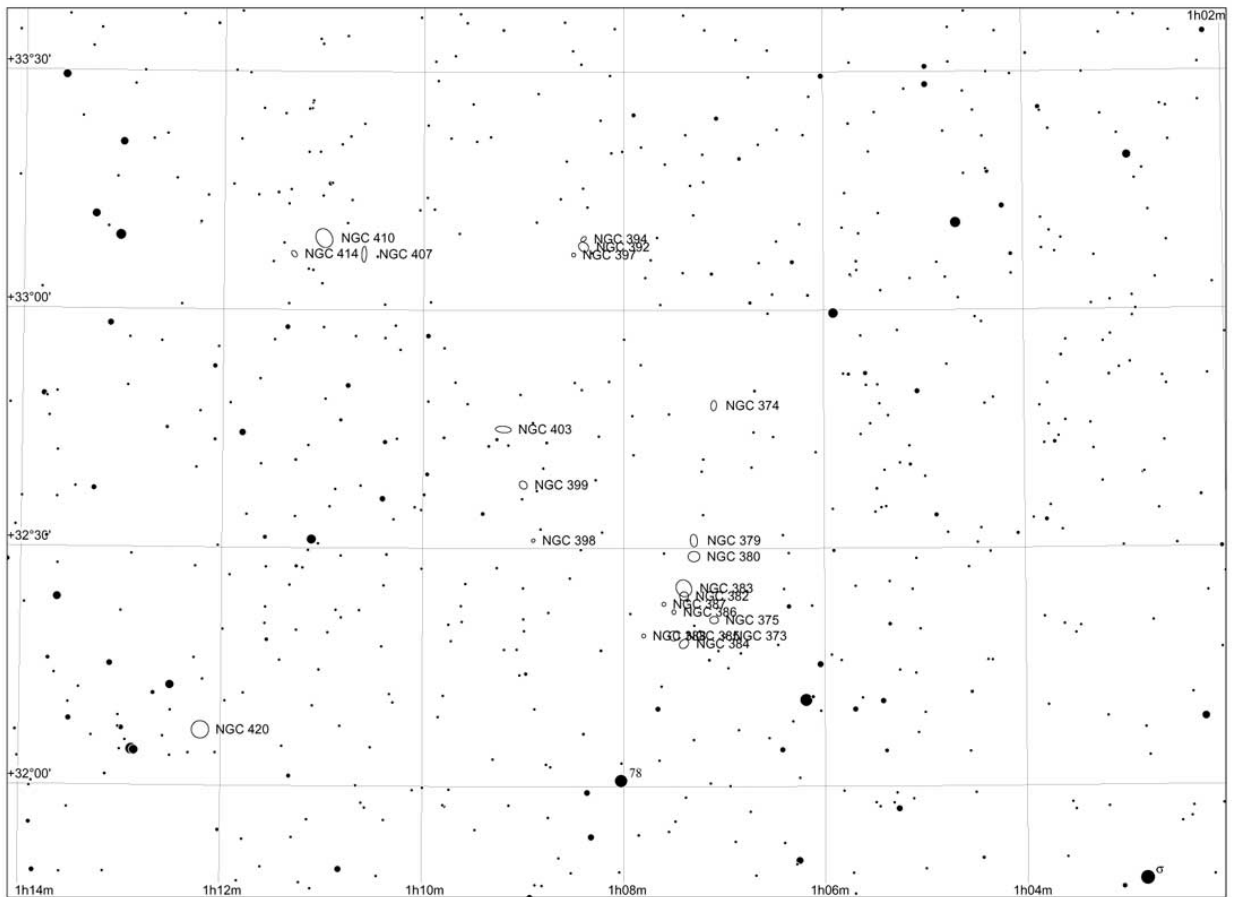
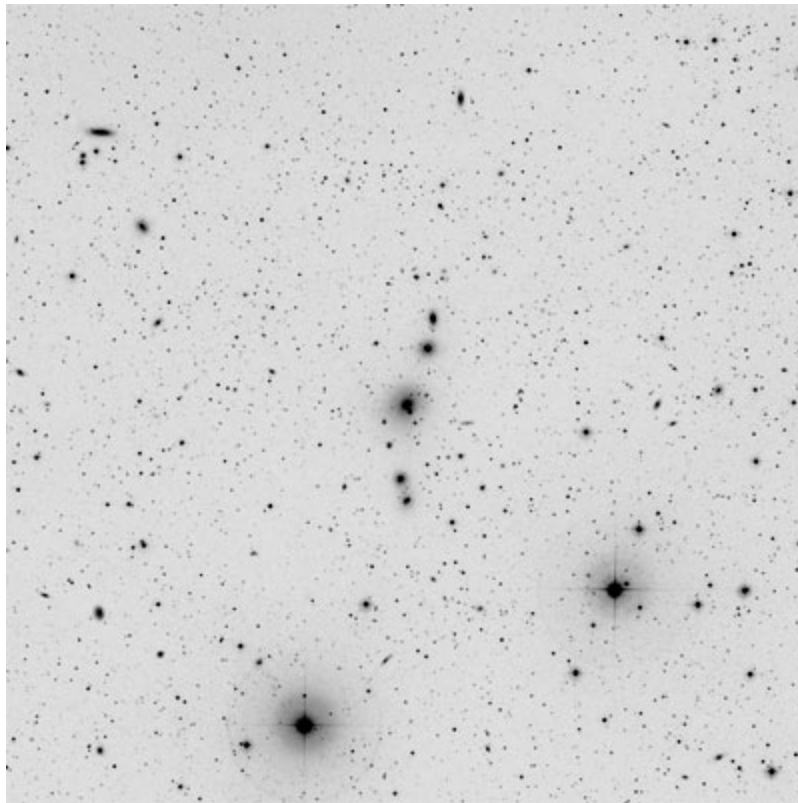


NGC 253

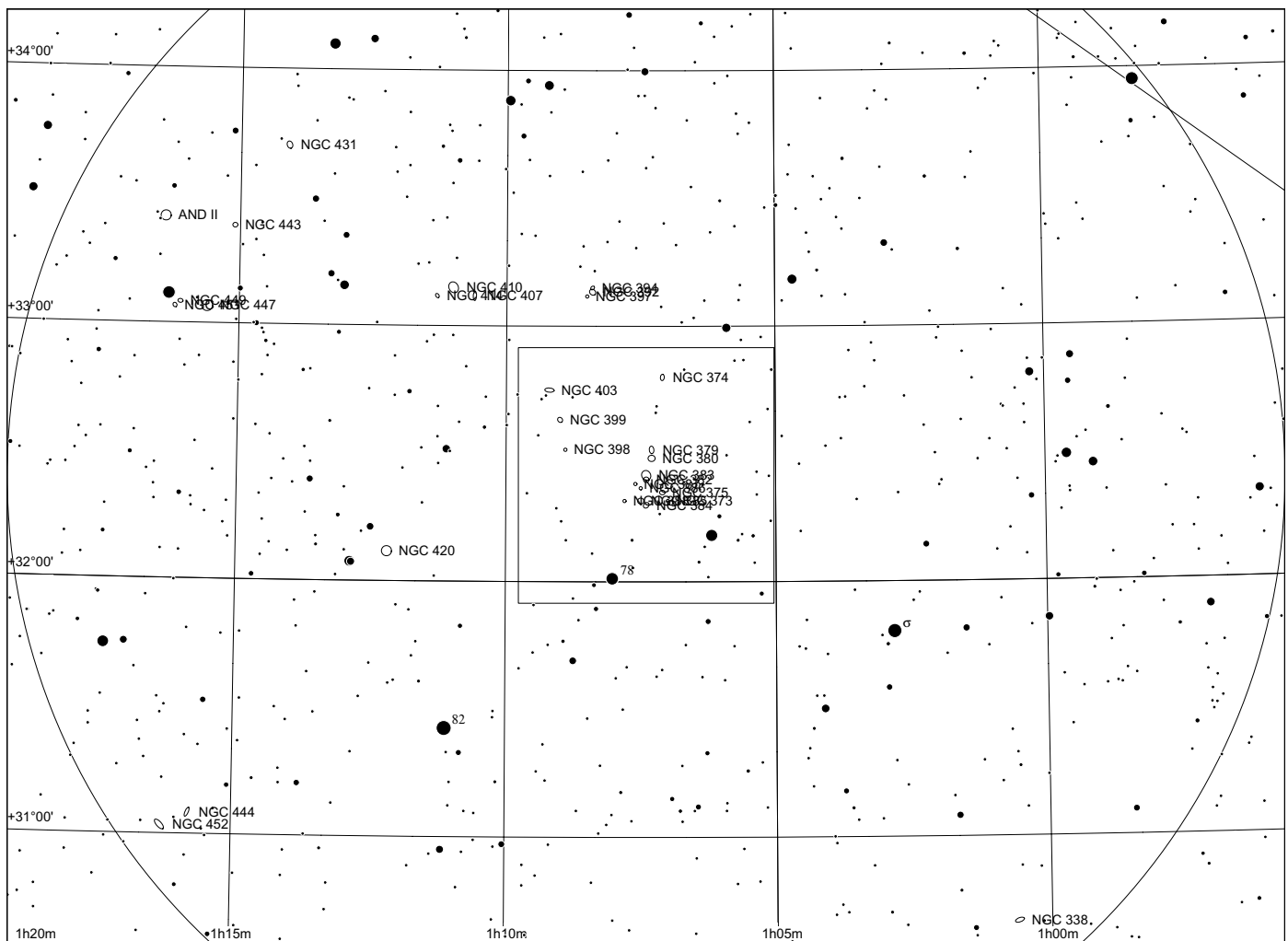
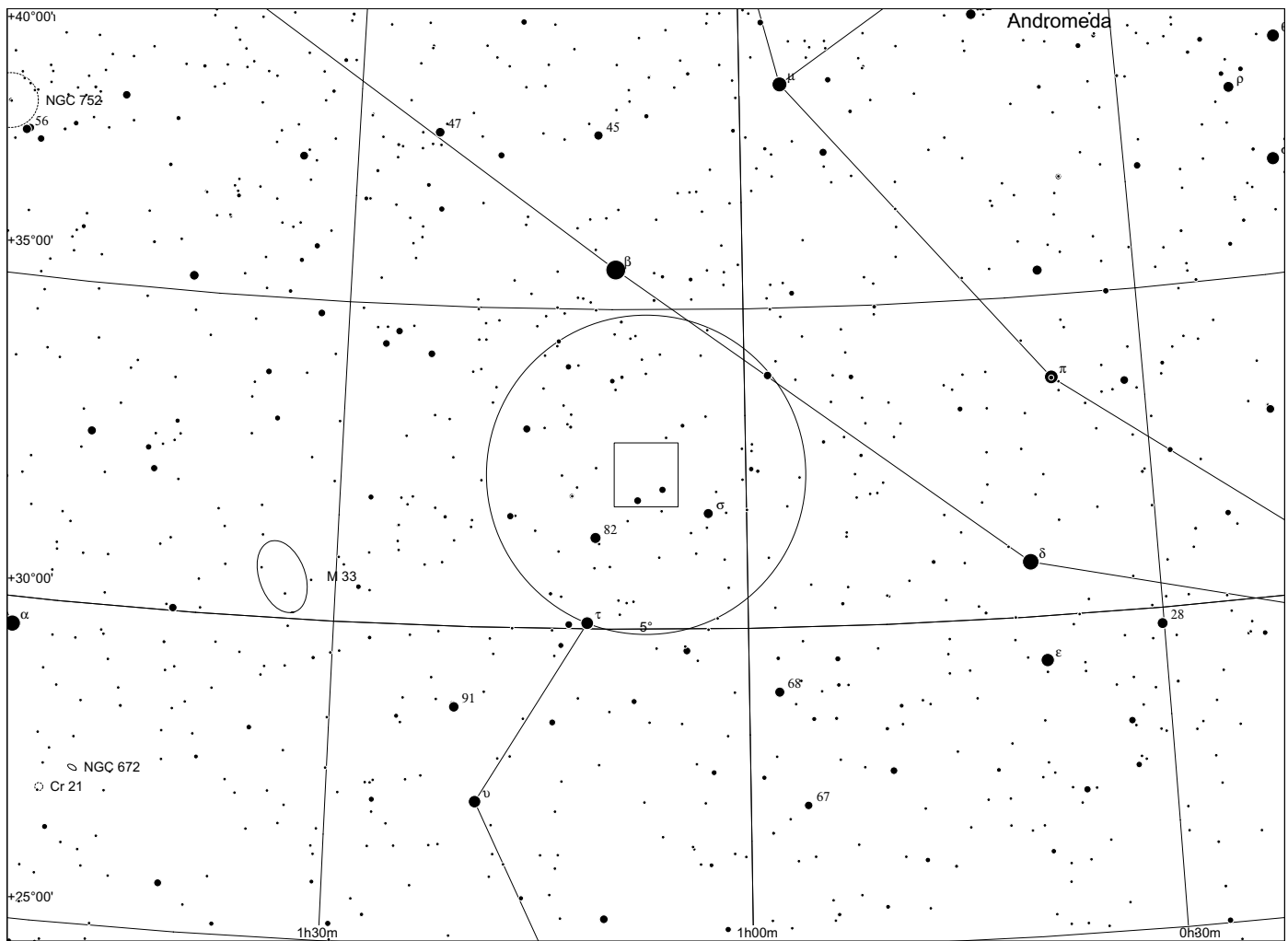
00h 47, -25° 17'



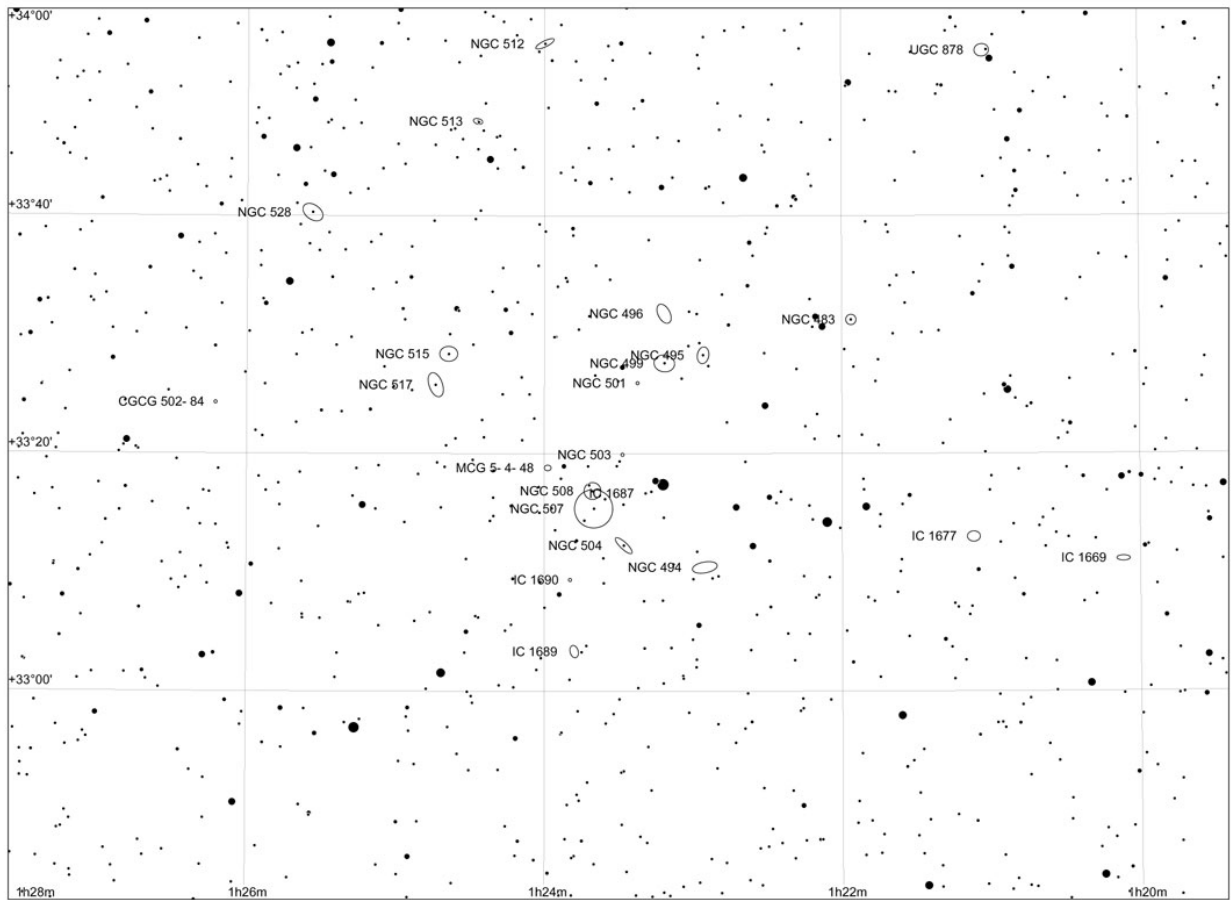
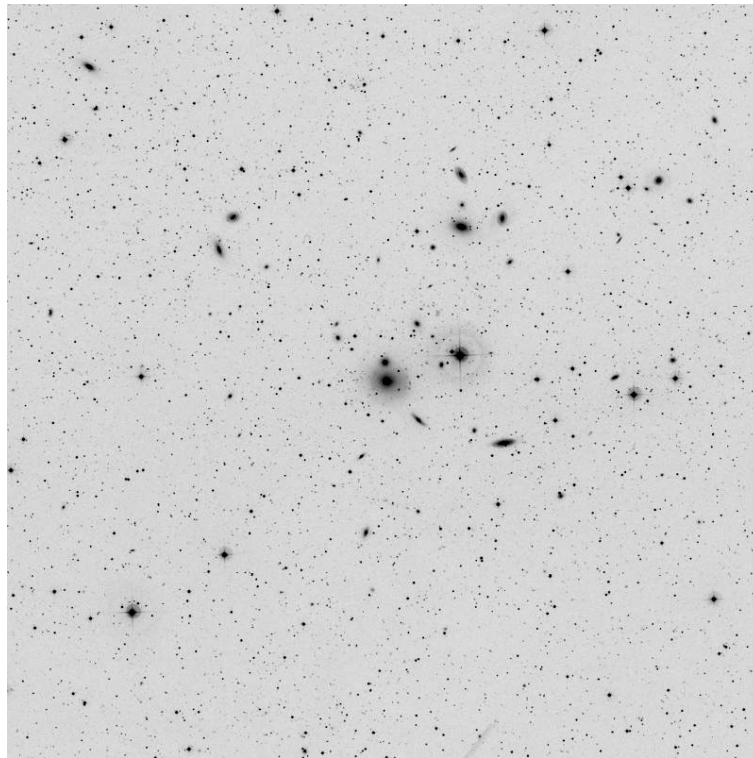
NGC 383 and friend in Pisces



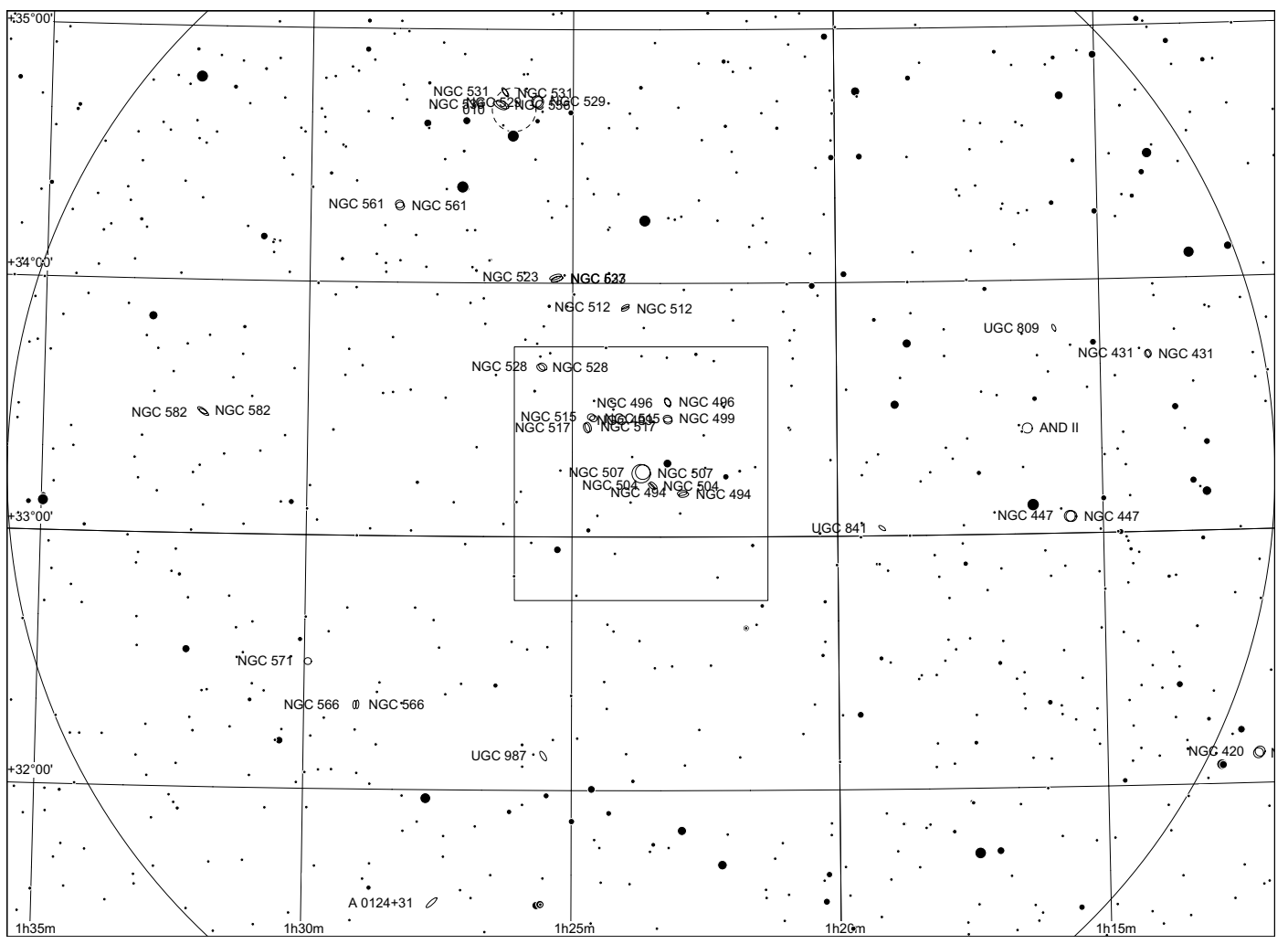
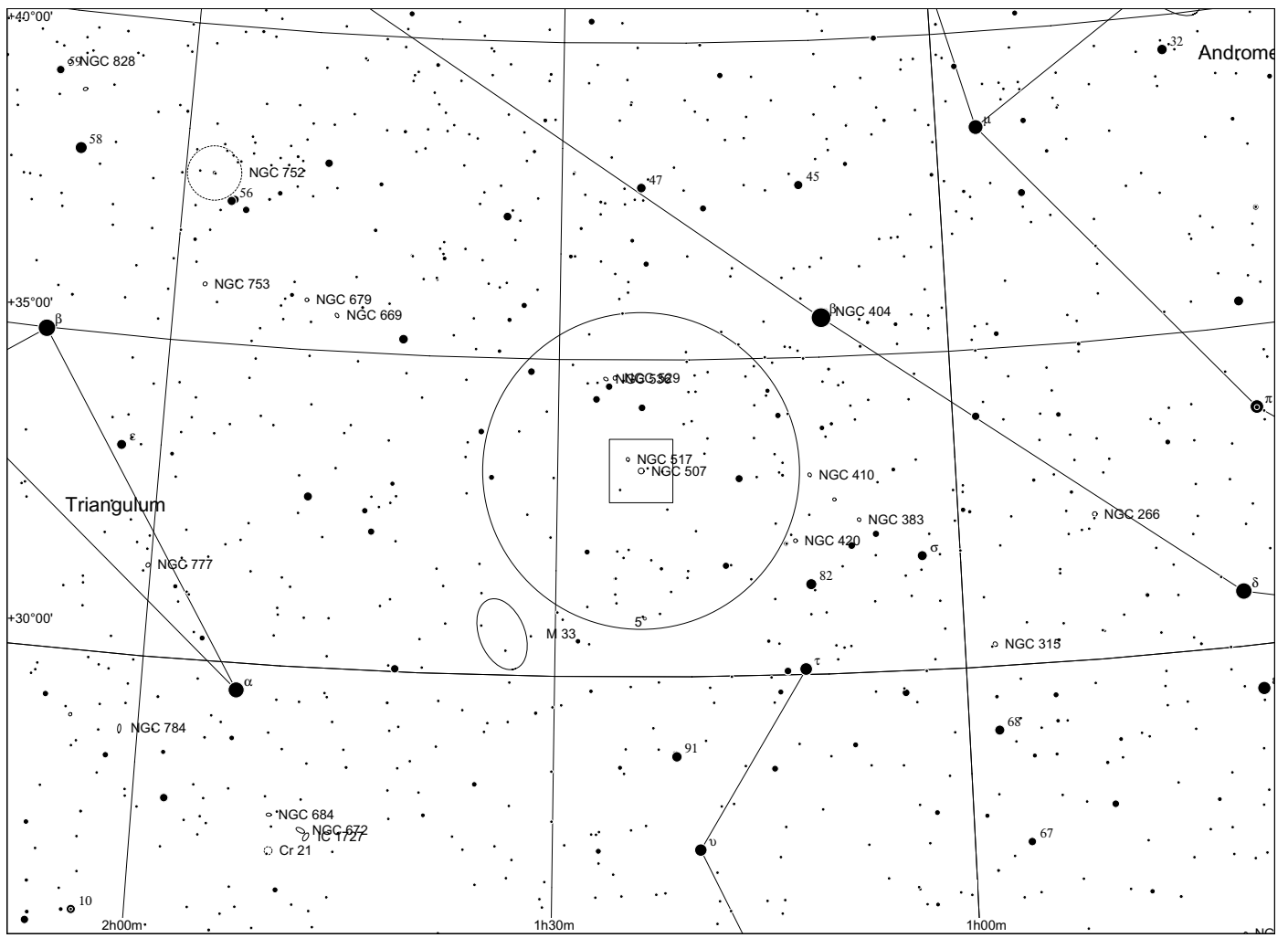
| | | |
|---------|-------------------------|--|
| NGC 383 | 01 07 24.94 +32 24 45.2 | |
|---------|-------------------------|--|



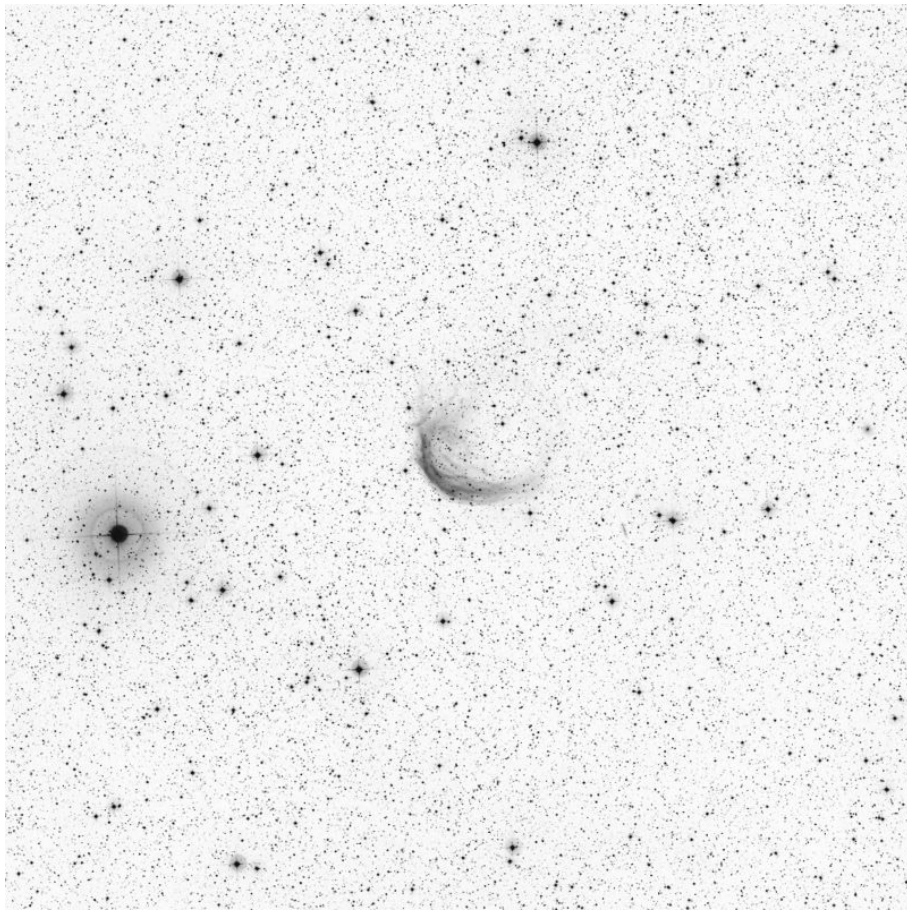
NGC 507 group in Pisces



| | | |
|---------|-------------------------|--|
| NGC 507 | 01 23 40.00 +33 15 20.0 | |
|---------|-------------------------|--|

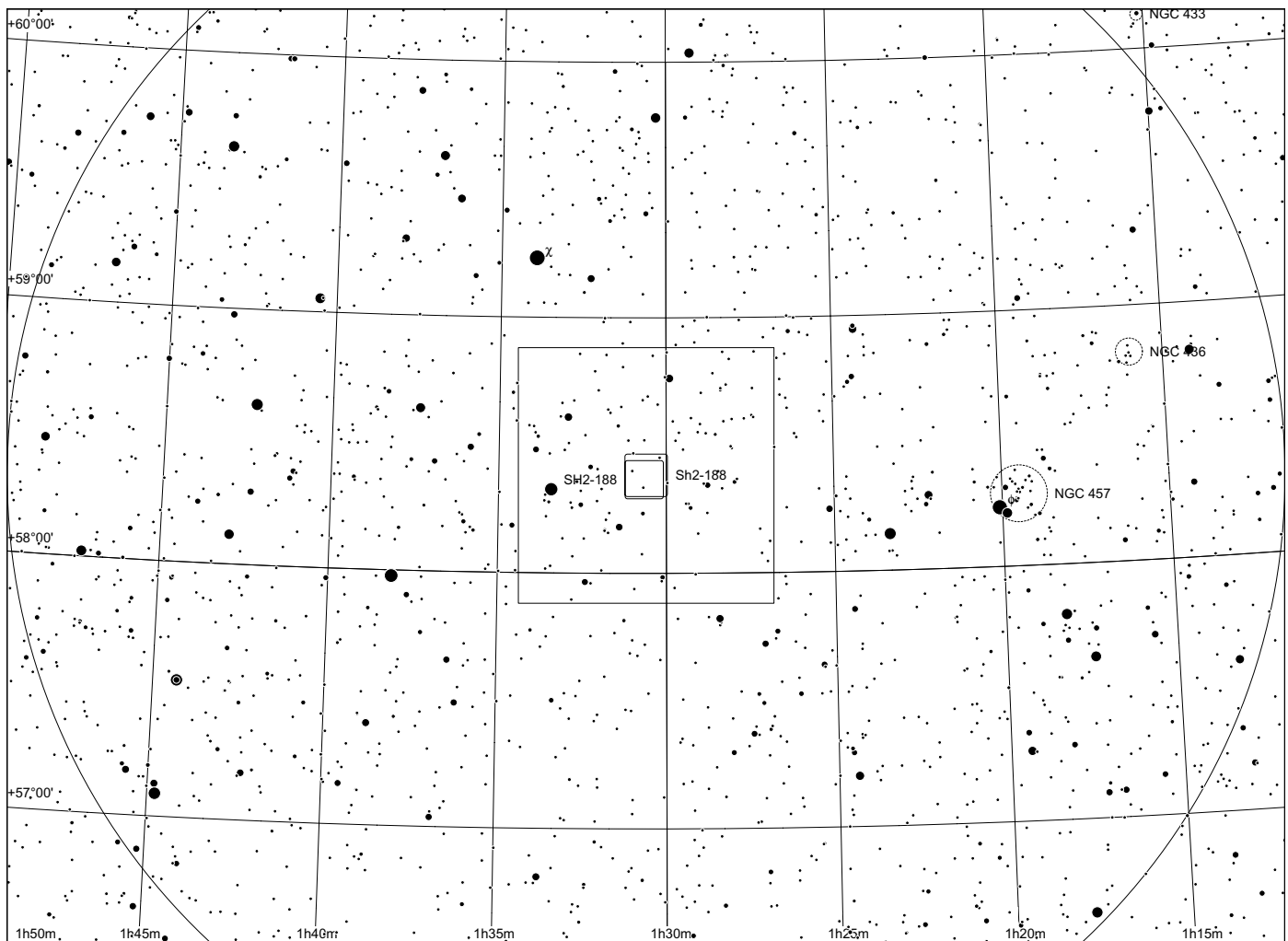
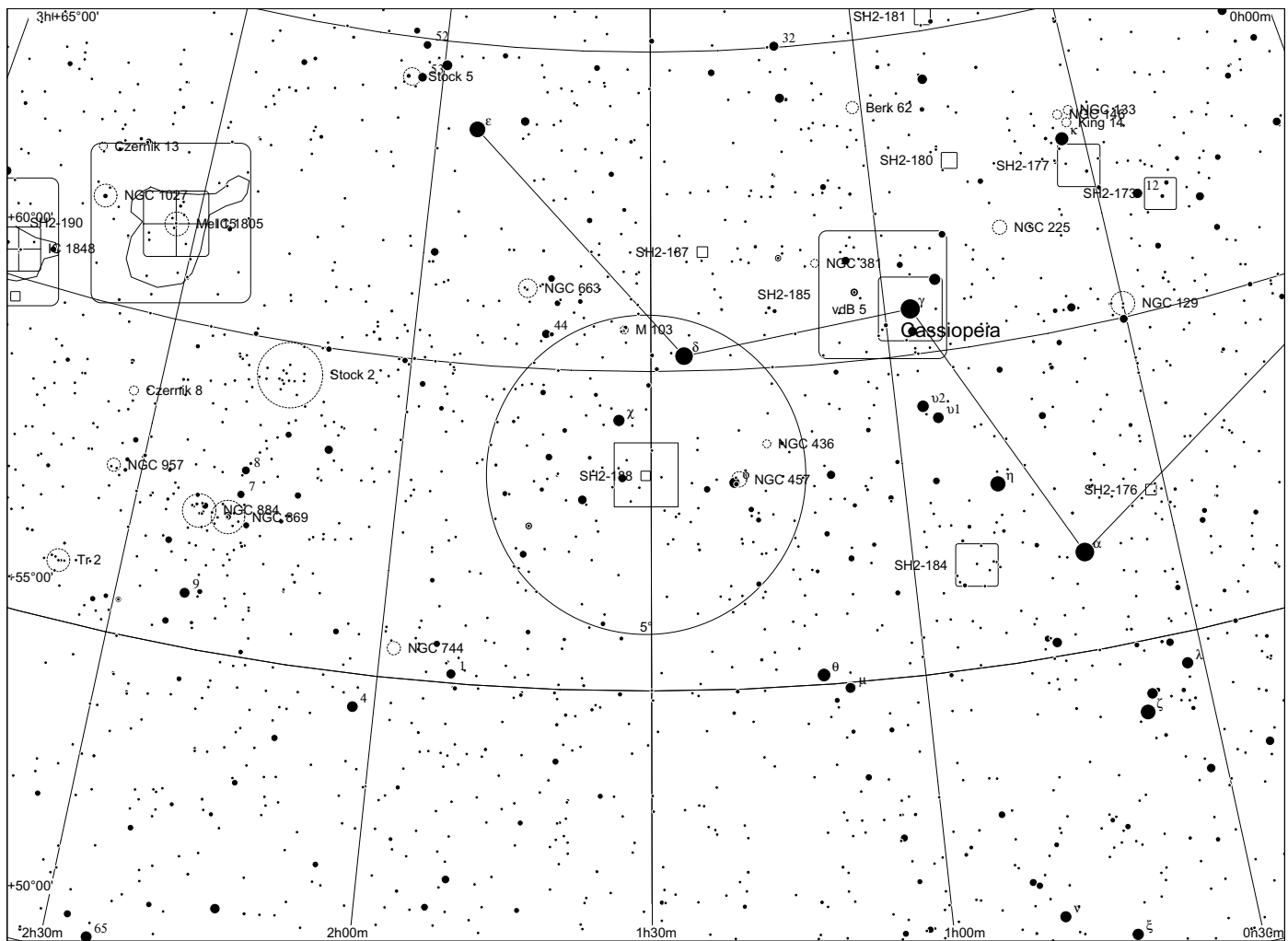


Simeis 22 (Sh2-188) in Cassiopeia

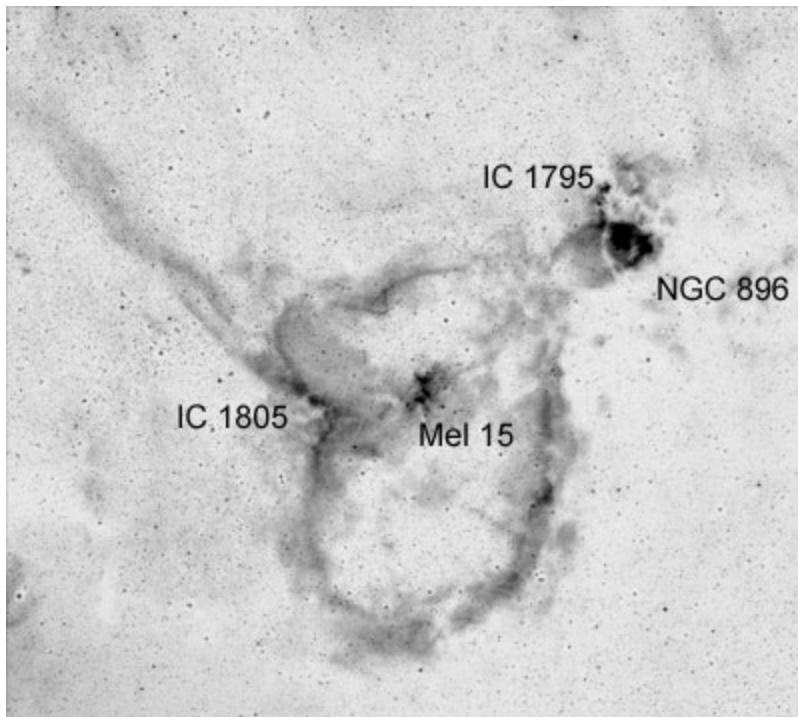
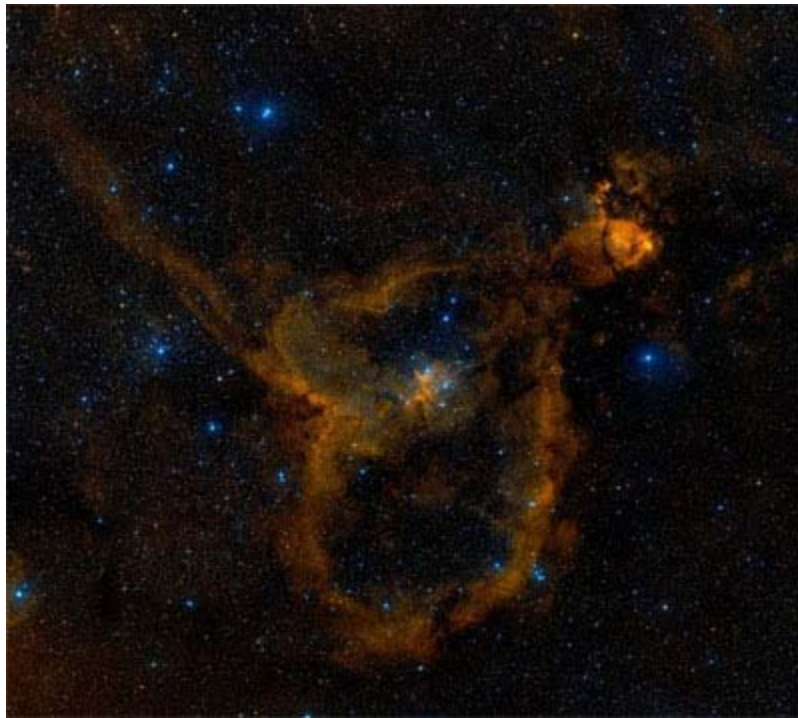


Simeis 22

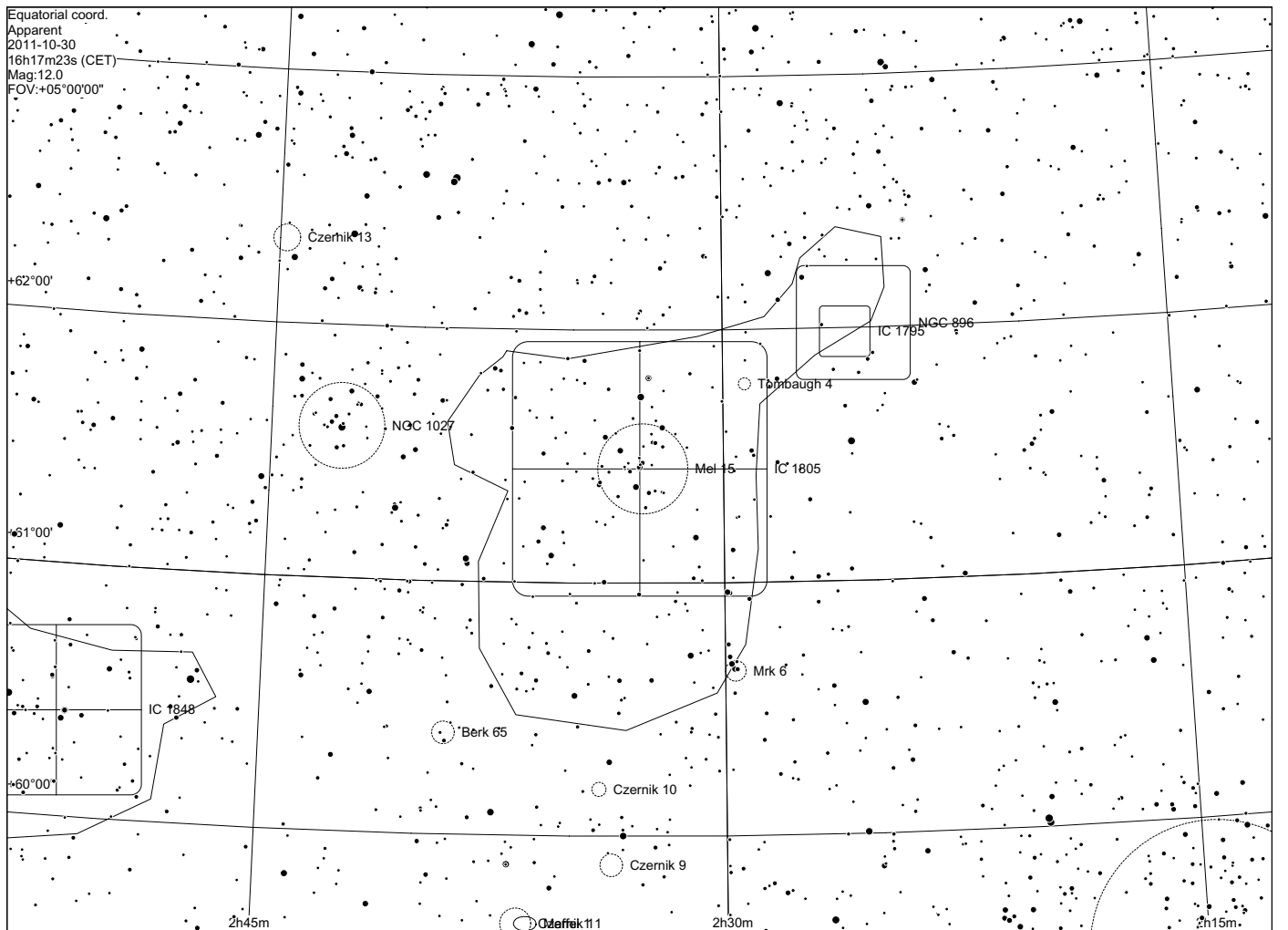
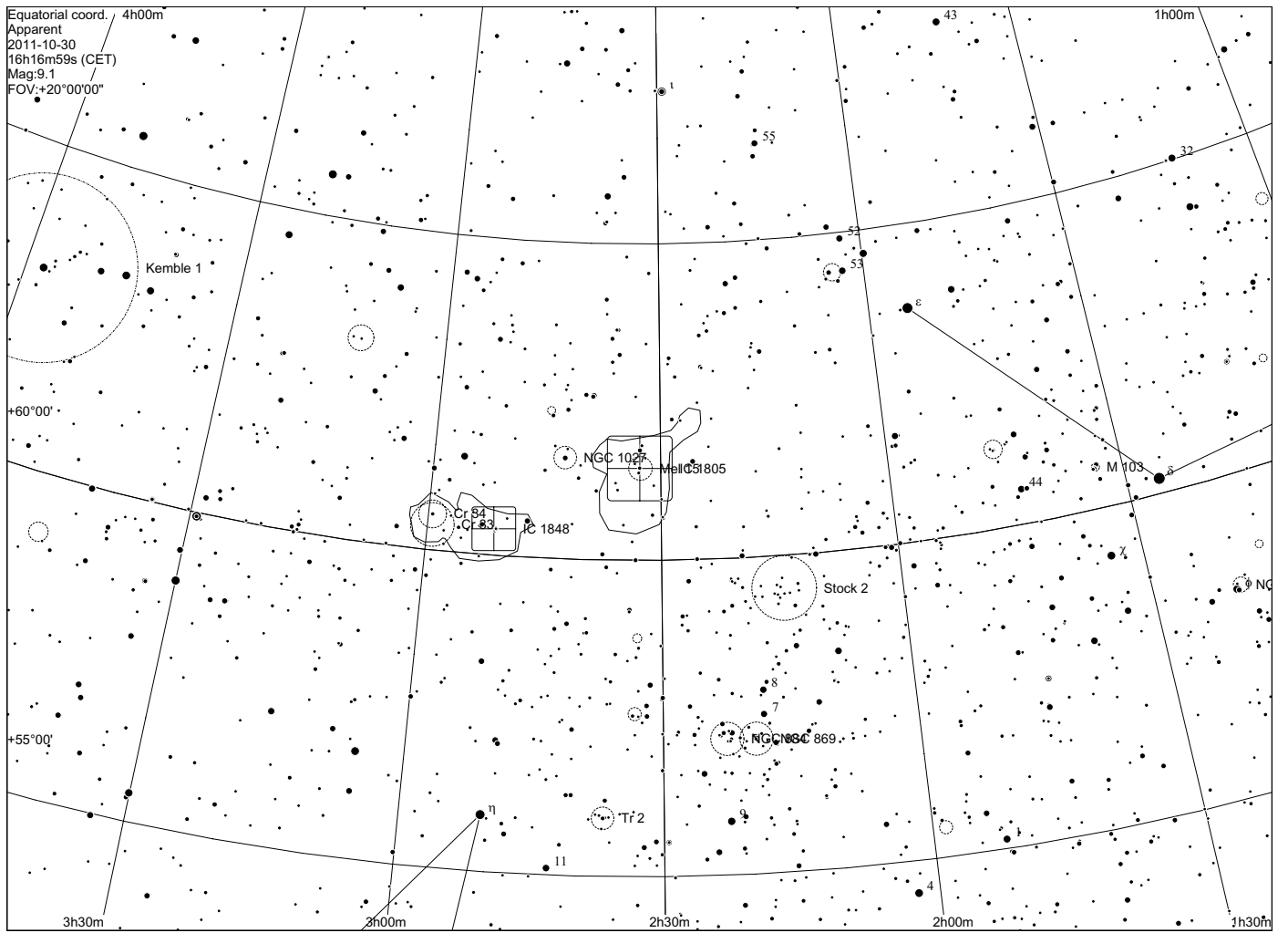
01 30 40 +58 22 00



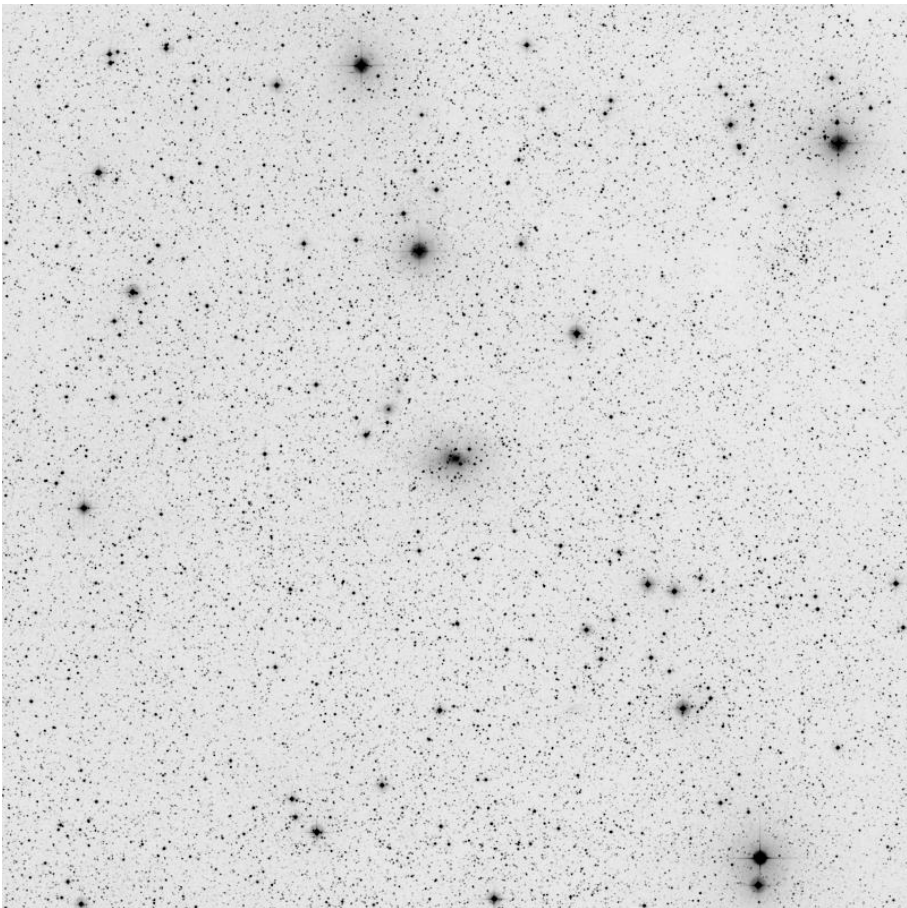
Heart Nebula in Cassiopeia



| | | |
|------------|--------------------|--|
| Melotte 15 | 02 32 40 +61 27 00 | |
|------------|--------------------|--|

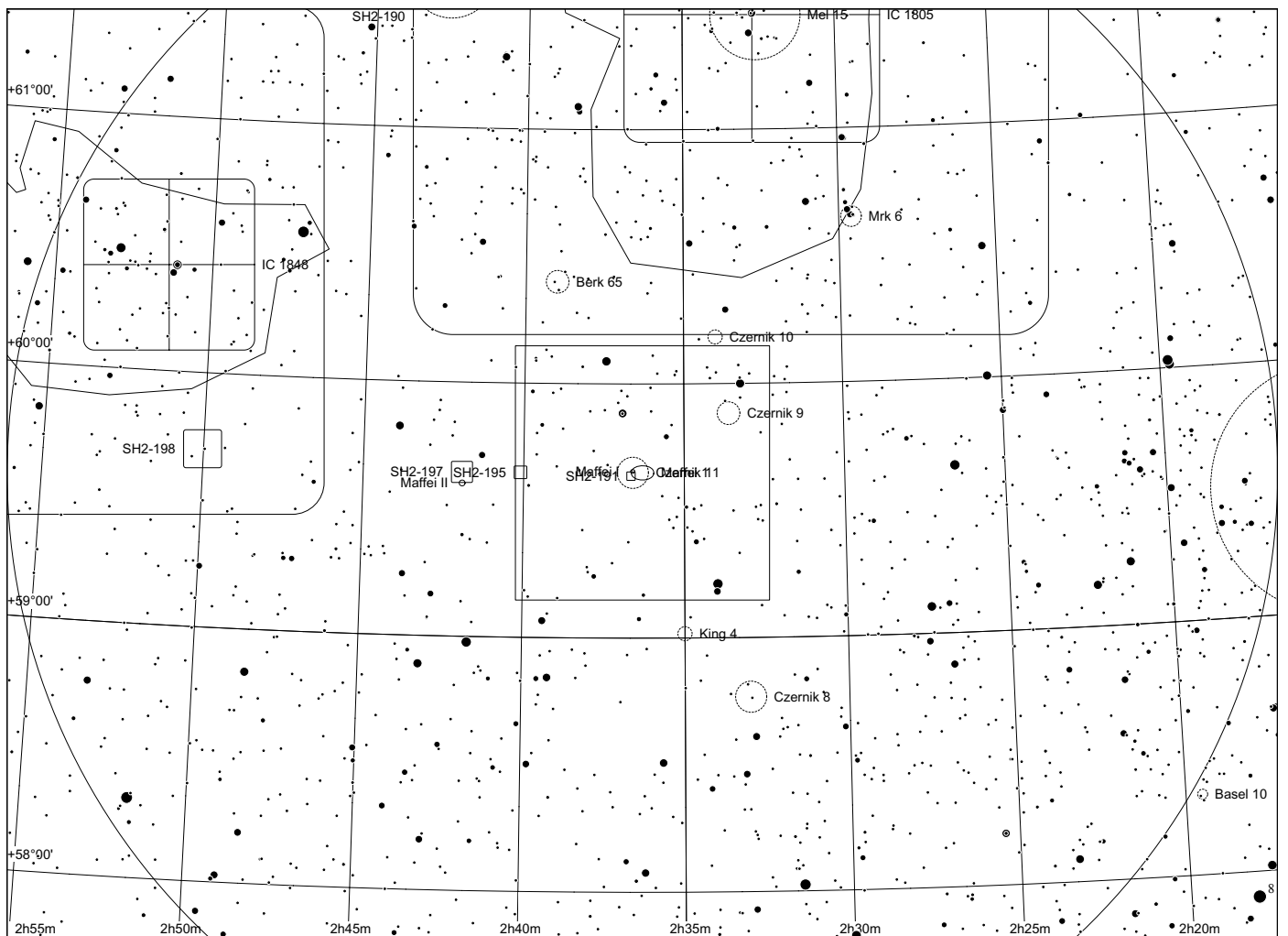
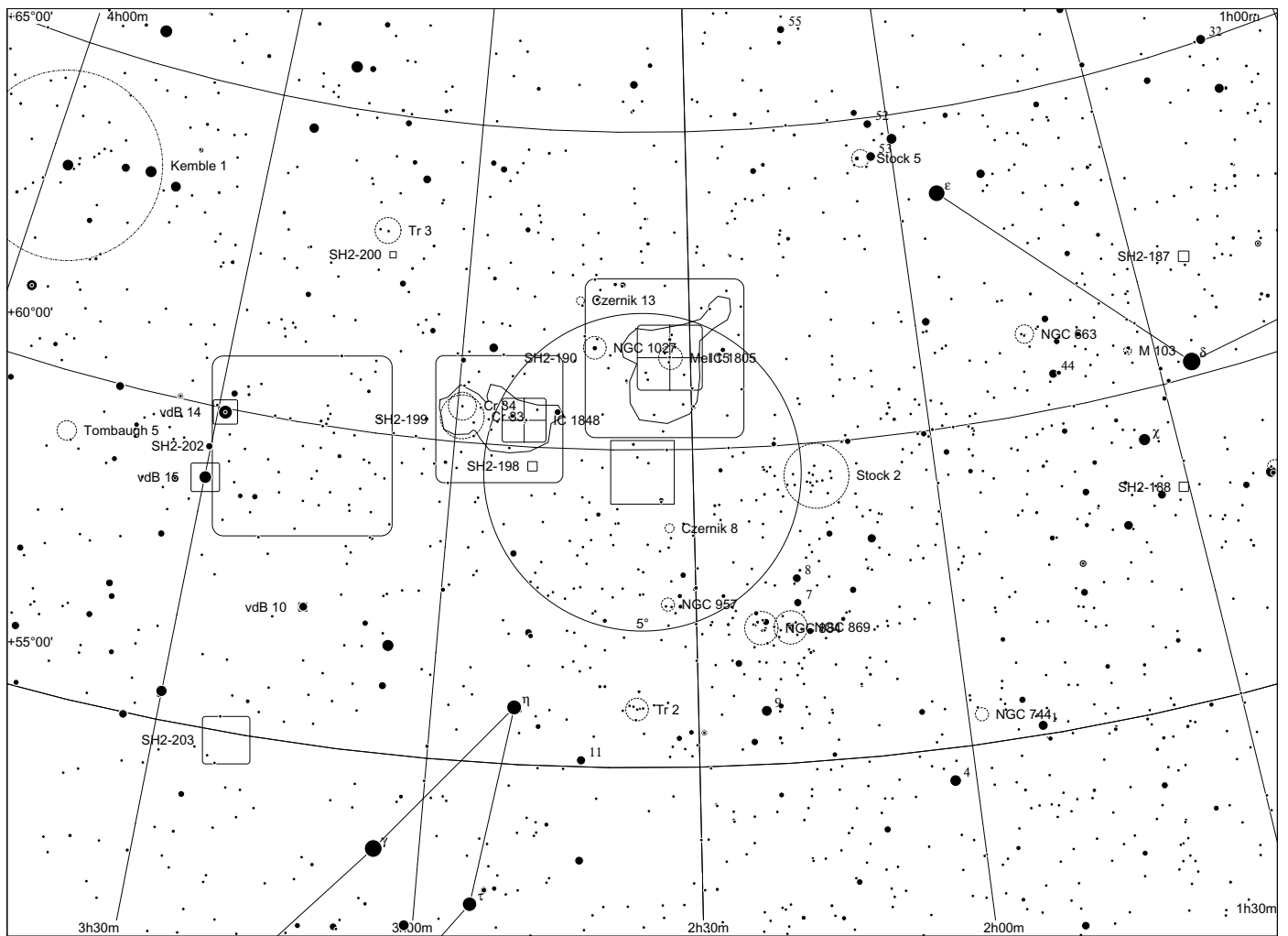


Maffei 1 in Cassiopeia

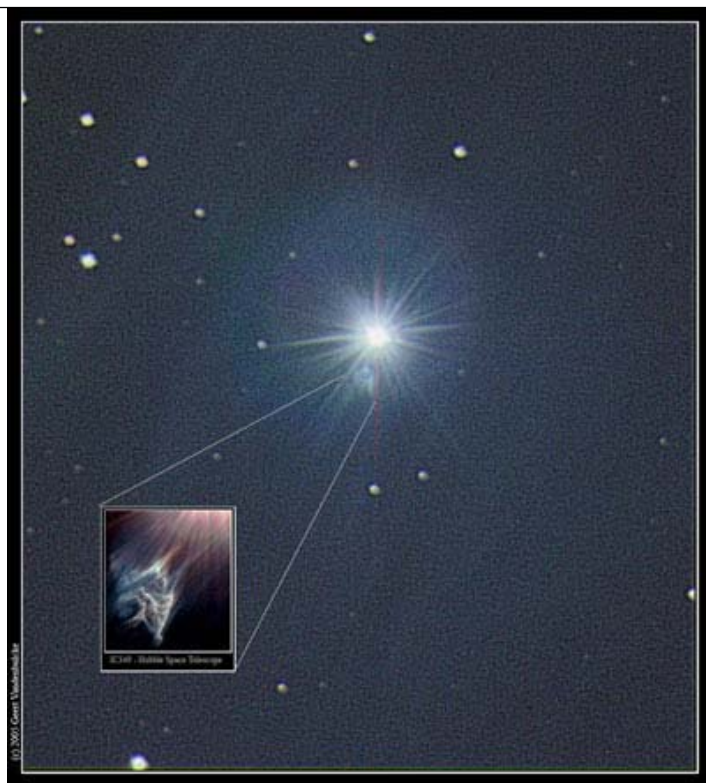
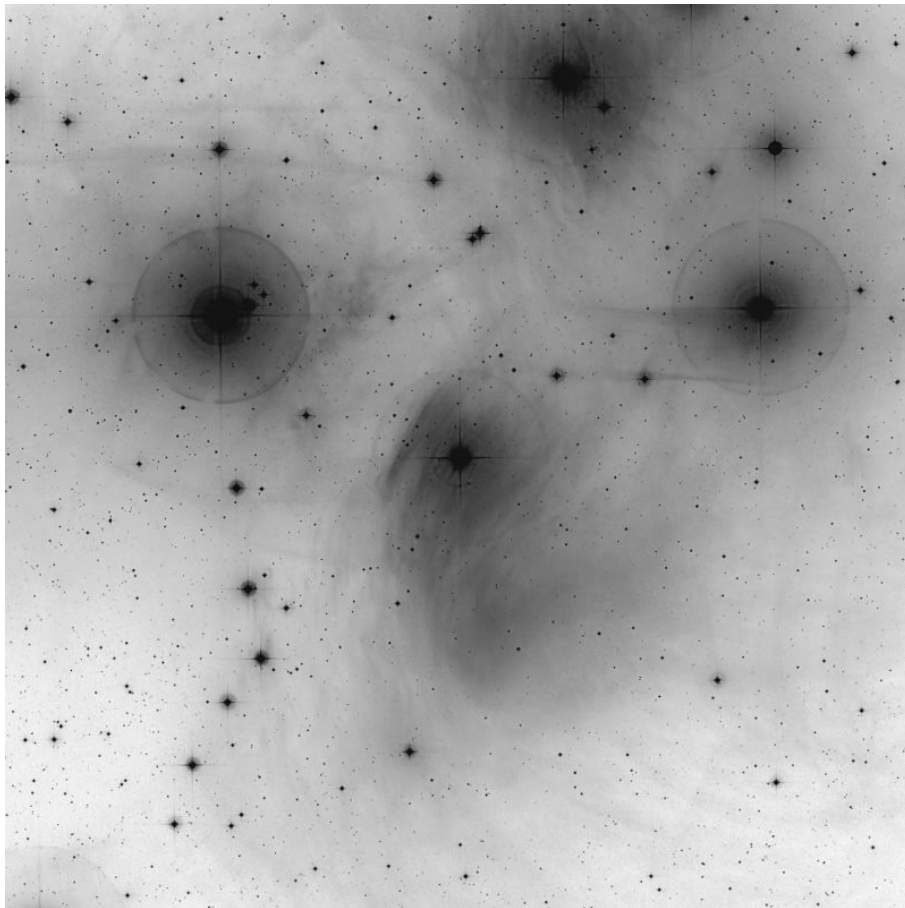


Maffei 1

02 36 35 +59 39 19

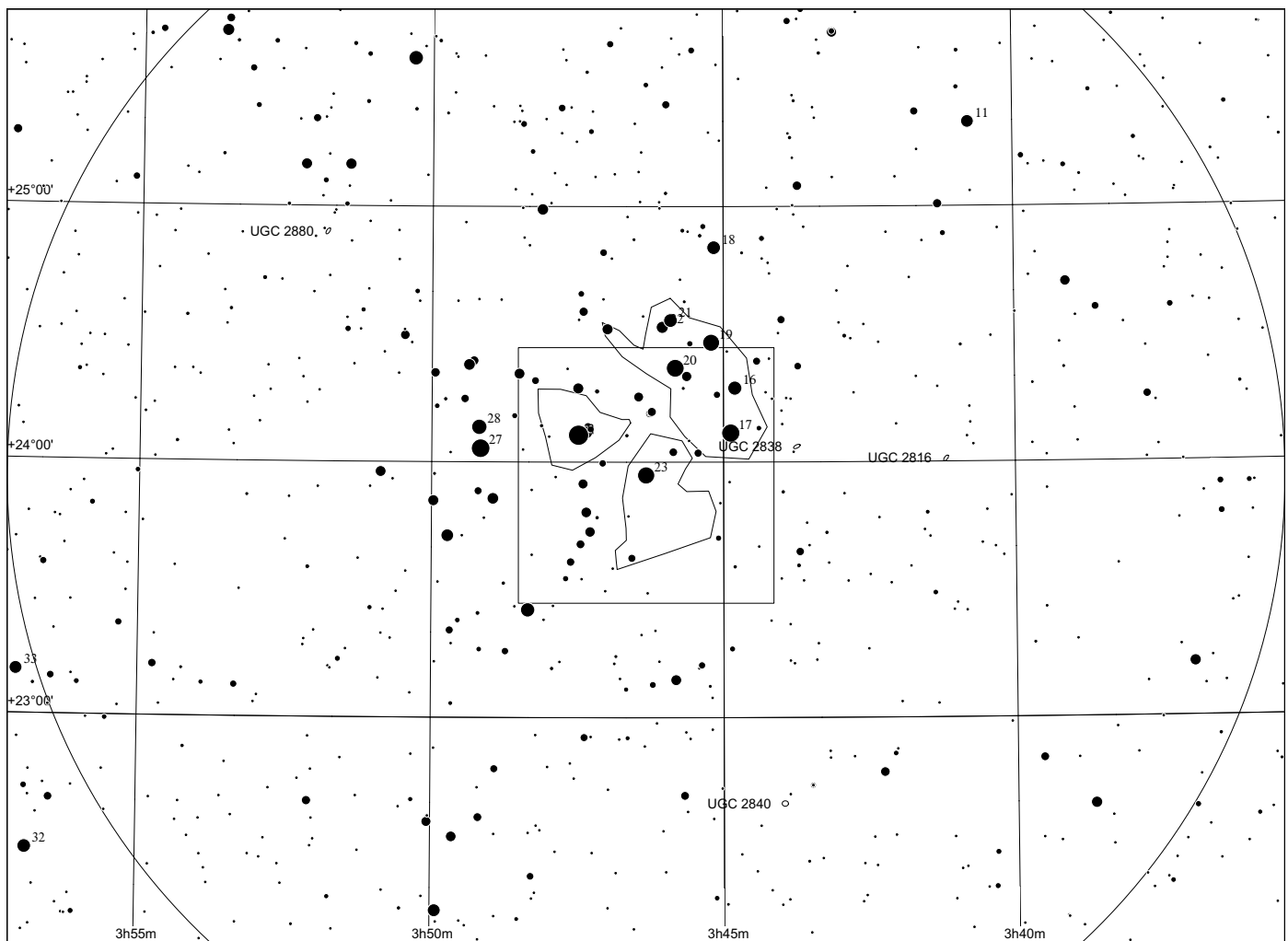
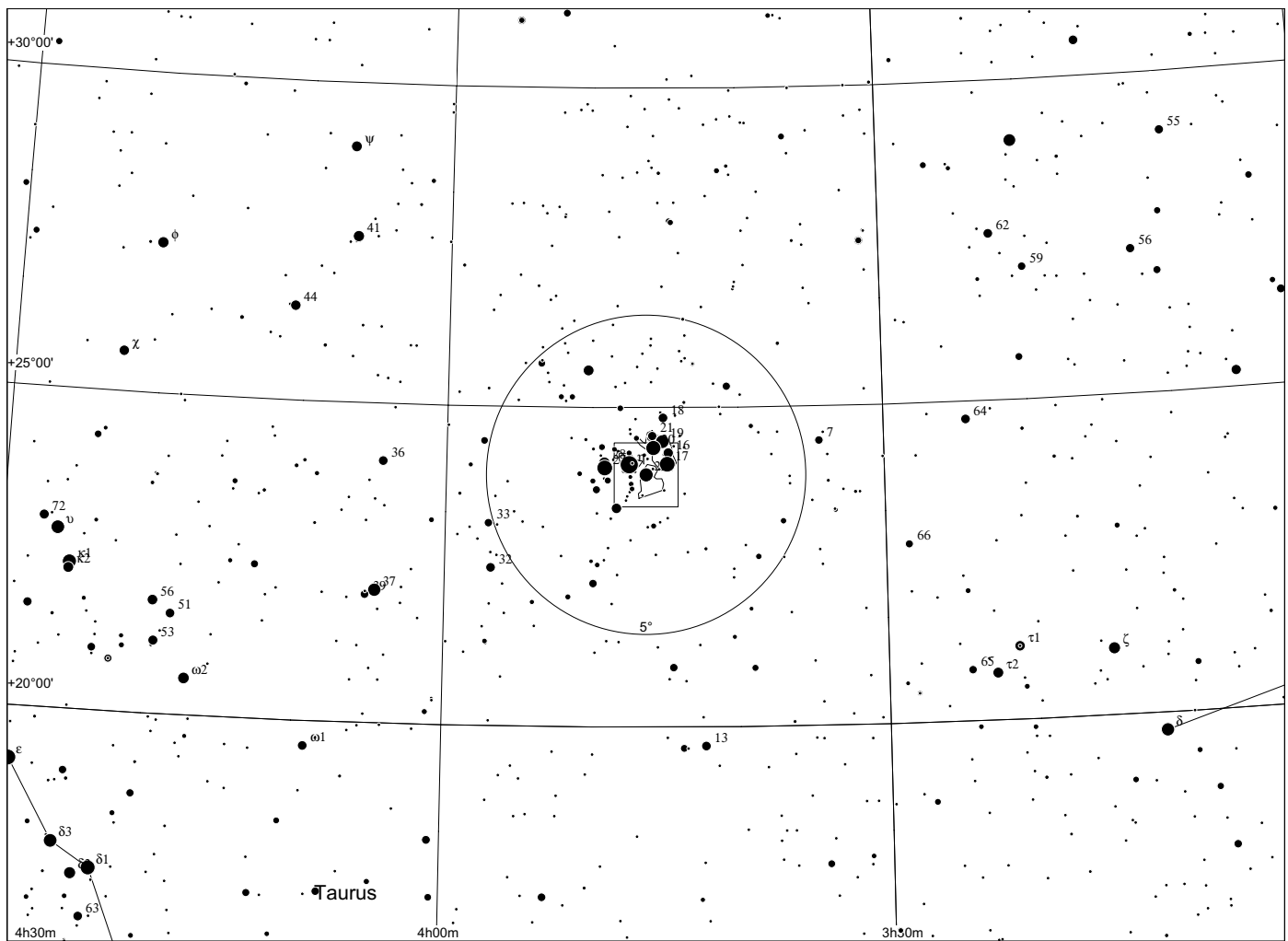


Merope-Nebel NGC 1435 und IC 349 in Taurus

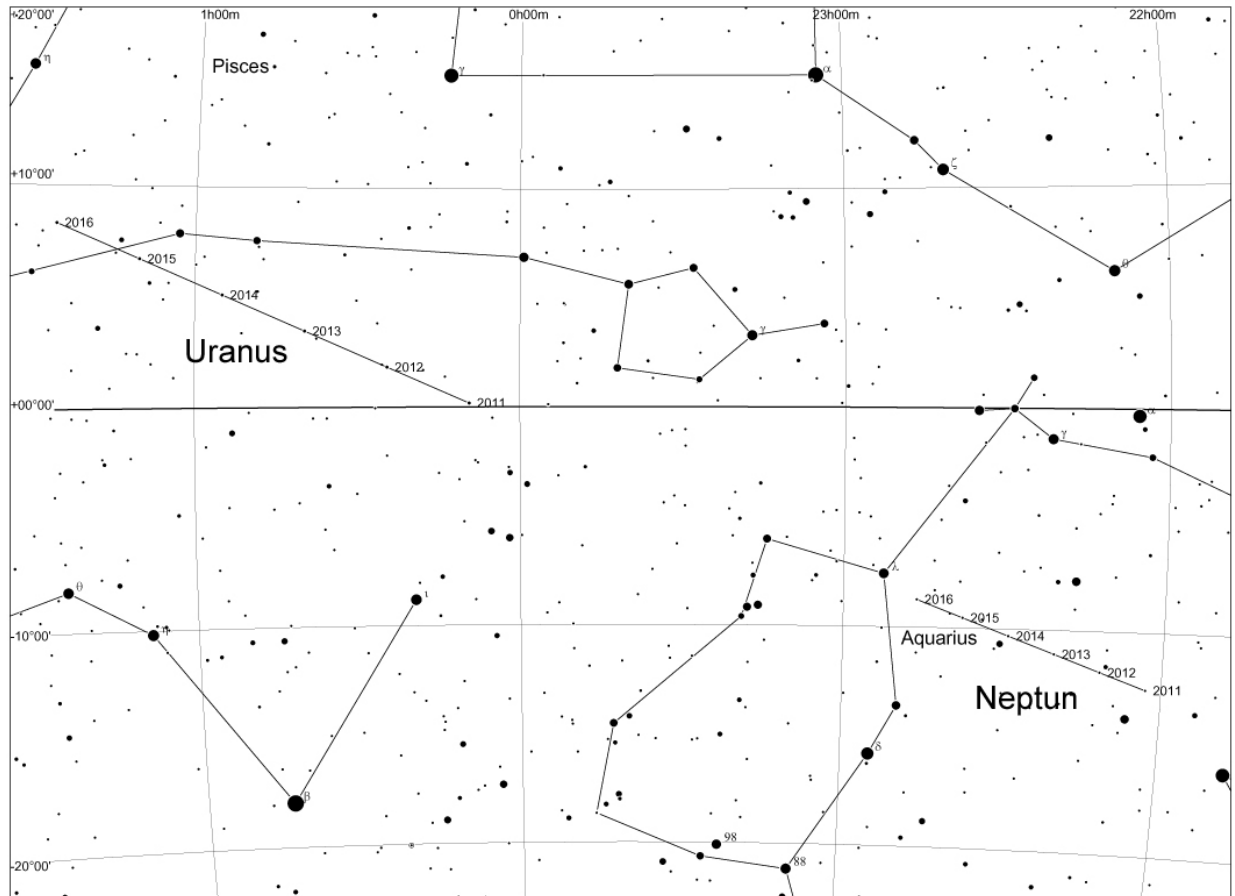


Merope

03 46 19.57 +23 56 54.1



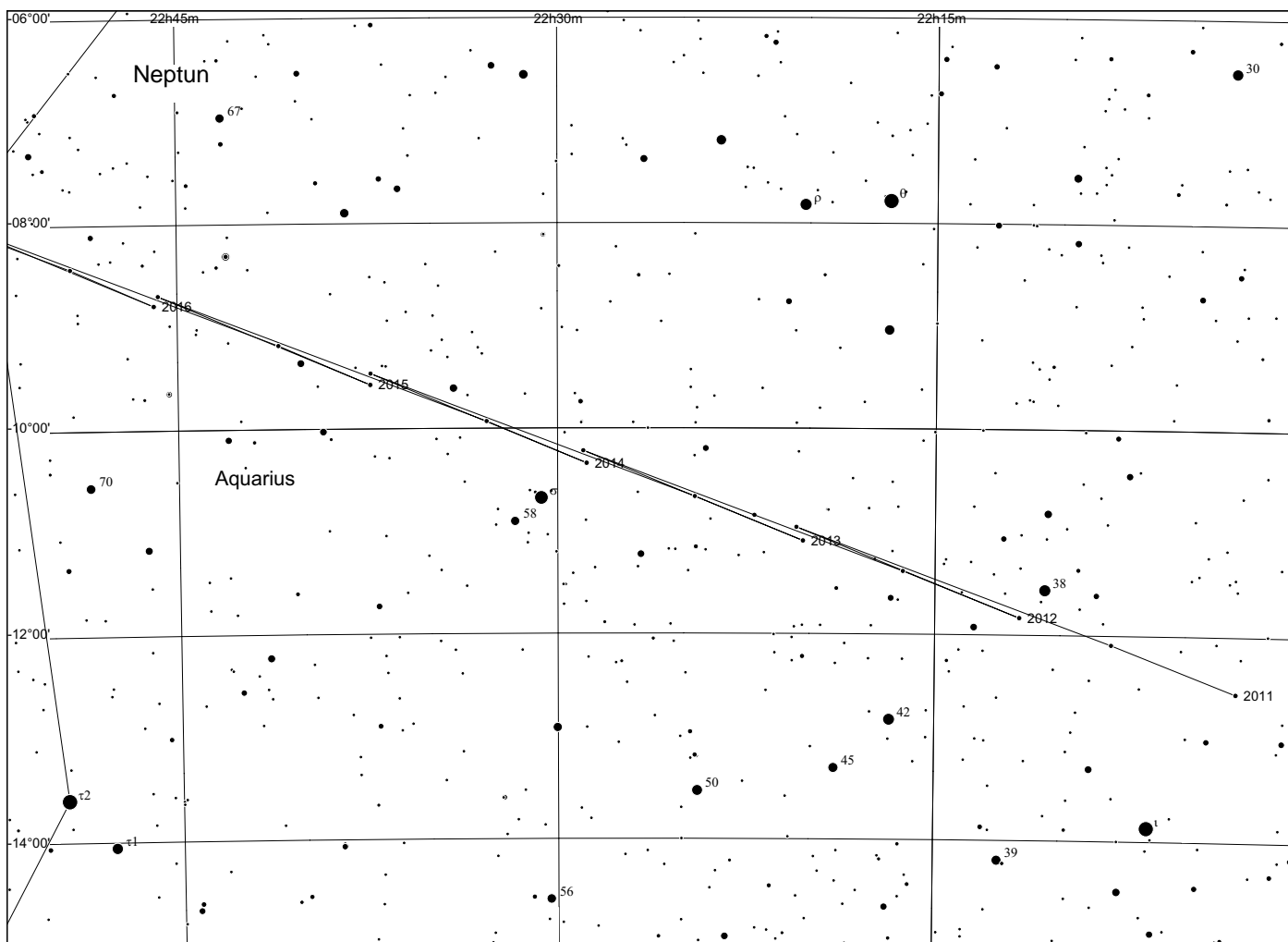
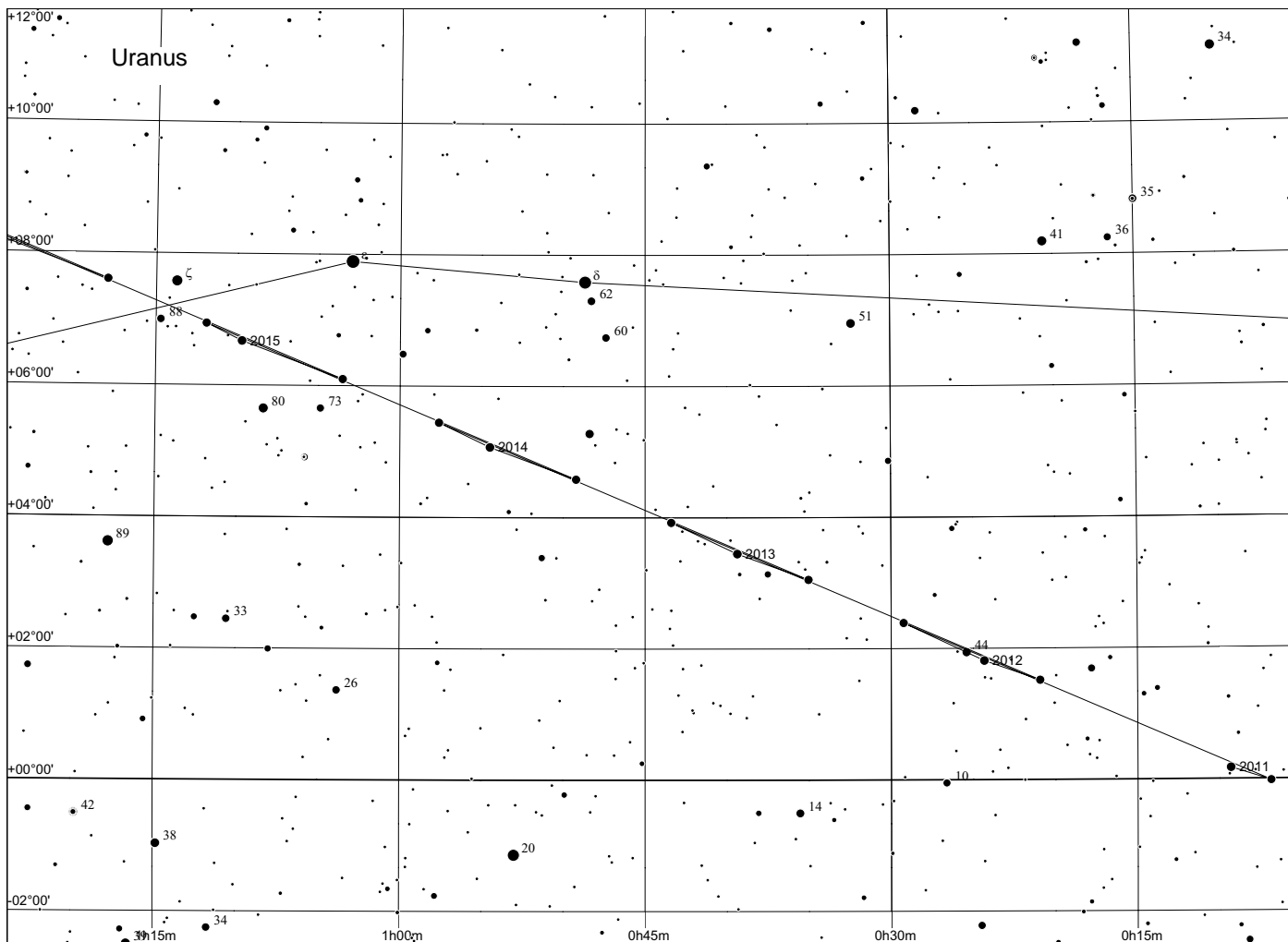
Monde von Uranus und Neptun



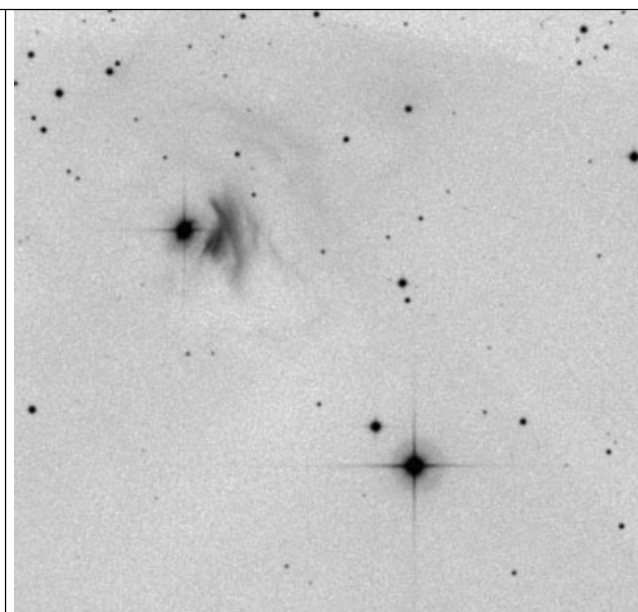
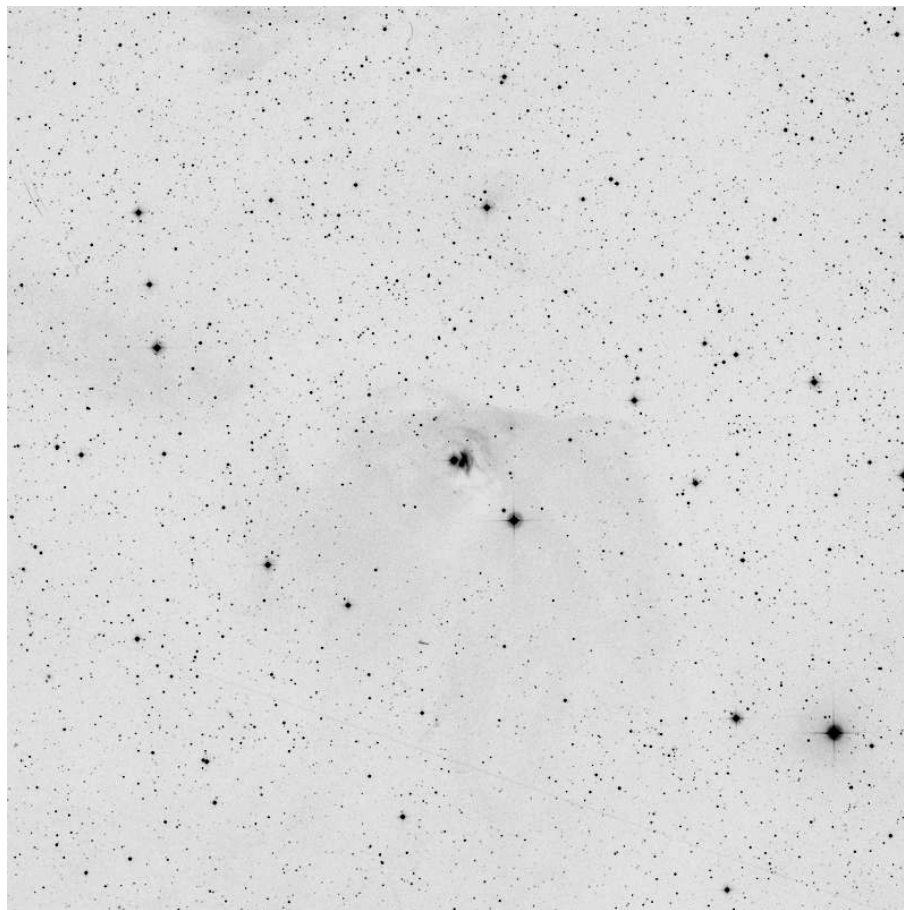
Die Positionen der Planeten sind jeweils zum 1. Oktober eines Jahres markiert.

Uranus hat eine maximale Helligkeit von 5^m6 und einen maximalen Scheibchendurchmesser von 3.6". Die hellsten Monde sind von innen nach außen mit ihrer jeweiligen Maximalhelligkeit und Durchmesser Miranda mit 16^m5 (472 km), Ariel mit 14^m4 (1158 km), Umbriel mit 15^m0 (1169 km), Titania mit 13^m9 (1578 km) und Oberon mit 14^m1 (1523 km).

Neptun hat eine maximale Helligkeit von 7^m8 und einen maximalen Scheibchendurchmesser von 2.5". Der einzige beobachtbare Mond ist Triton mit 13^m4 und einem Durchmesser von 2700 km. Er umkreist Neptun in knapp 6 Tagen auf einer um 157° gegen die Ekliptik geneigte Bahn und ist aufgrund dieser Neigung immer in genügend Abstand vom Planetenscheibchen sichtbar. Aufgrund seiner Helligkeit, und seines Abstandes zur weniger hellen Neptunscheibe ist Triton somit leichter zu beobachten als die Uranusmonde.



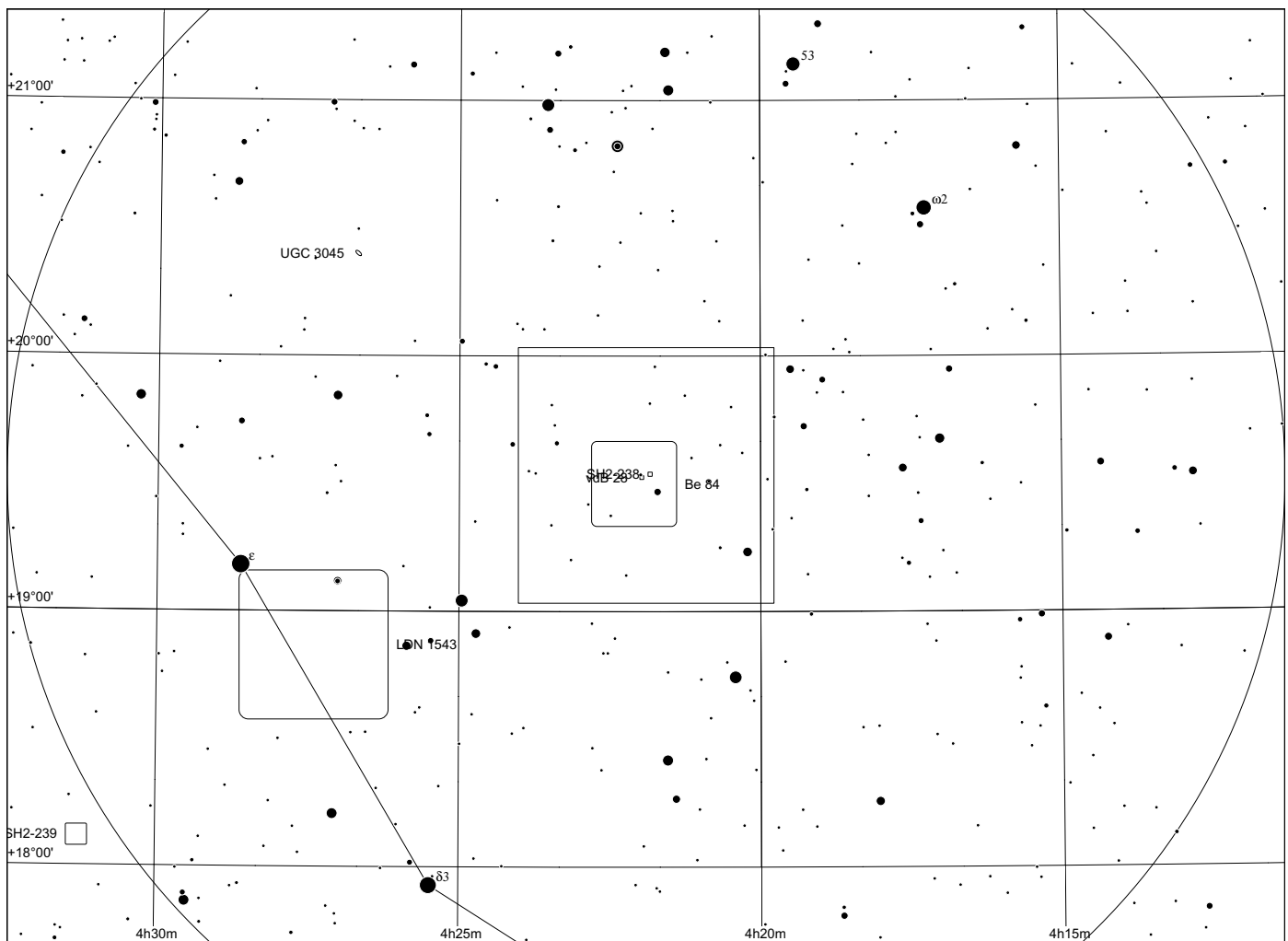
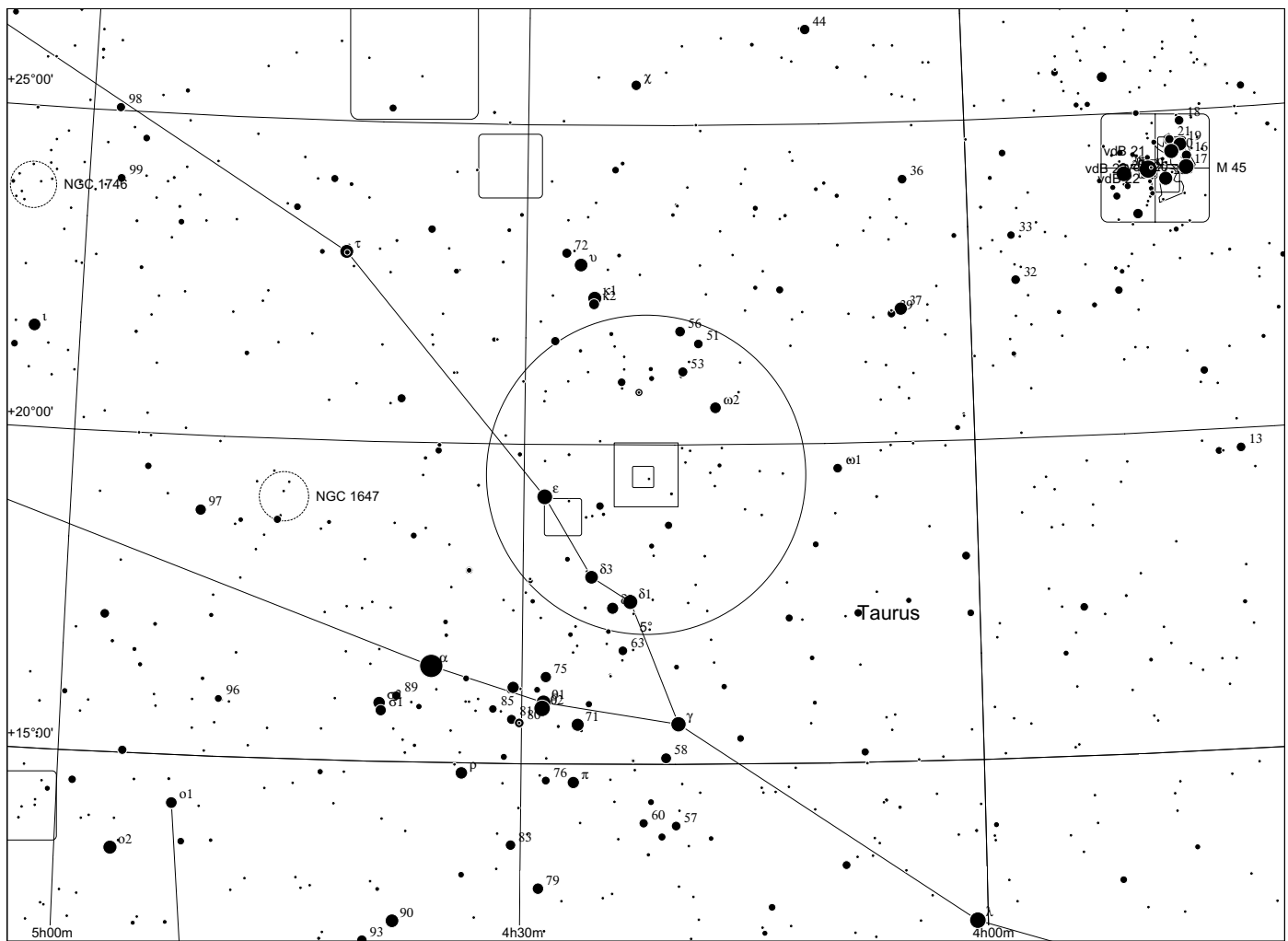
Hind's Variable Nebula NGC1555 in Taurus



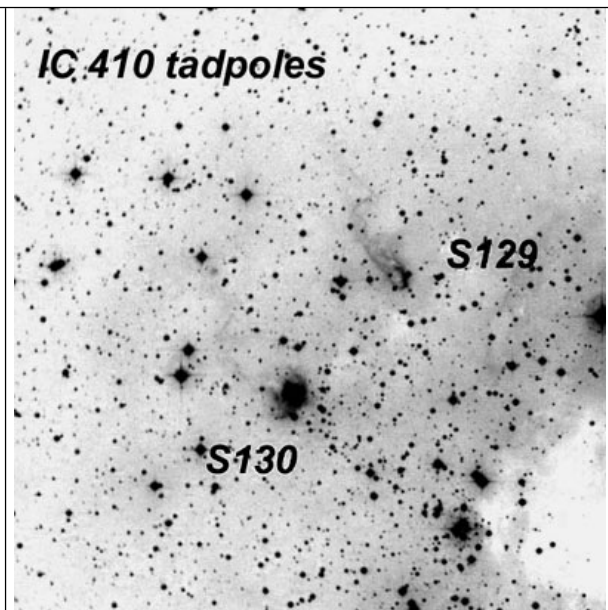
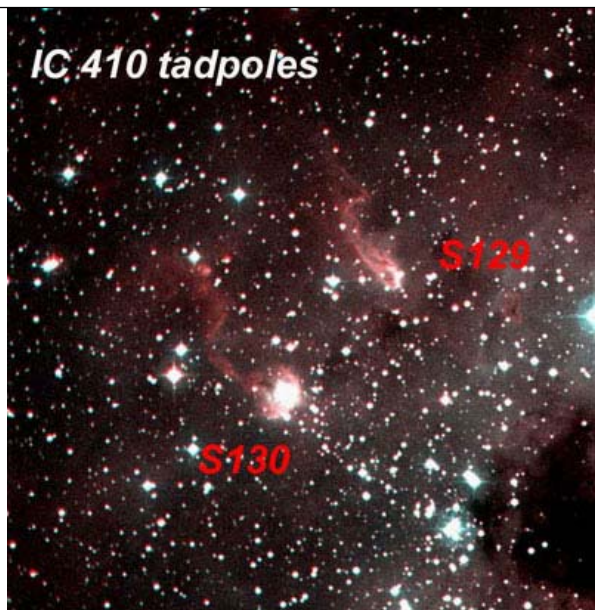
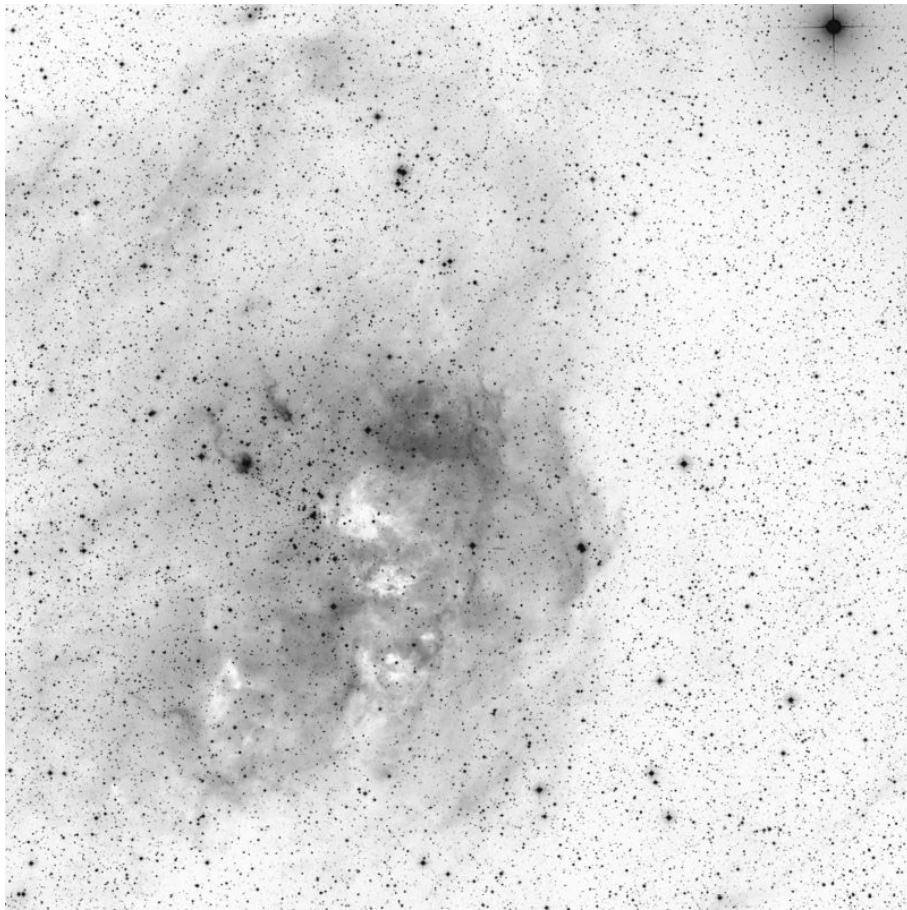
NGC 1555

04 21 57 +19 32 02

around T Tauri

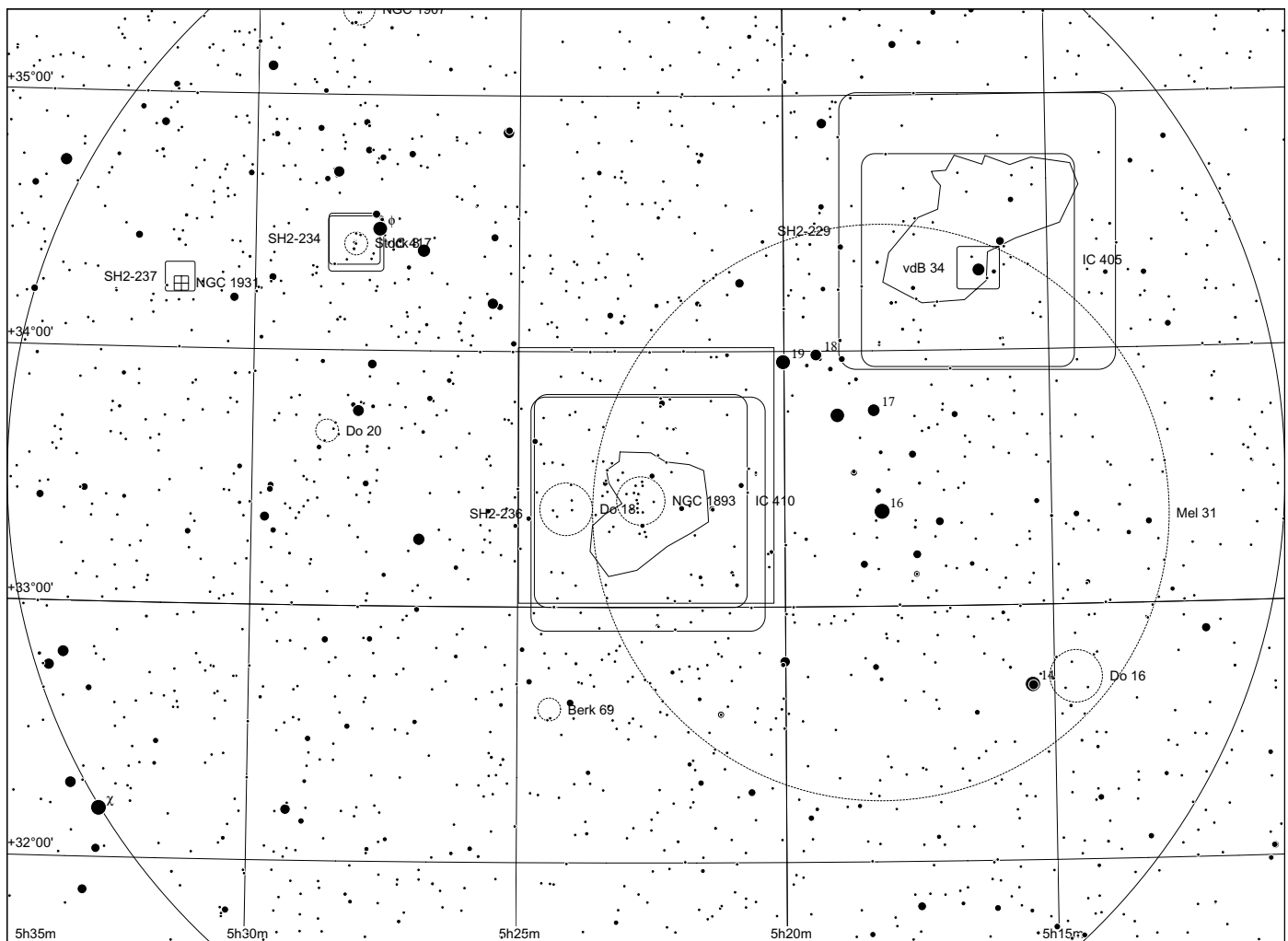
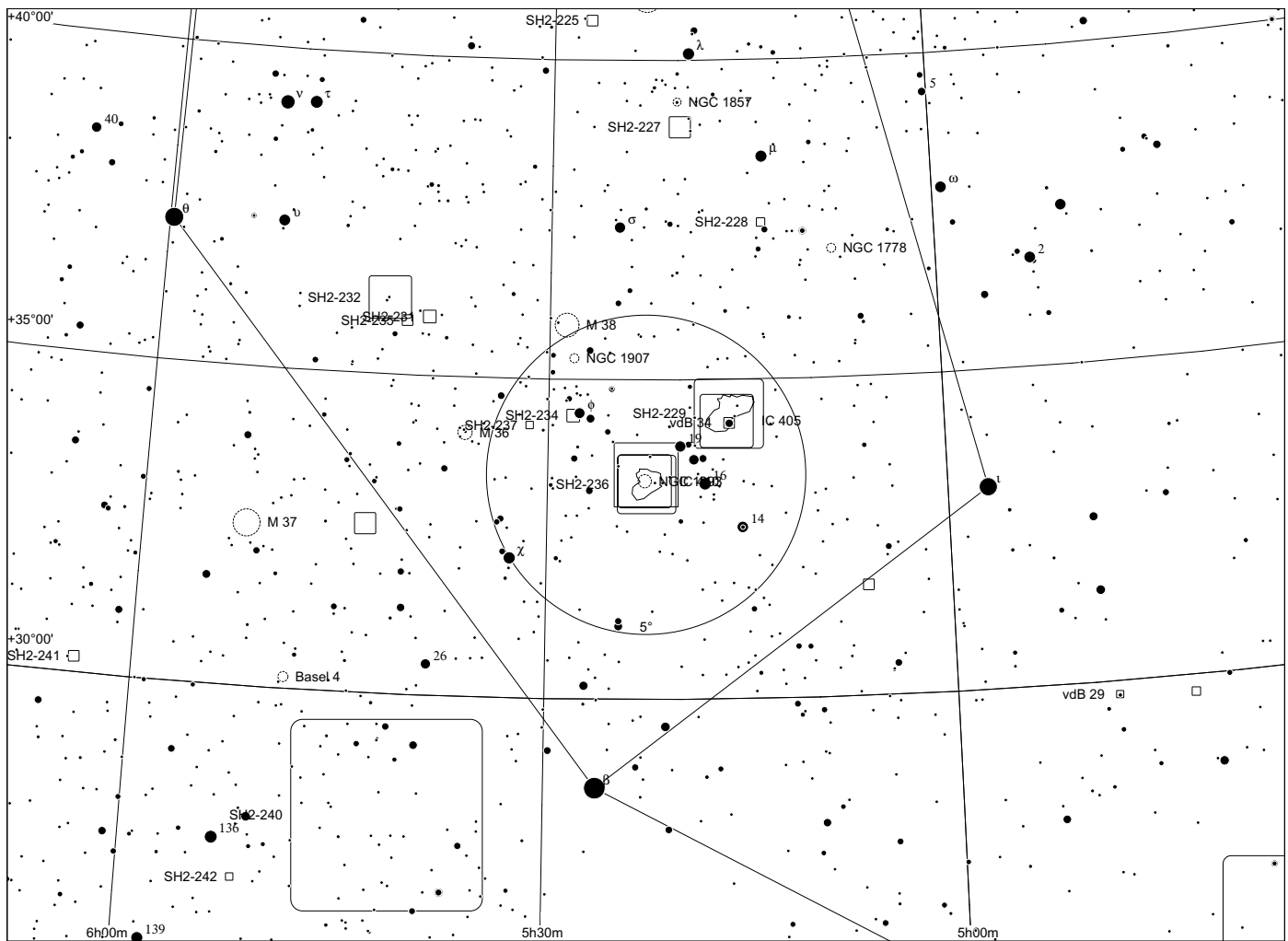


Tadpoles in IC410 in Auriga

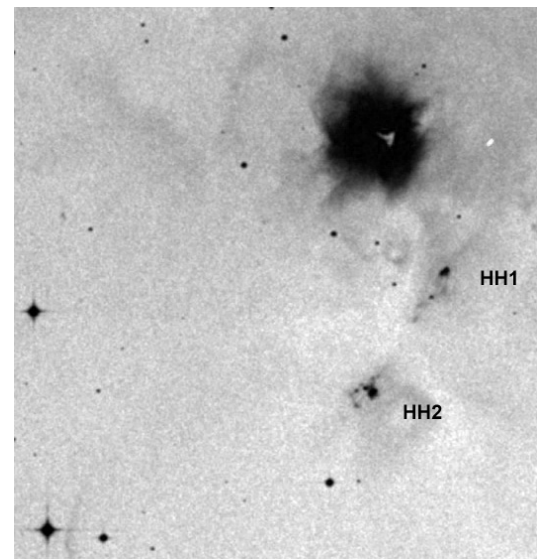
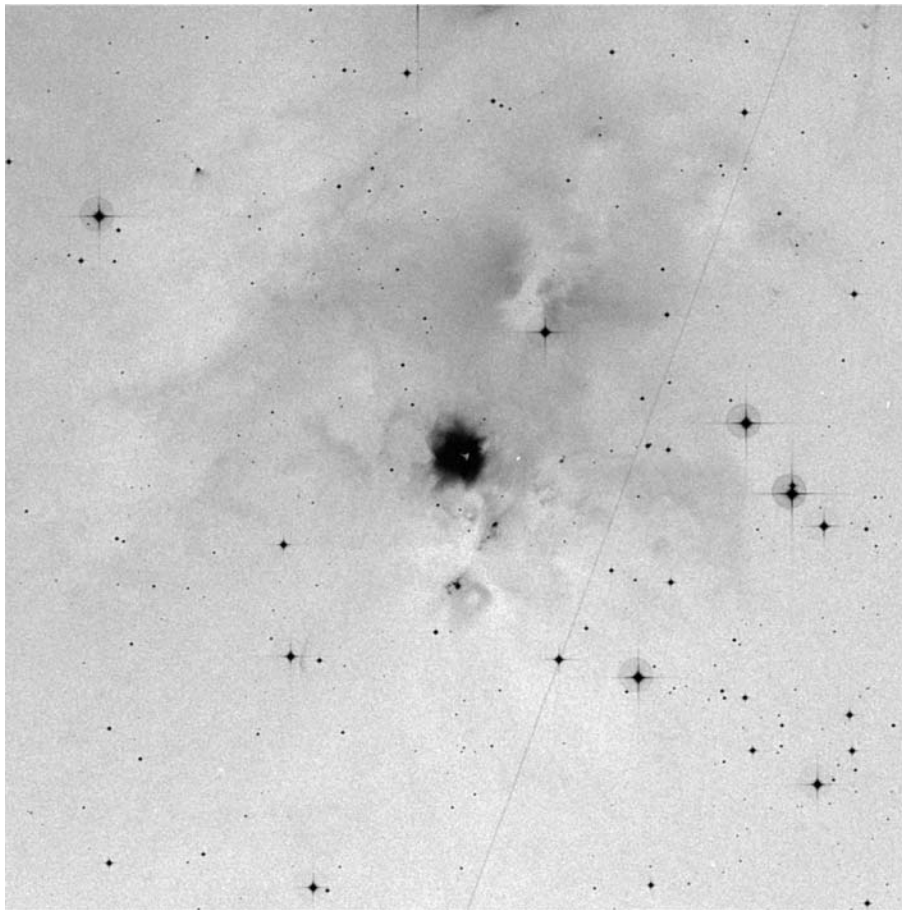


IC 410

05 23 08 +33 28 40



V380 Ori/NGC 1999 in Orion



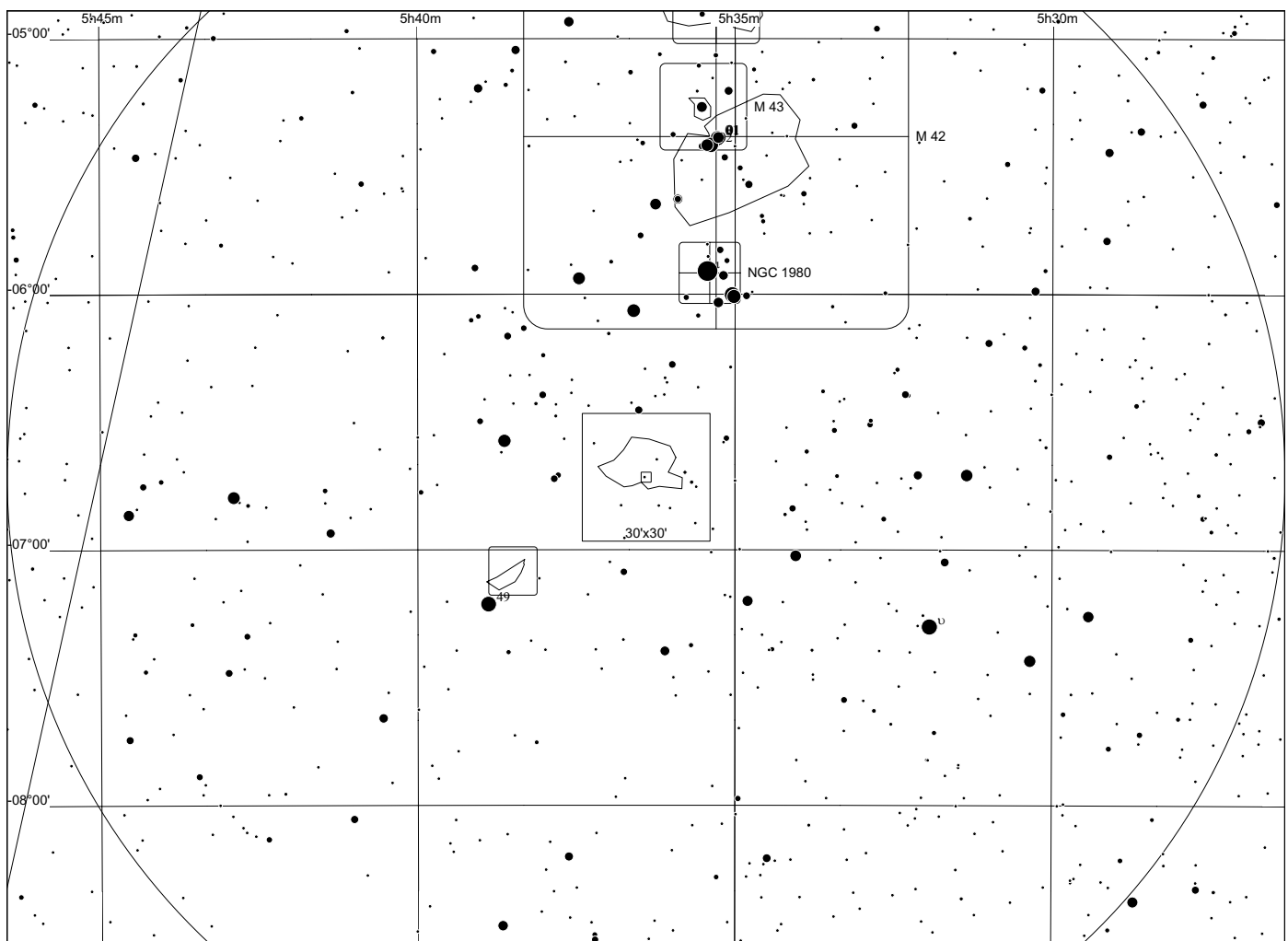
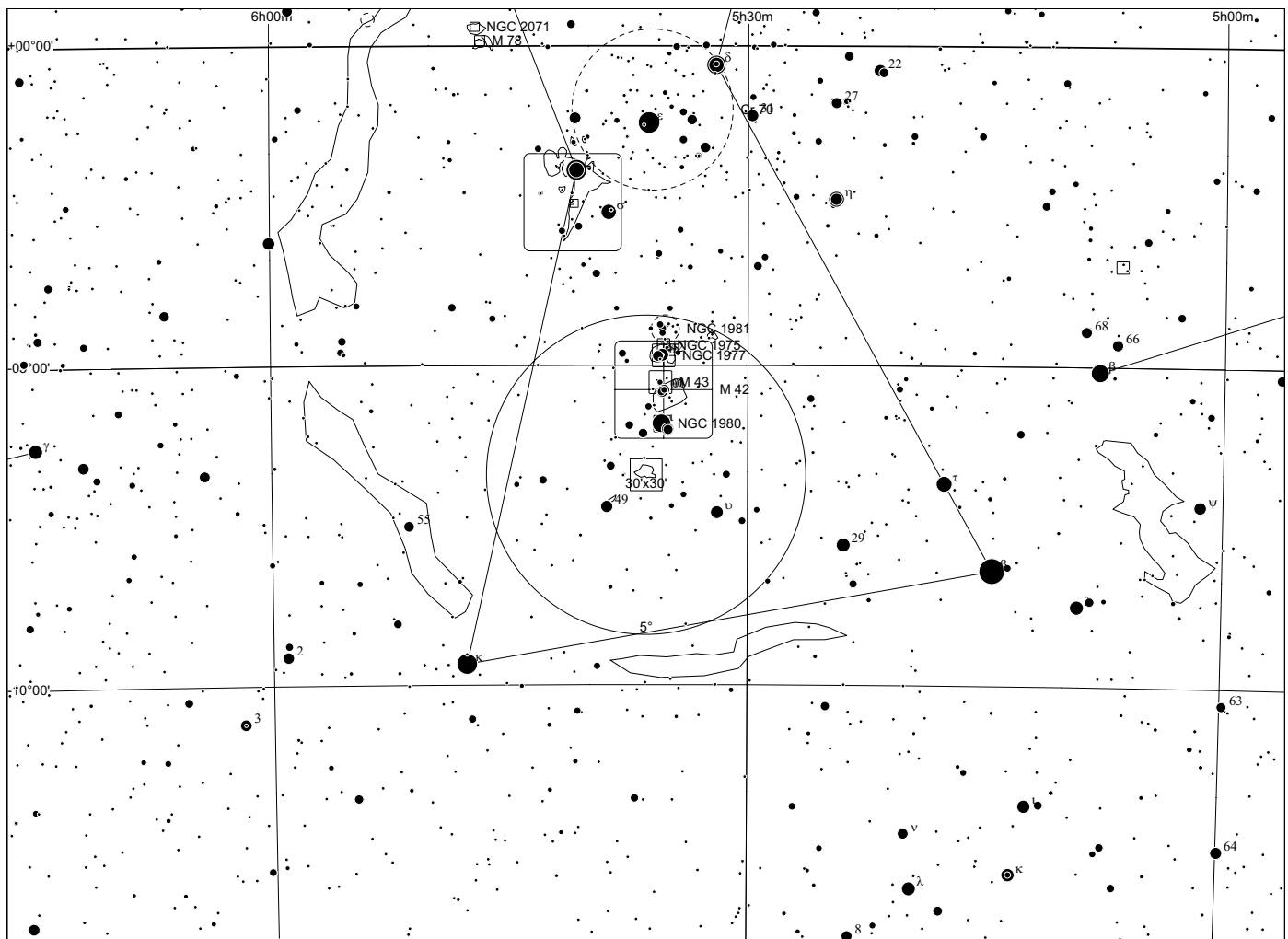
HH1 and HH2 in the vicinity of NGC 1999

| | other | RA | Dek | comments |
|-----------------|----------|----------|-----------|--|
| NGC 1999 | V380 Ori | 05 36 27 | -06 43 18 | with HH 1 and HH 2 |

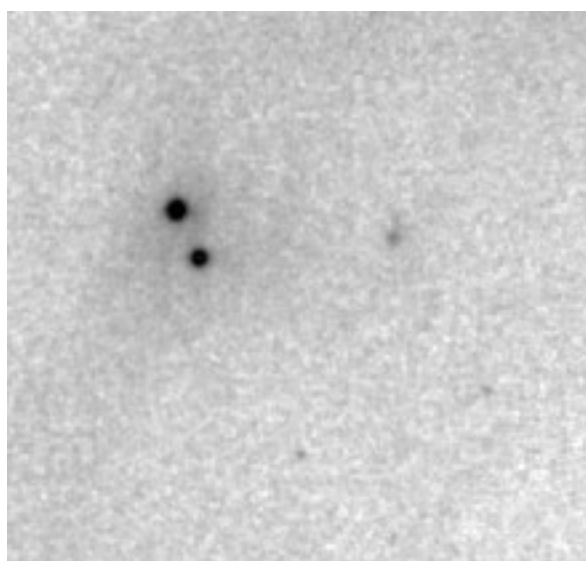
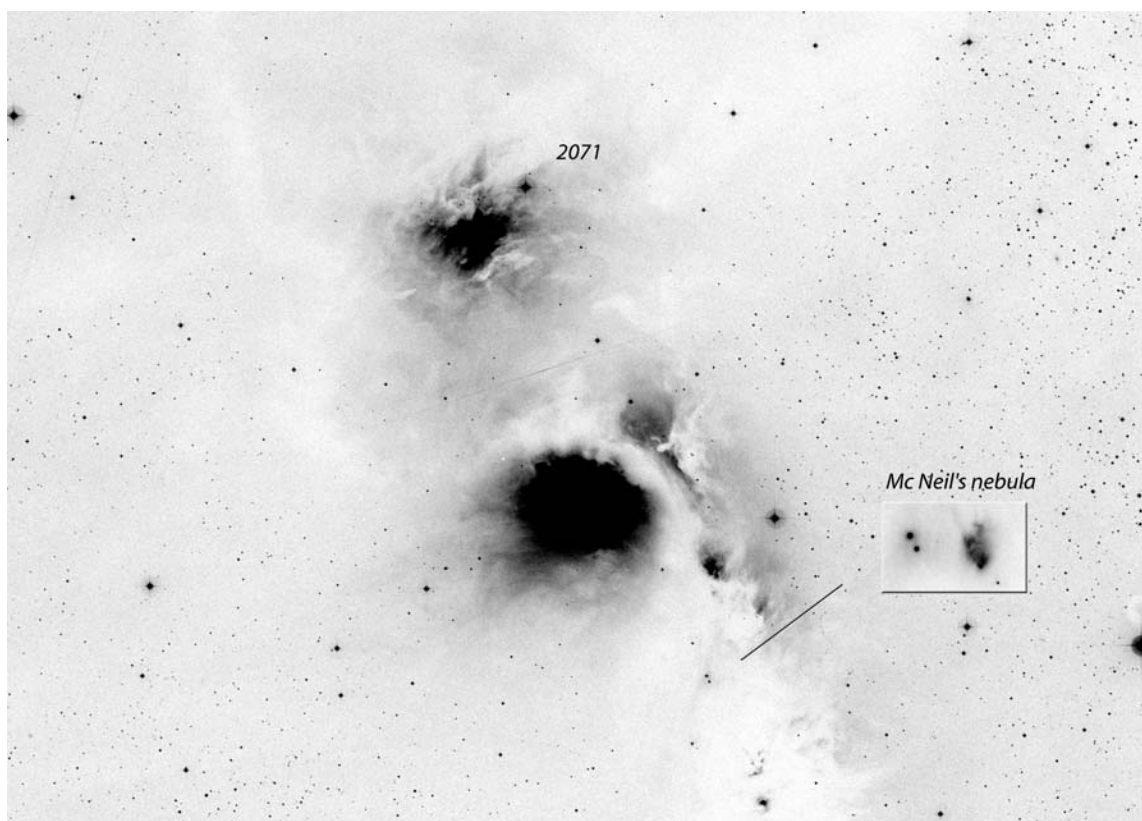
Observing notes:

22" f/4.5

NGC 1999 is an easy object already in smaller telescopes. The nebulosity is small. The star sits within the nebulosity at the edge of the keyhole shaped obscuration to the W. HH1 and HH2 are to the S of NGC 1999. HH2 could be held indirectly, while HH1 required indirect vision.



V1647 Ori/Mc Neil's Nebula in M78 in Orion



POSS red



POSS composite

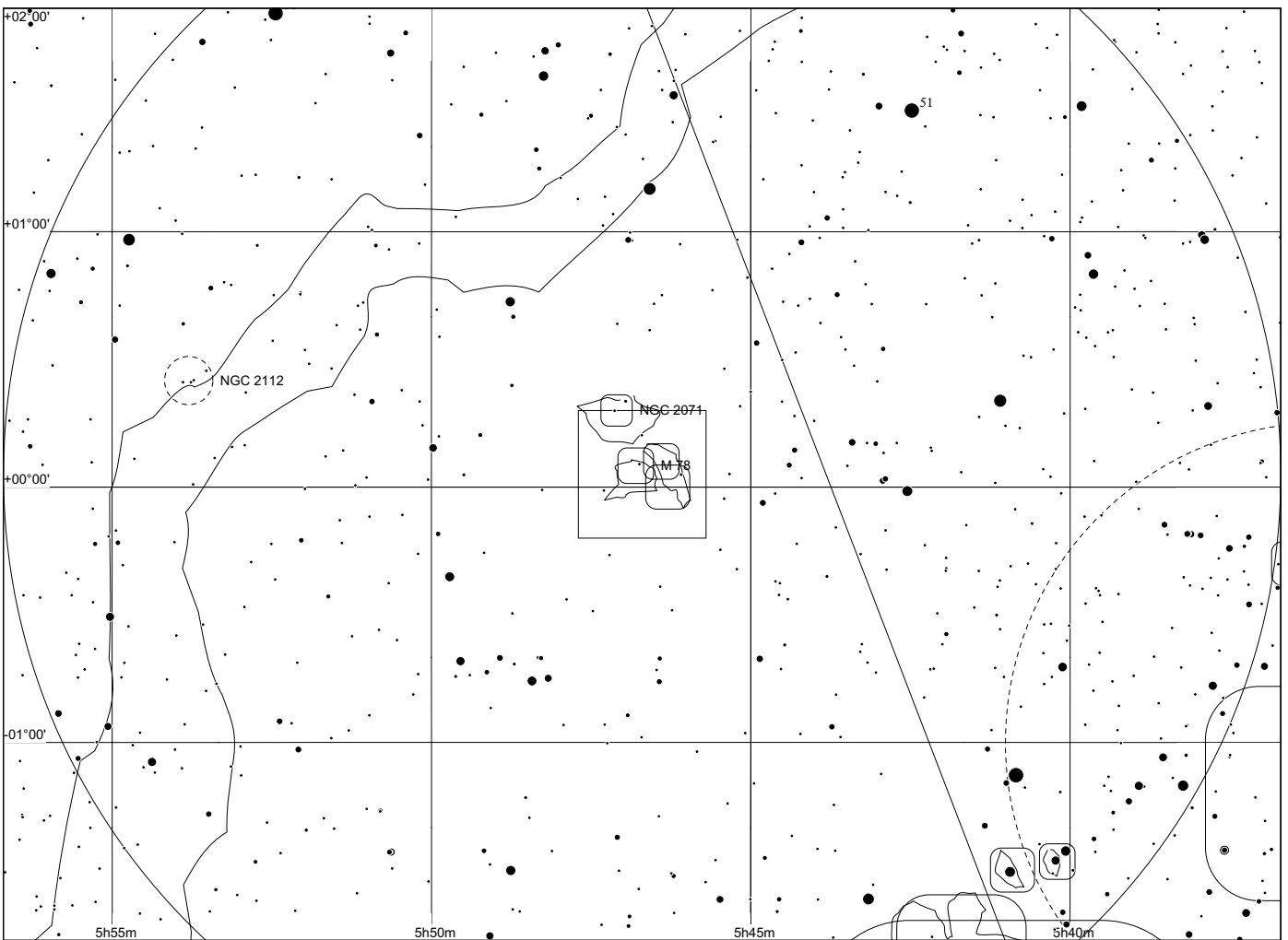
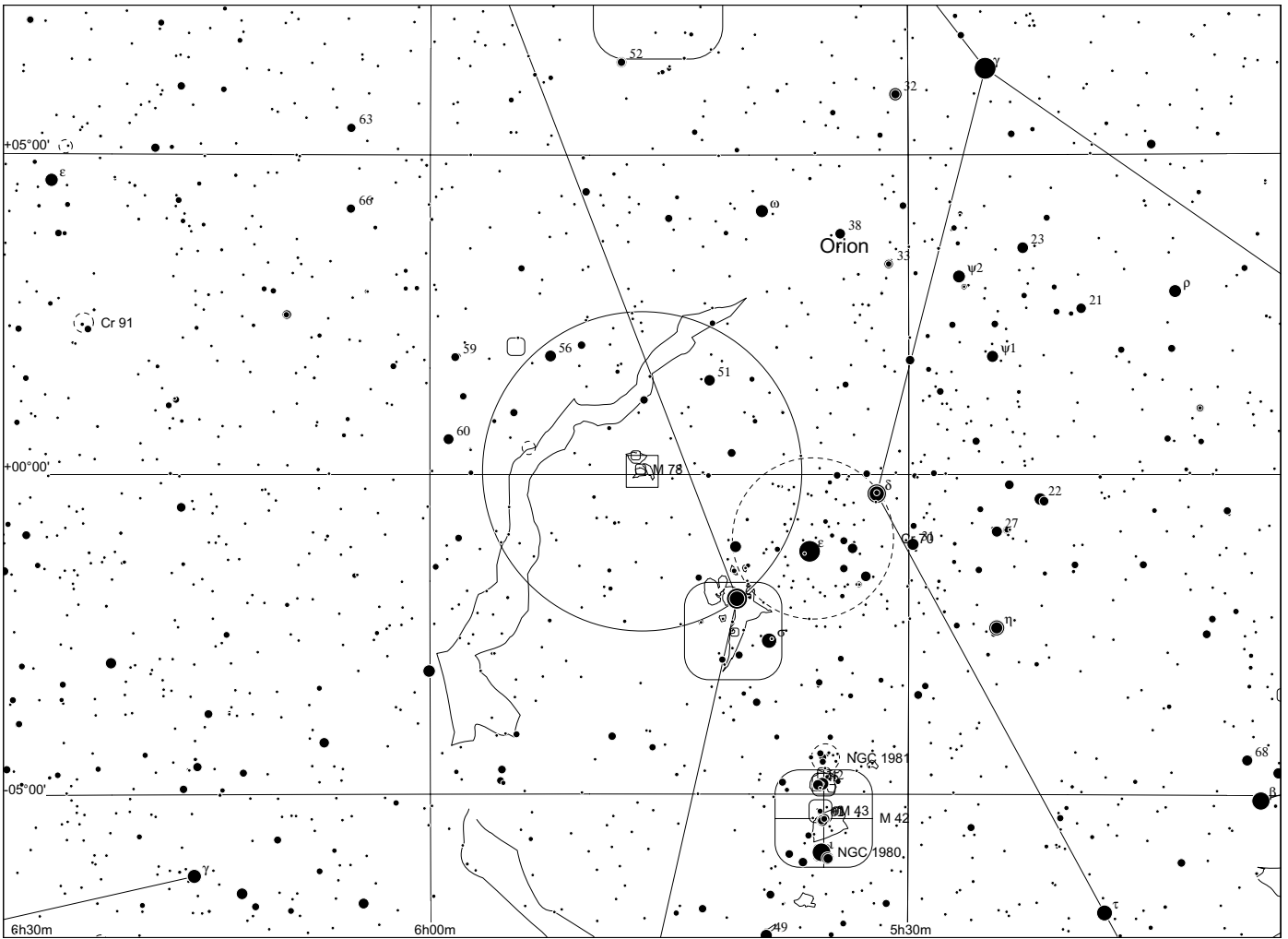
| | other | RA | Dek | comments |
|------------------------------|-------|-------------|-------------|-------------|
| V* V1647 Ori | | 05 46 13.14 | -00 06 04.8 | FU Ori type |

Observing notes:
22" f/4.5

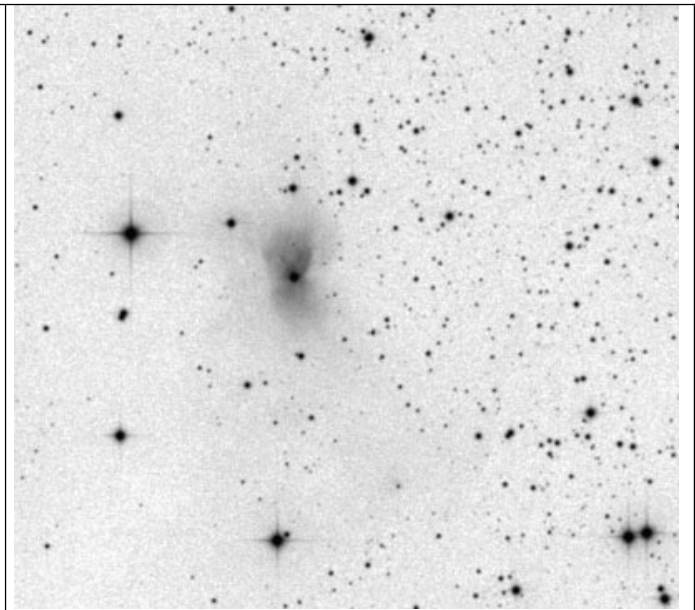
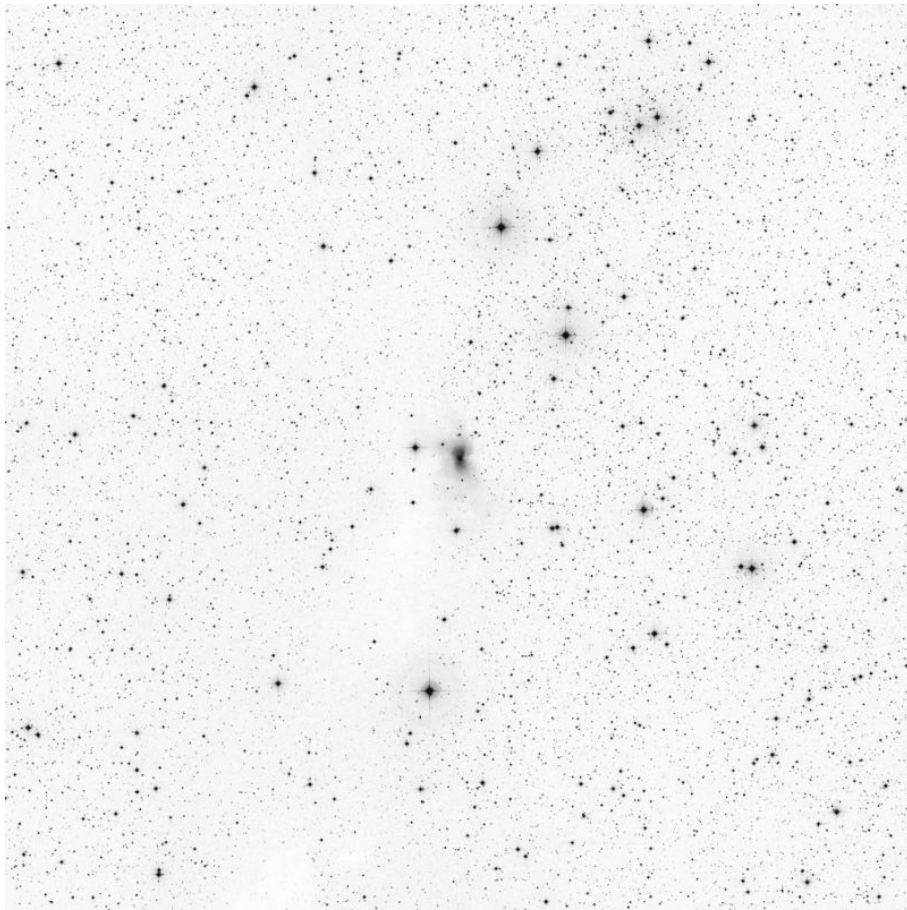
Maybe you remember the sudden appearance of McNeil's Nebula in M78? This nebula was discovered photographically as a new object in the dusty landscape around M78 in 2004 by amateur observer Jay McNeil. At that time, it was accessible to visual observation. An attempt to observe the nebula in 2006 with my 22" Dob failed. In the end of 2008 it appeared to brighten again and I gave it another try.

It proved to be not exactly easy to locate the field. Due to the obscuring dark clouds, the environment of M78 lacks stars and star patterns suitable for star hopping, and the few remaining stars are considerably dimmed. It took me therefore some time to locate the precise position and to permanently hold the faint field stars. Close to the position of McNeil's Nebula is a close pair of stars, which are difficult to split visually due to their faintness. This double star forms an equilateral triangle with two other stars to the south and to the west. Mc Neil's nebula is next to the double star. I estimated the nebula's brightness to be somewhat lower than that of the combined double star, but it could be seen steadily with averted vision.

There are further YSOs toward S (not observed). Re-observed in January 2011 with similar result.

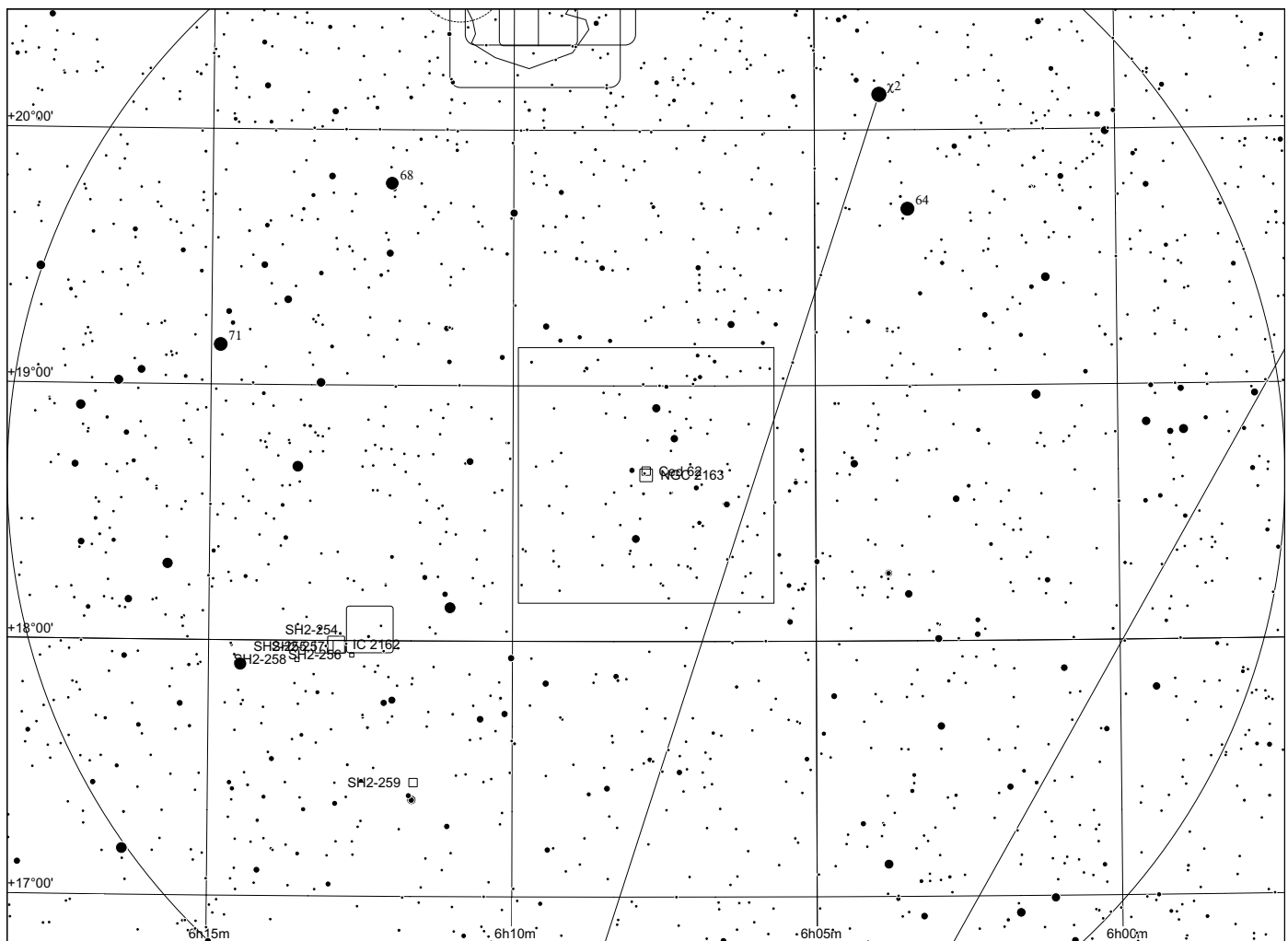
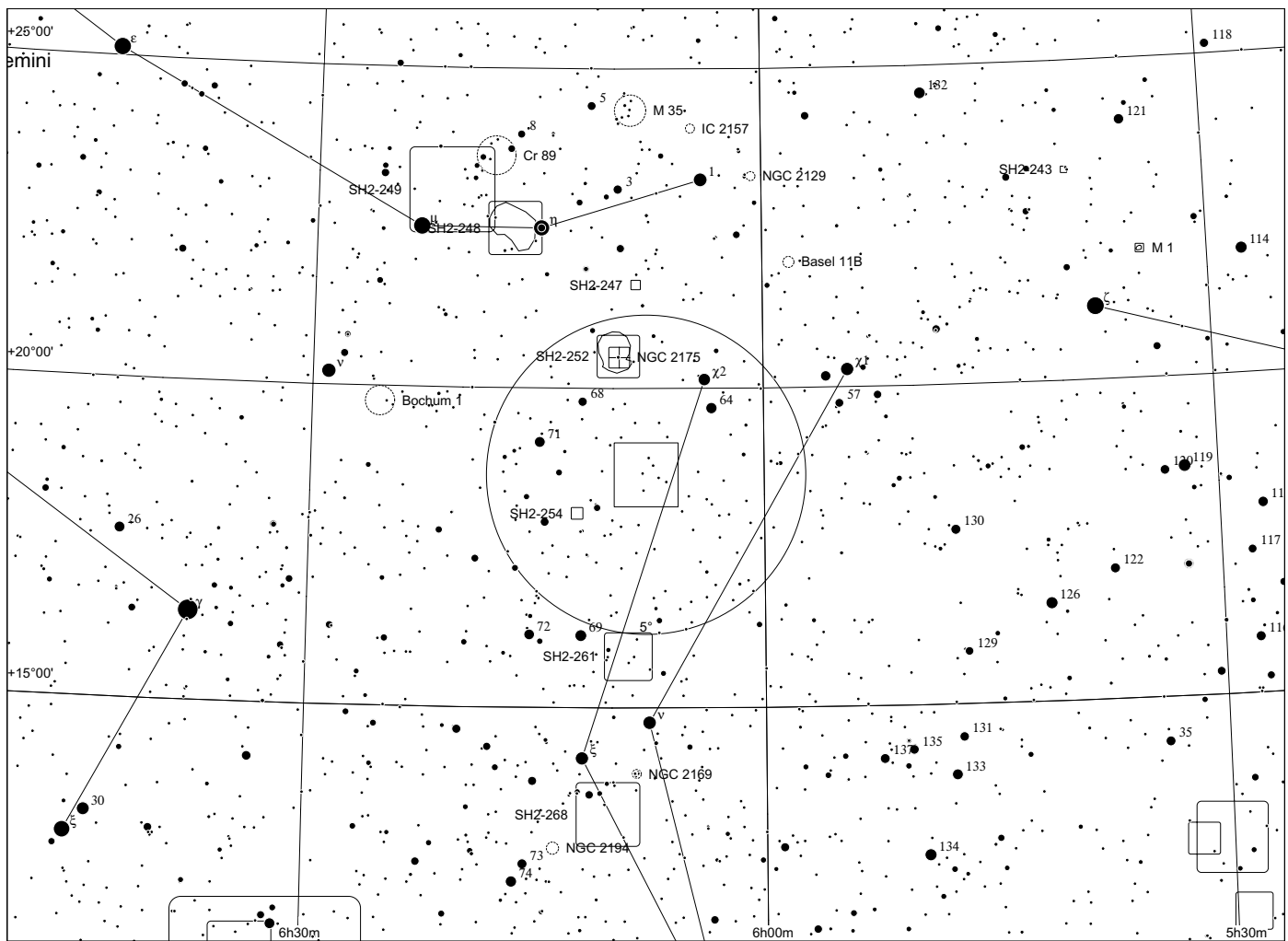


Ced 62 (NGC 2163) in Orion

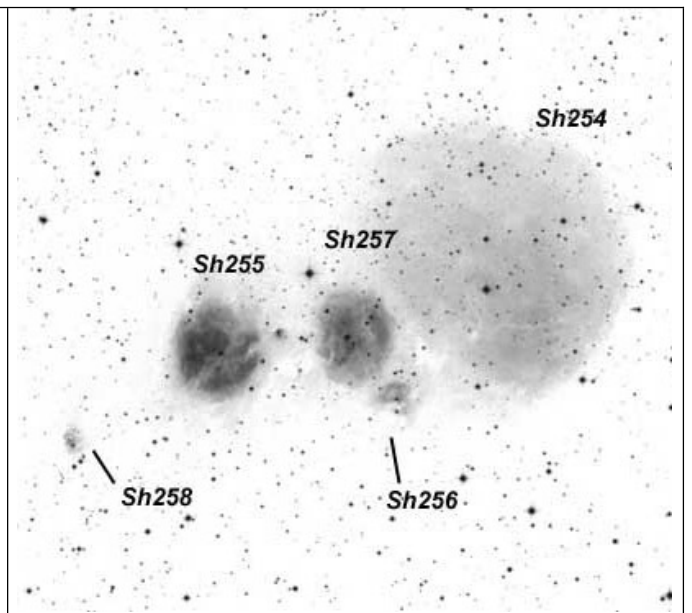
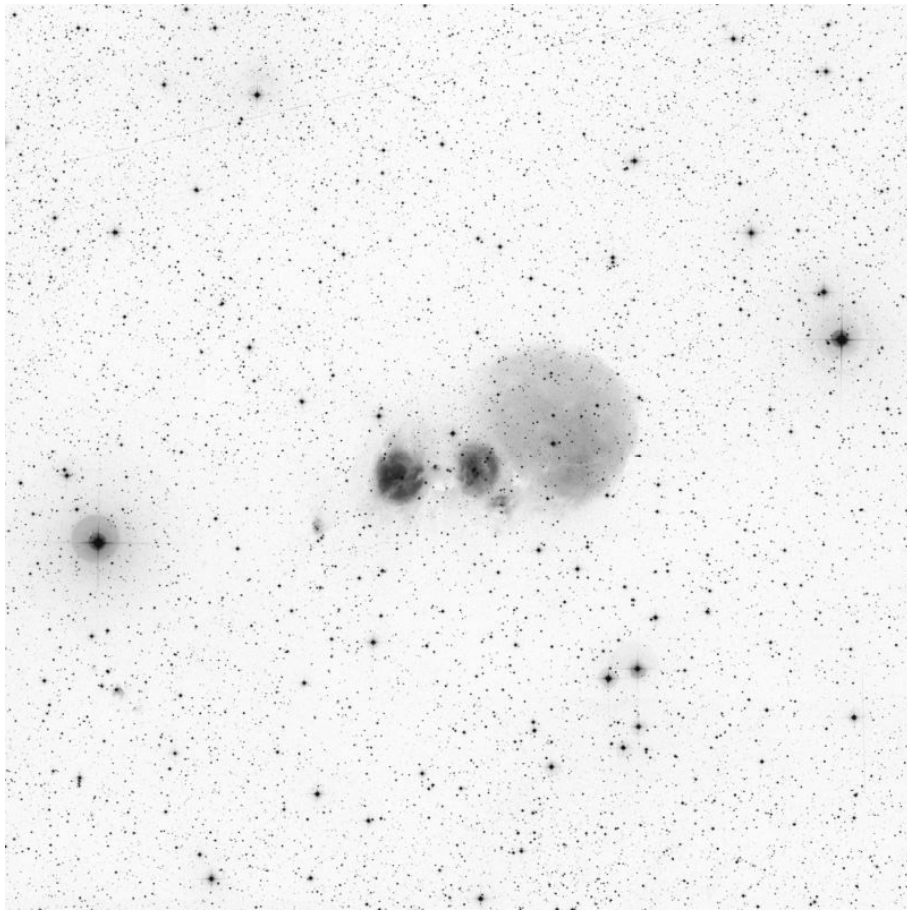


NGC 2163

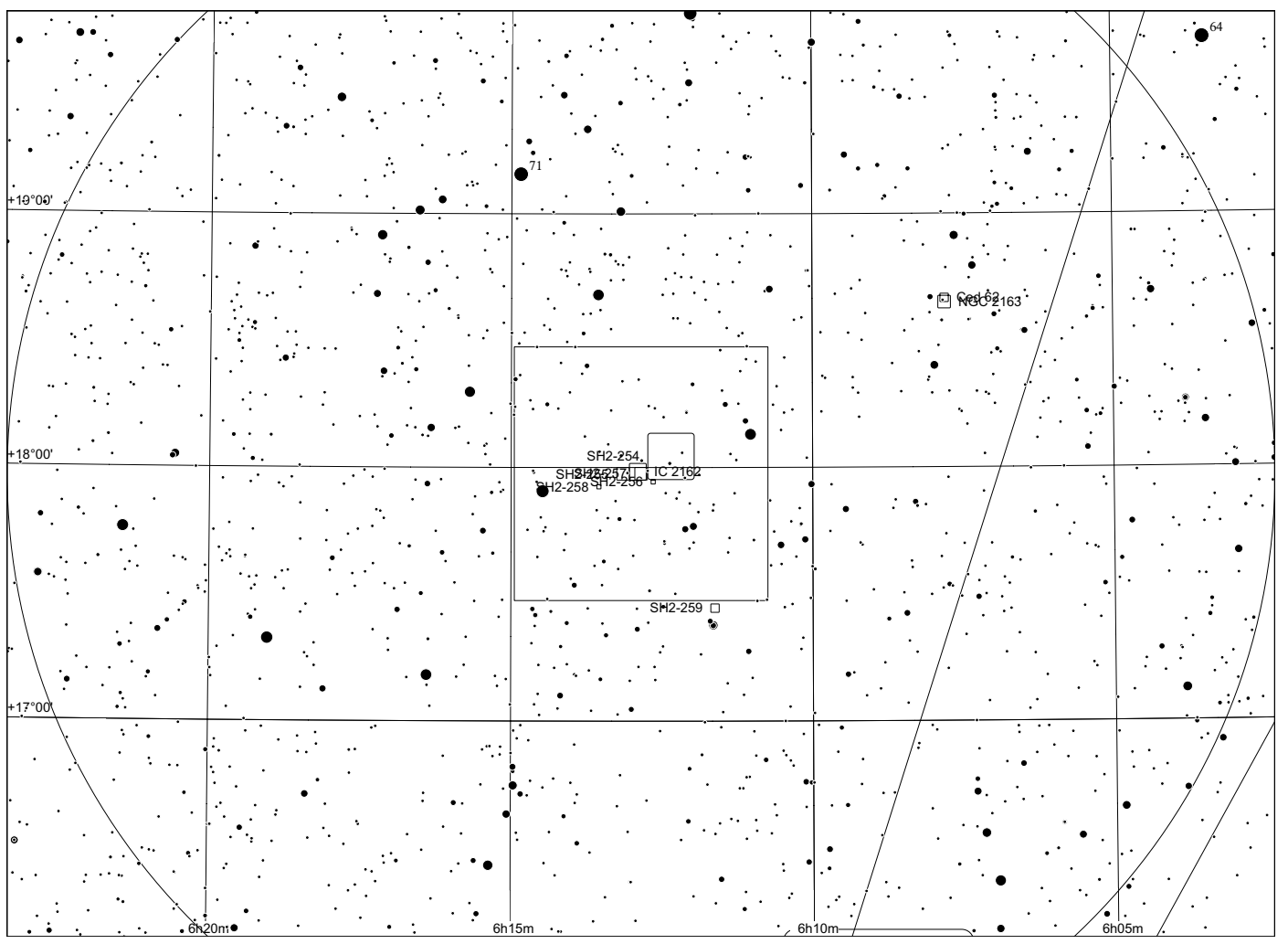
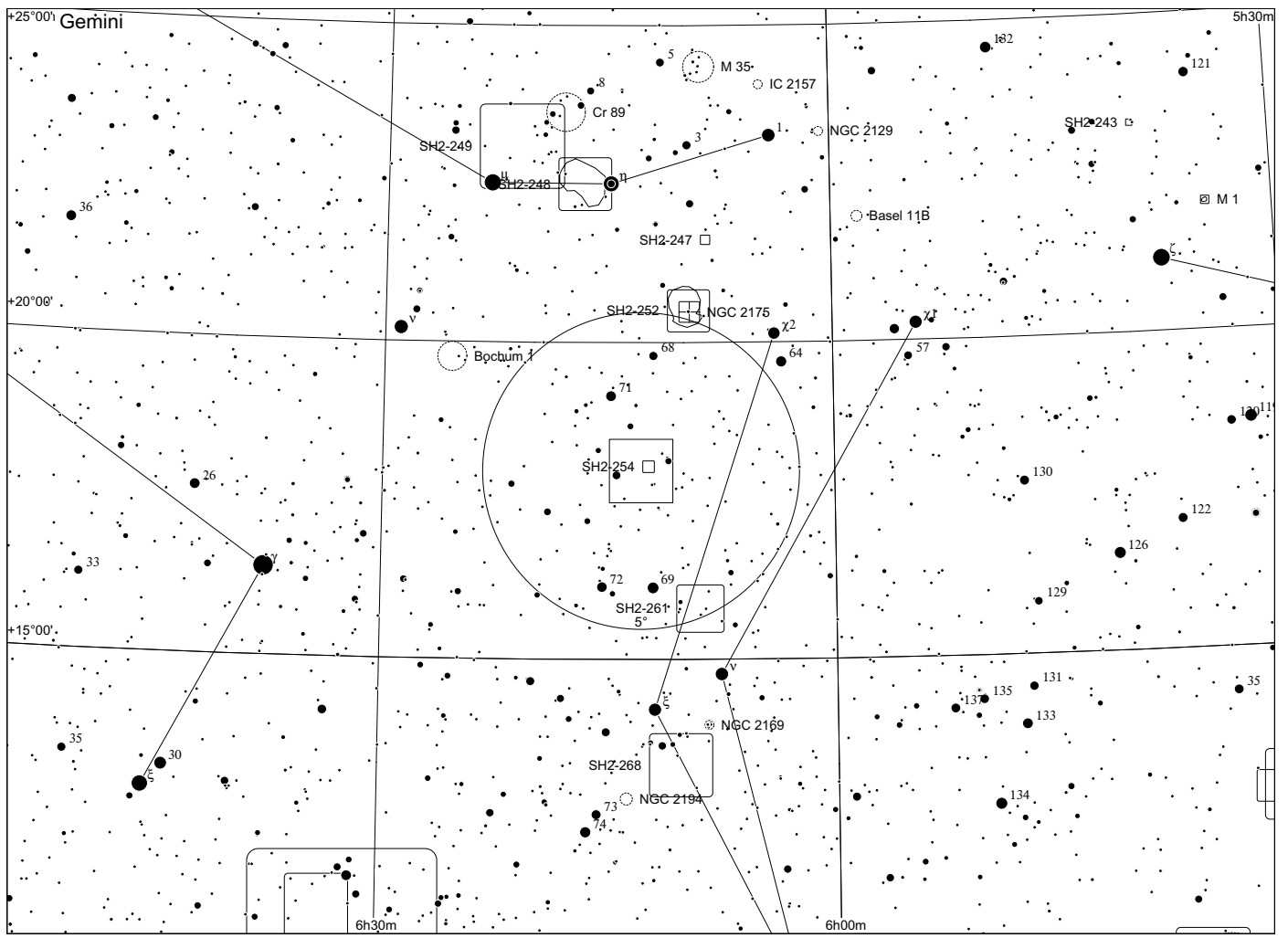
06 07 50 +18 39 27



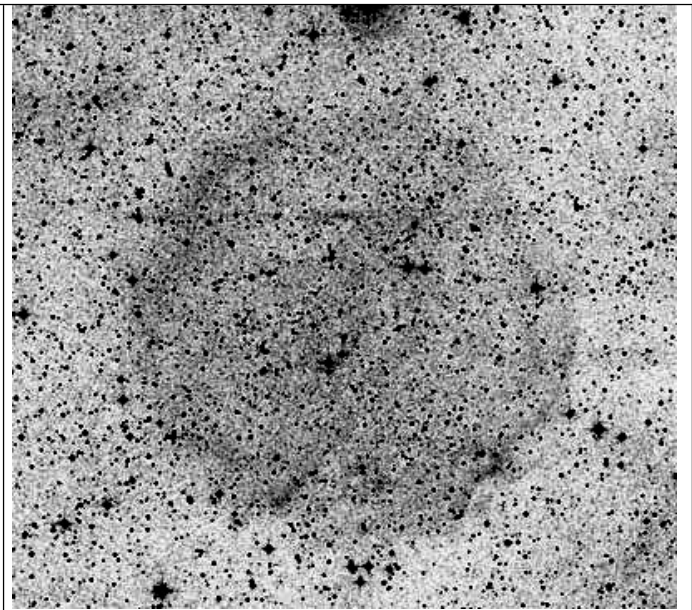
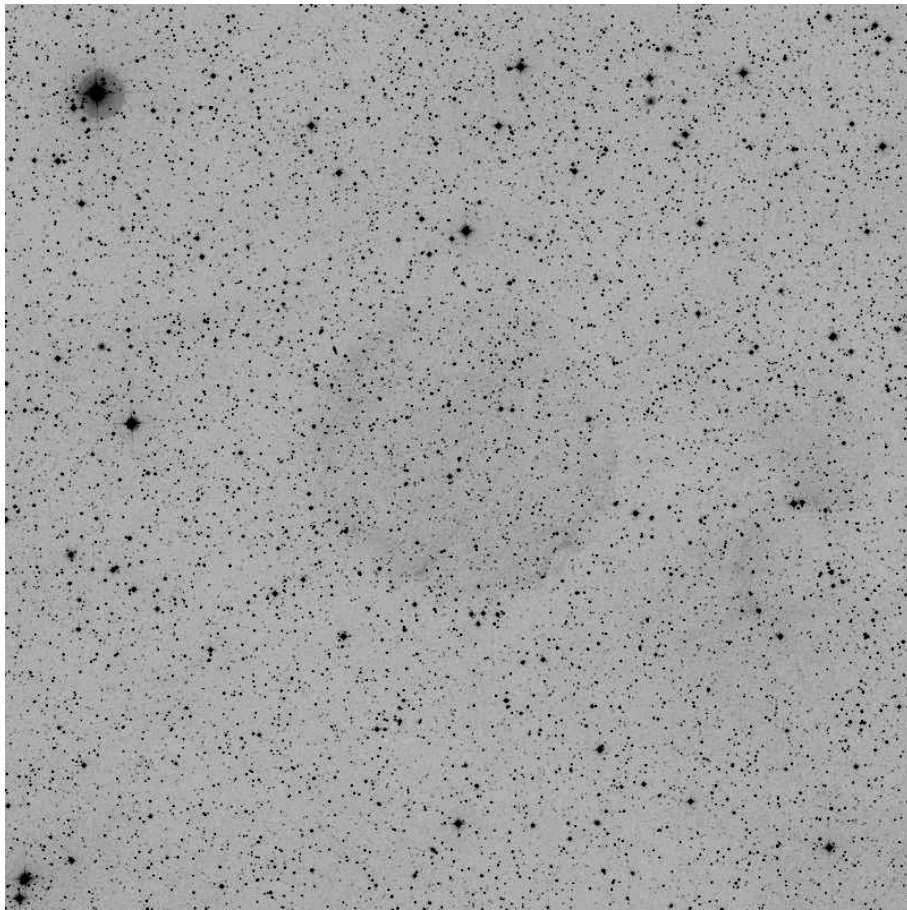
Sharpless 257 and friends in Orion



| | | |
|---------|--------------------|--|
| Sh2-257 | 06 07 50 +18 39 27 | |
|---------|--------------------|--|

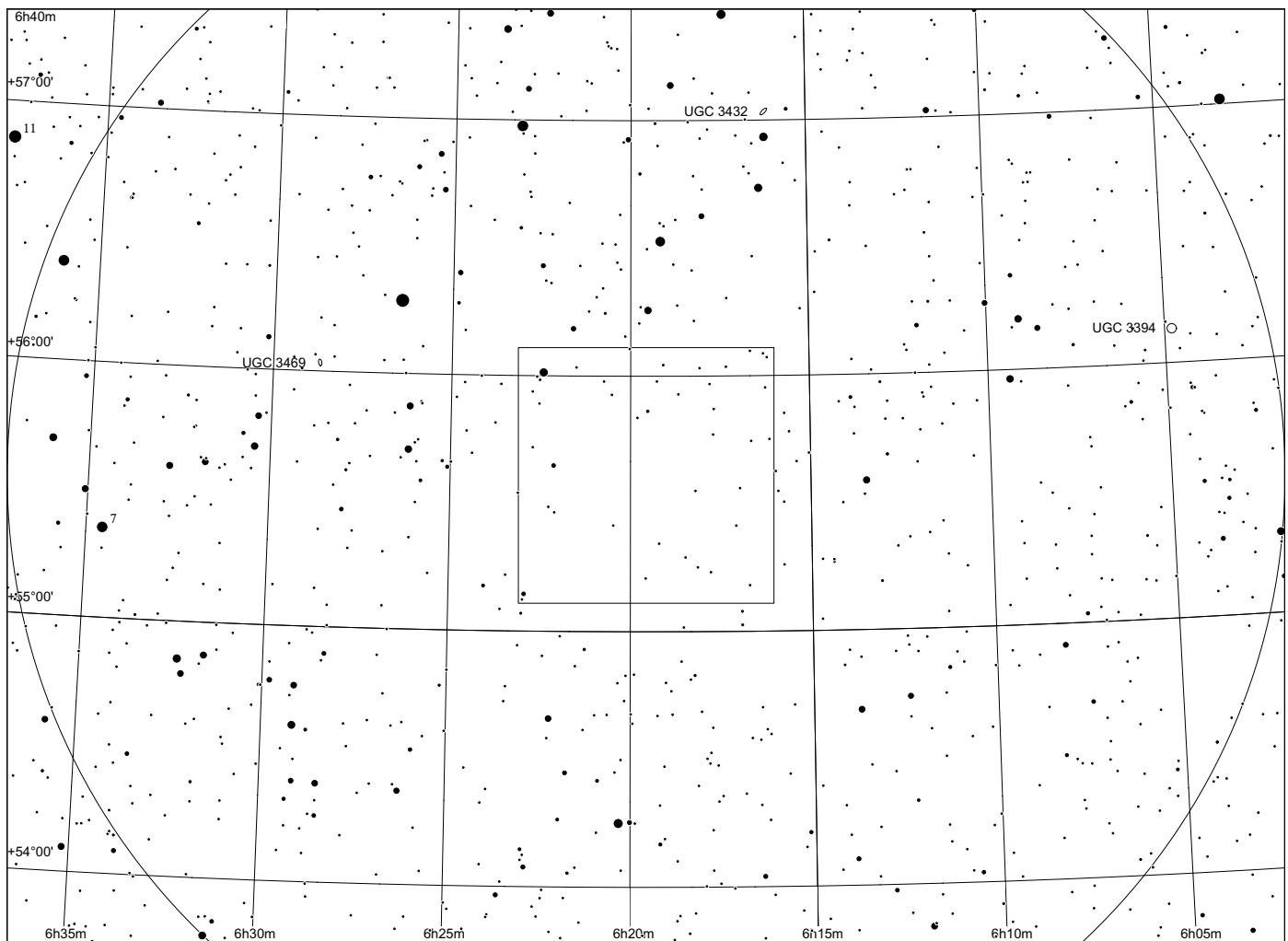
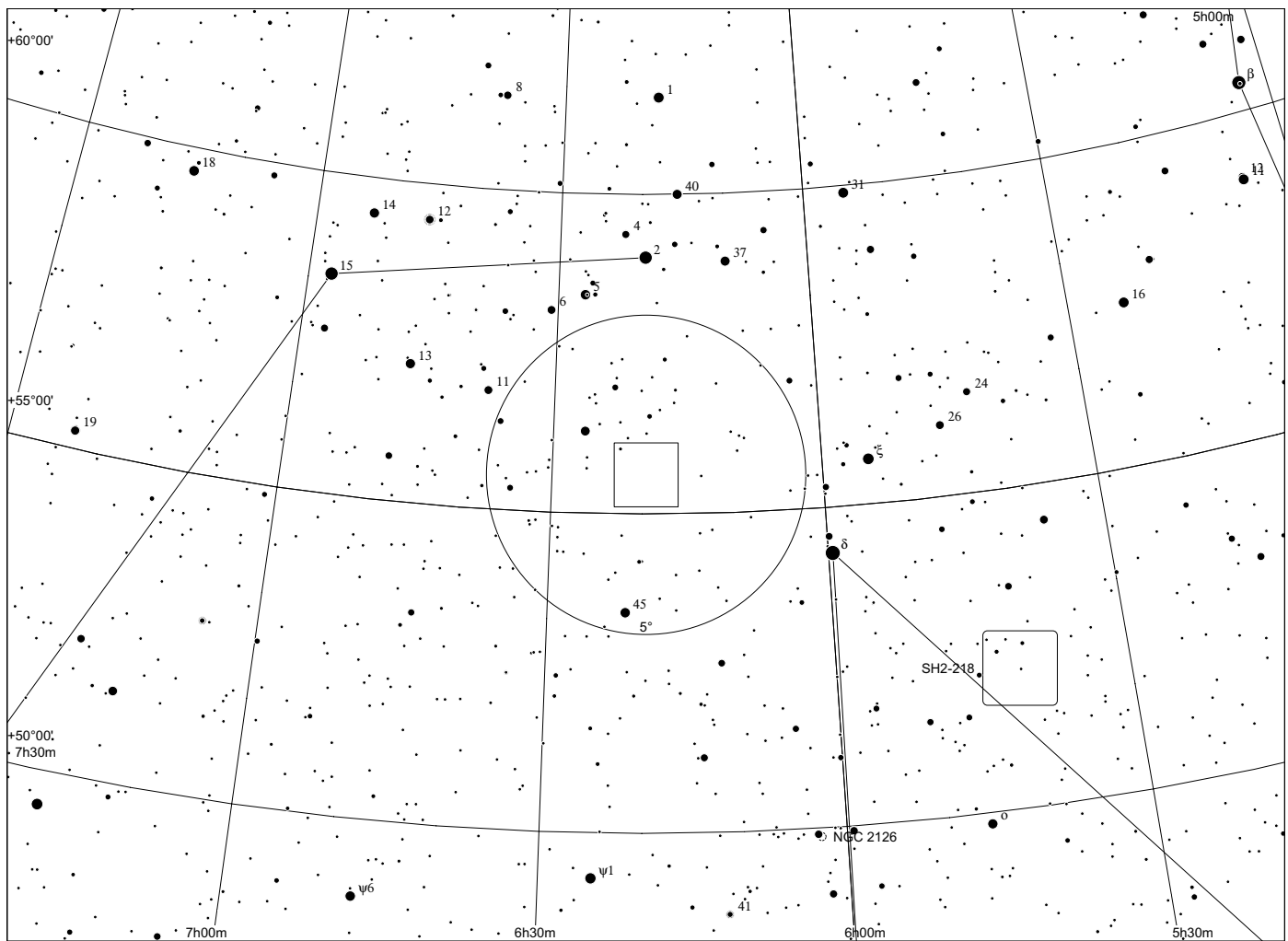


Purgathofer-Weinberger 1 in Lynx

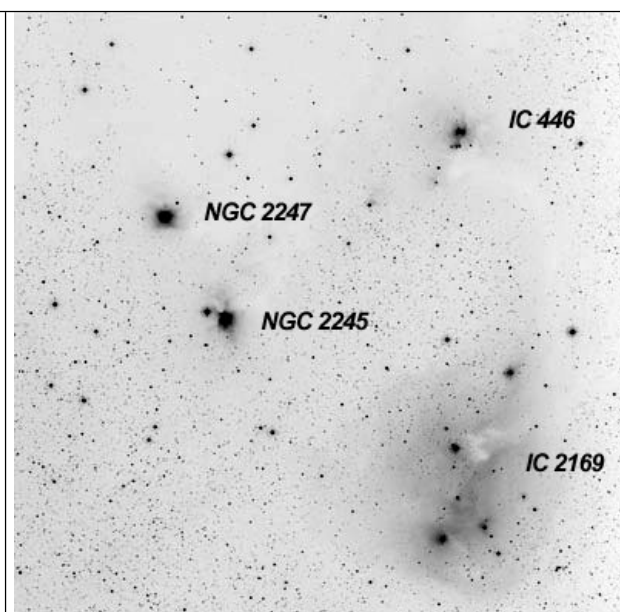
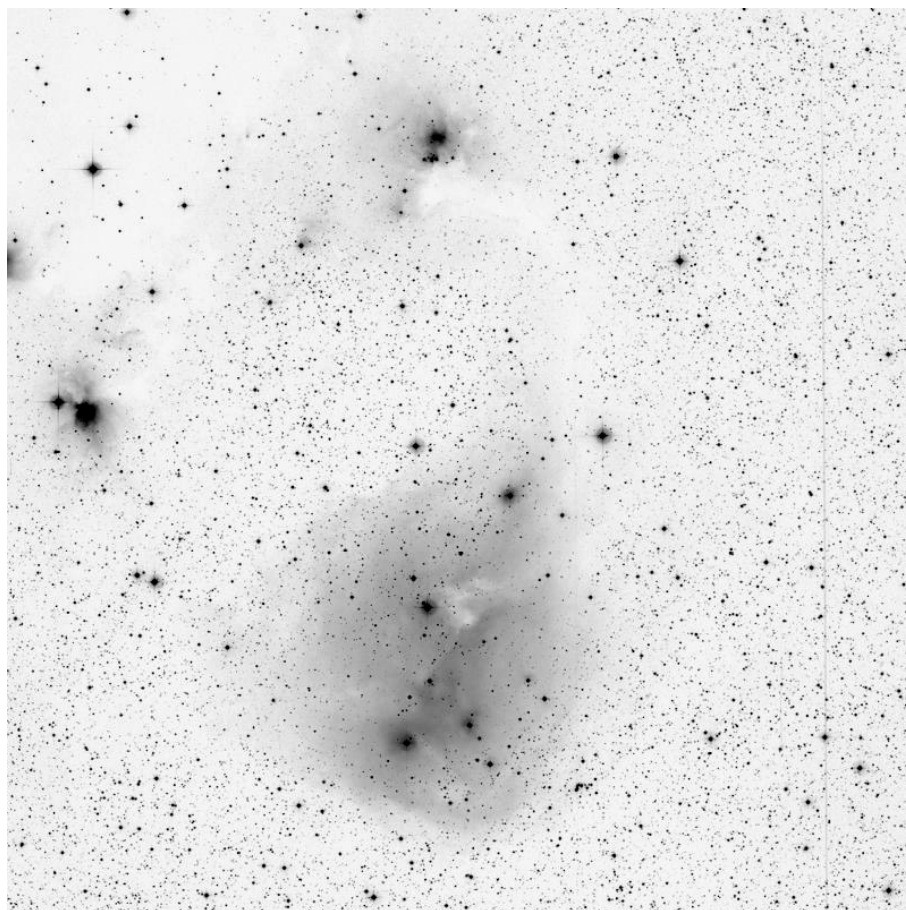


PuWe 1

06 19 34 +55 36 43

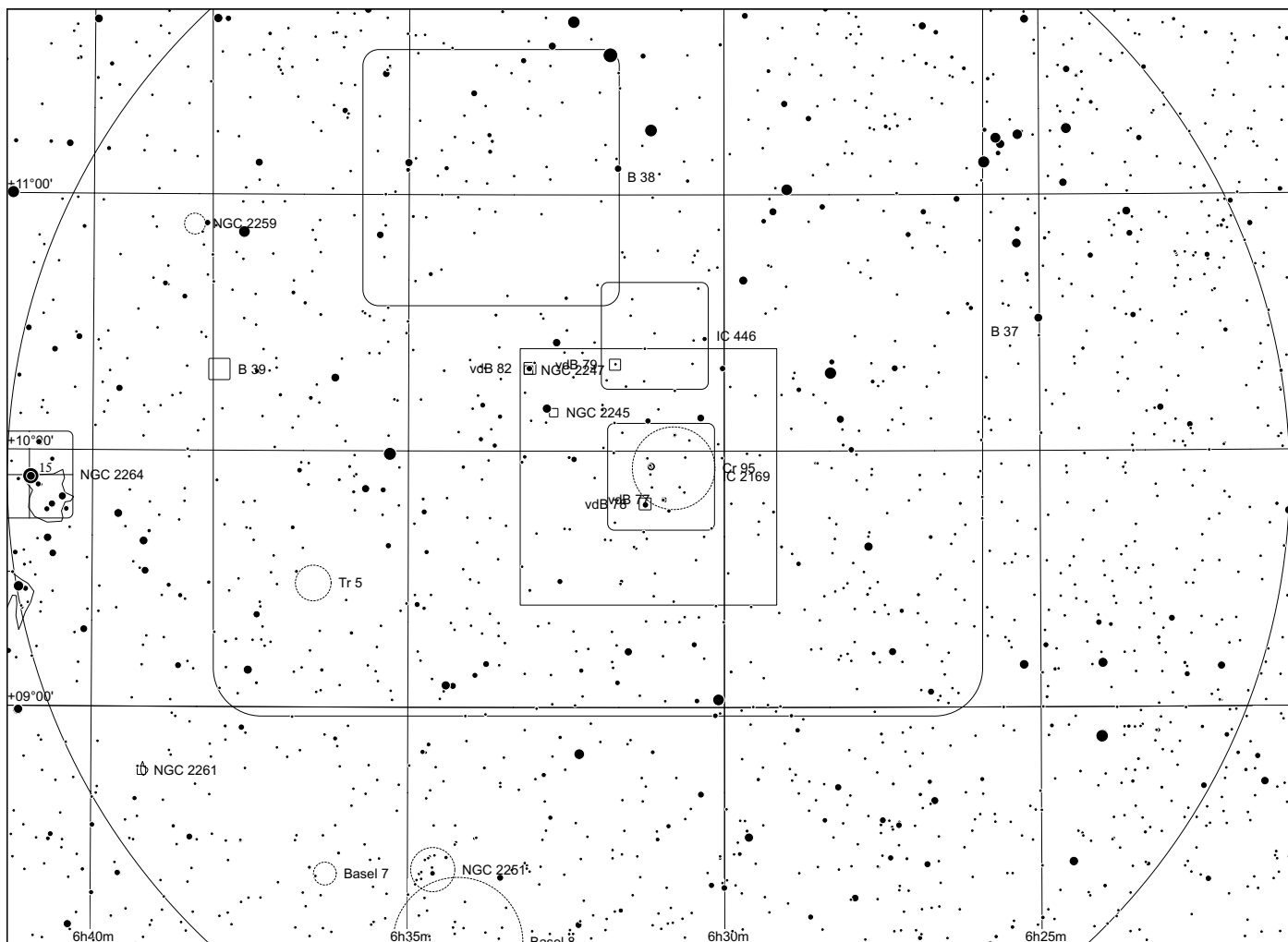
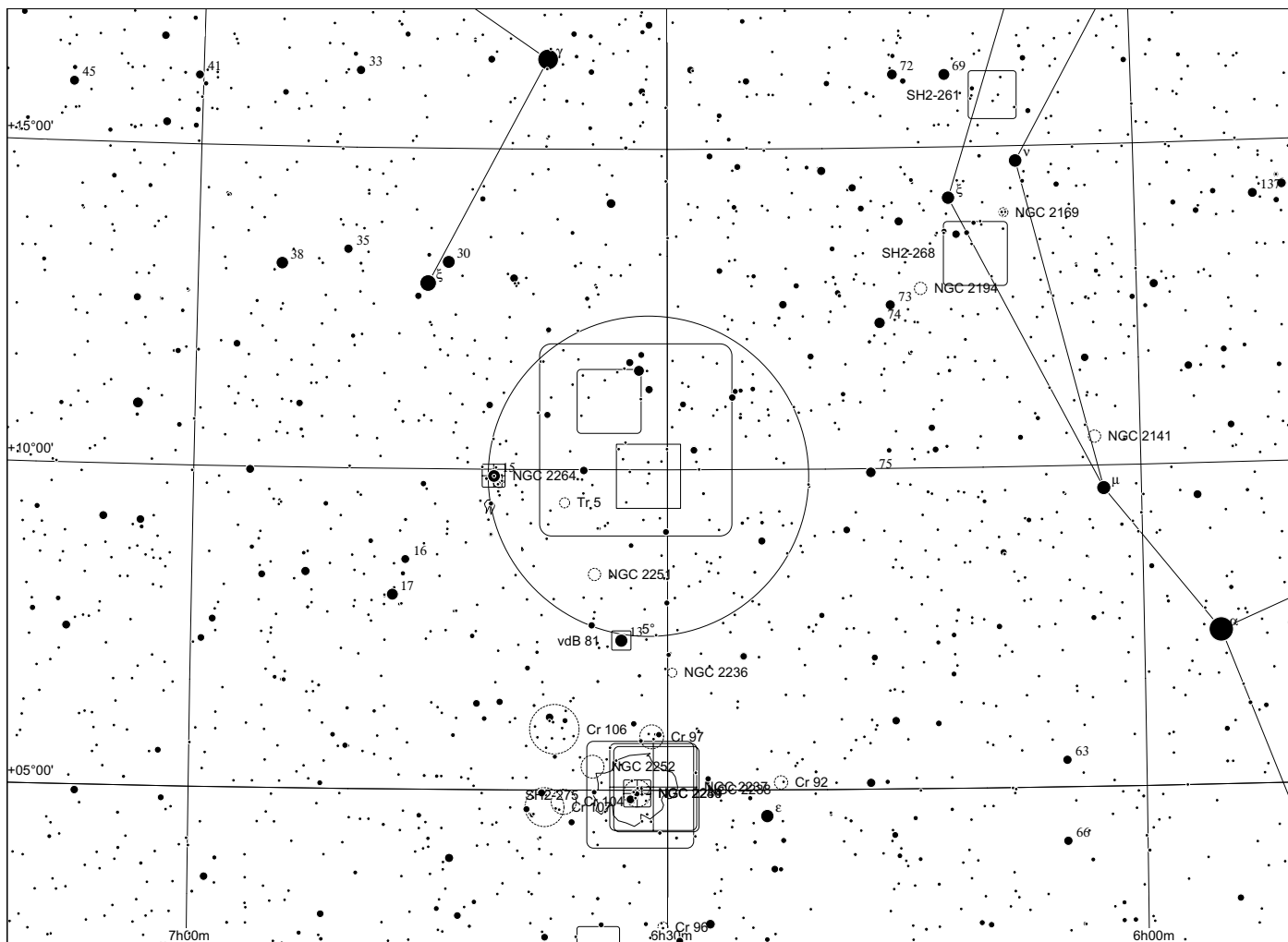


IC 2169 and friends in Monoceros

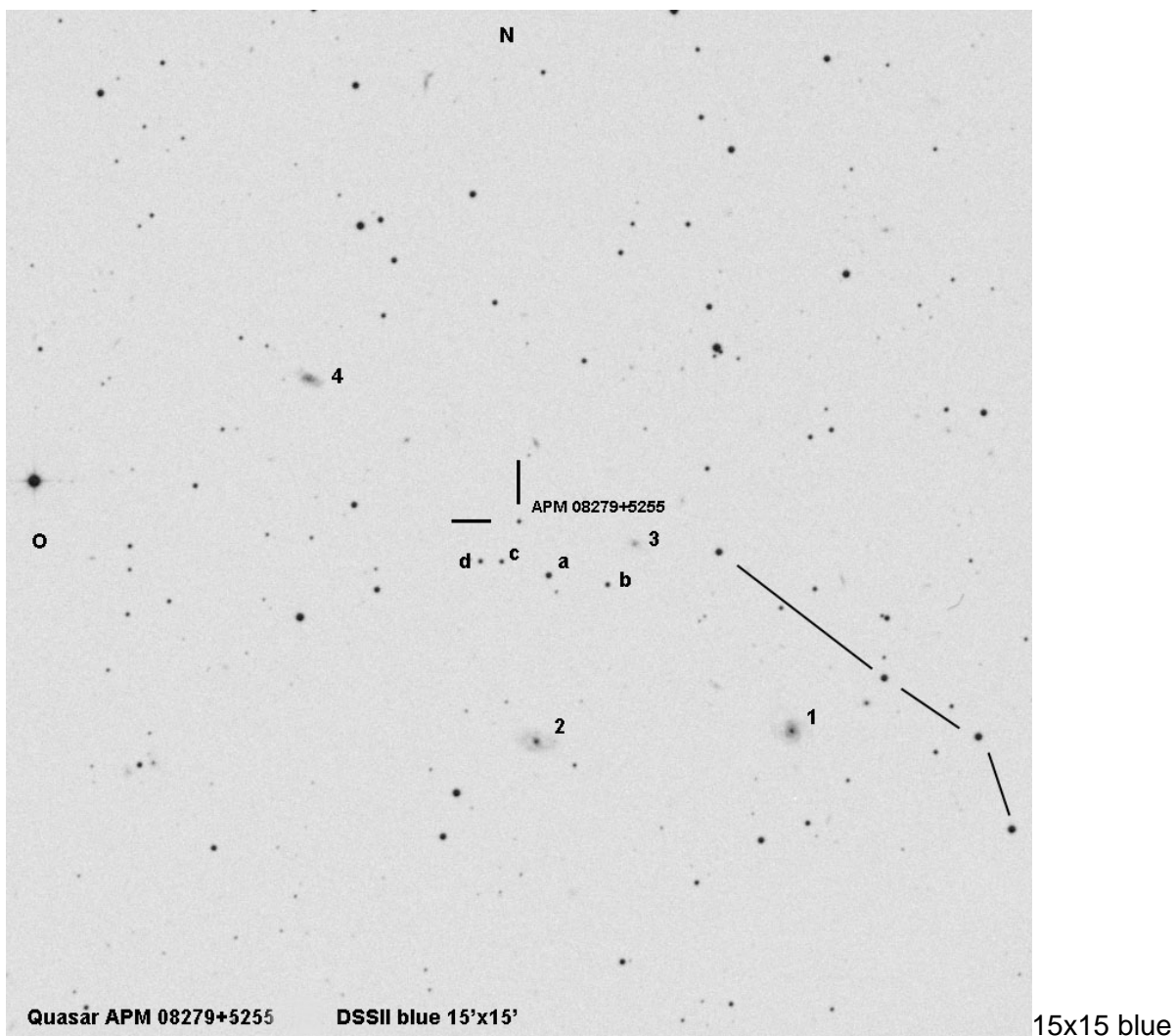


IC 2169

06 31 00 +10 05 00



APM 08279+5255 in Lynx



Stern a: 16,5 (Blau) und 15,3 (Rot)

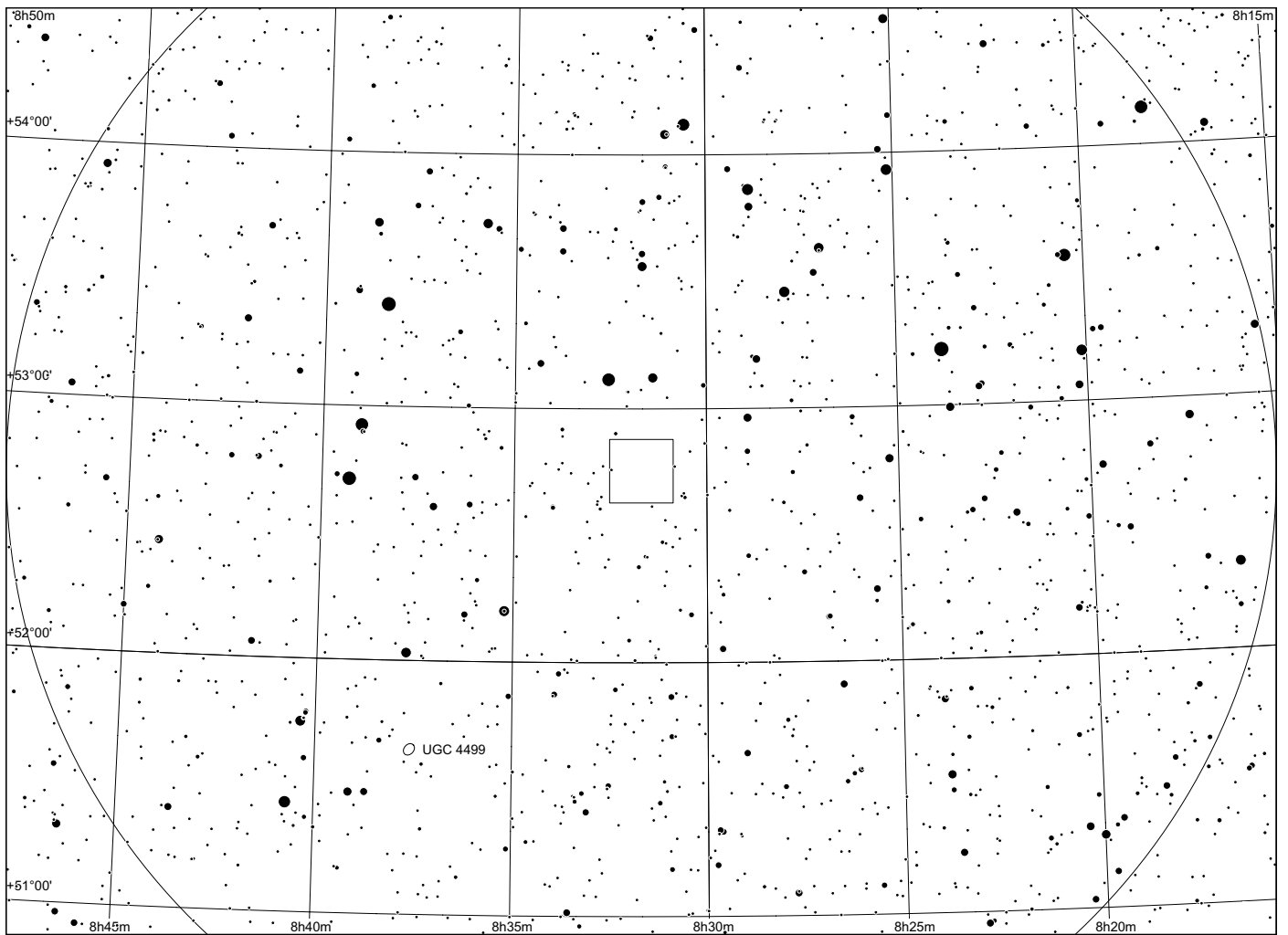
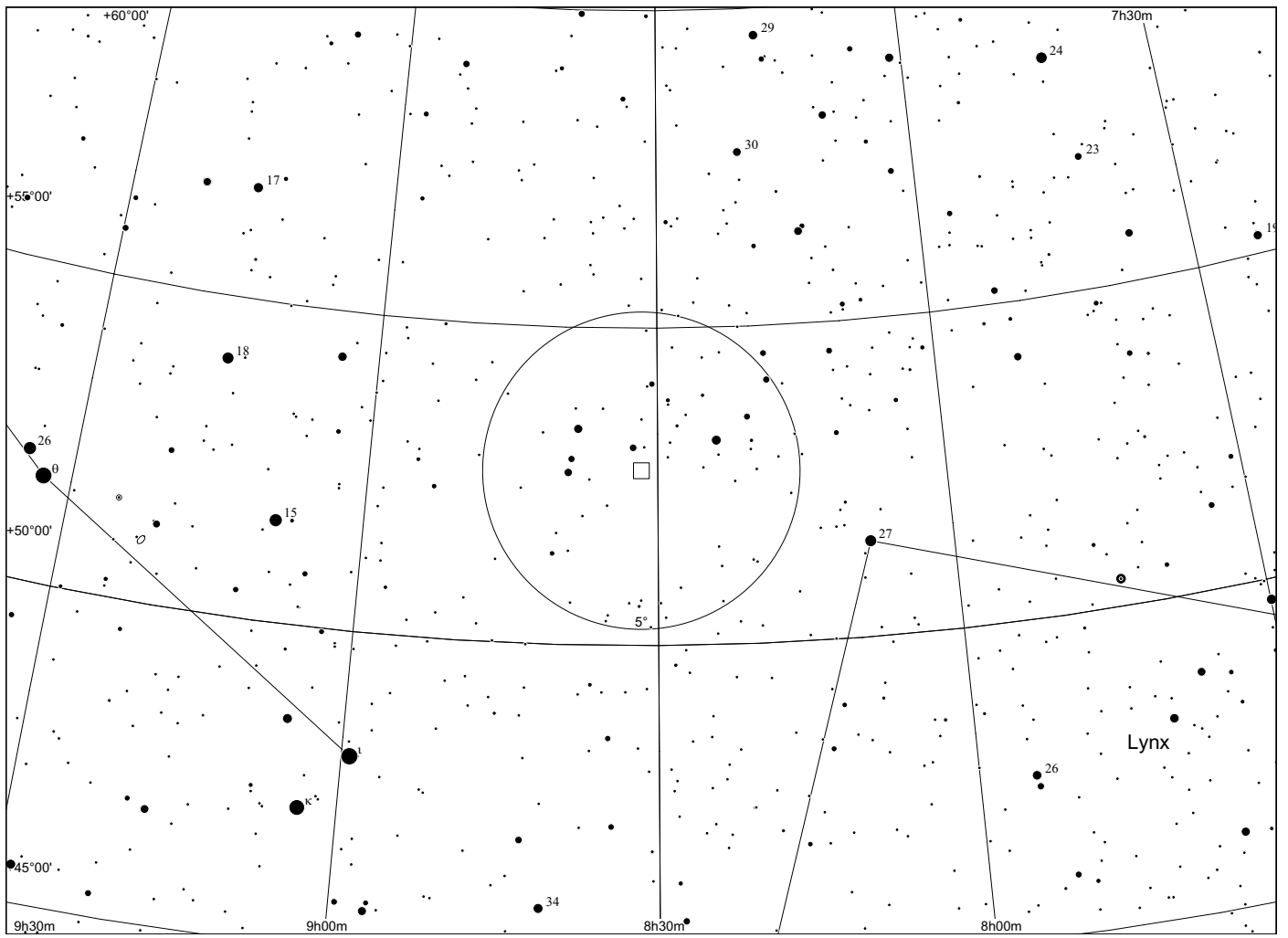
Stern b: 17,6 (B) und 16,1 (R)

Stern c: 18,3 (B) und 16,6 (R)

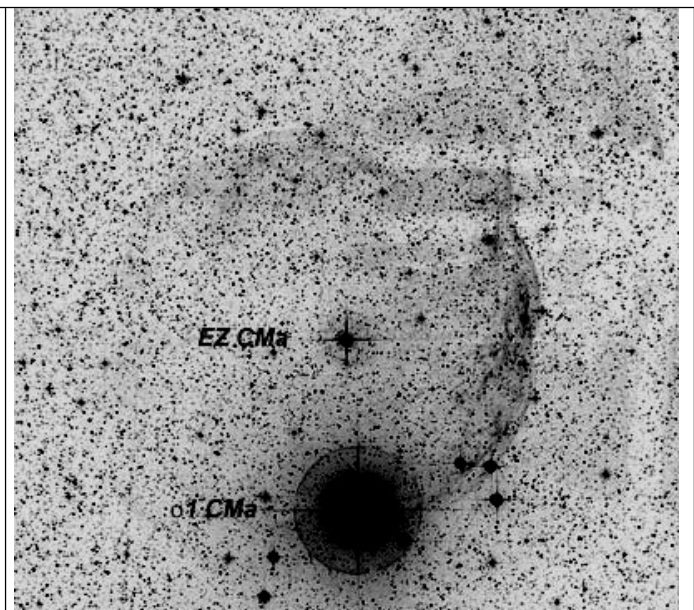
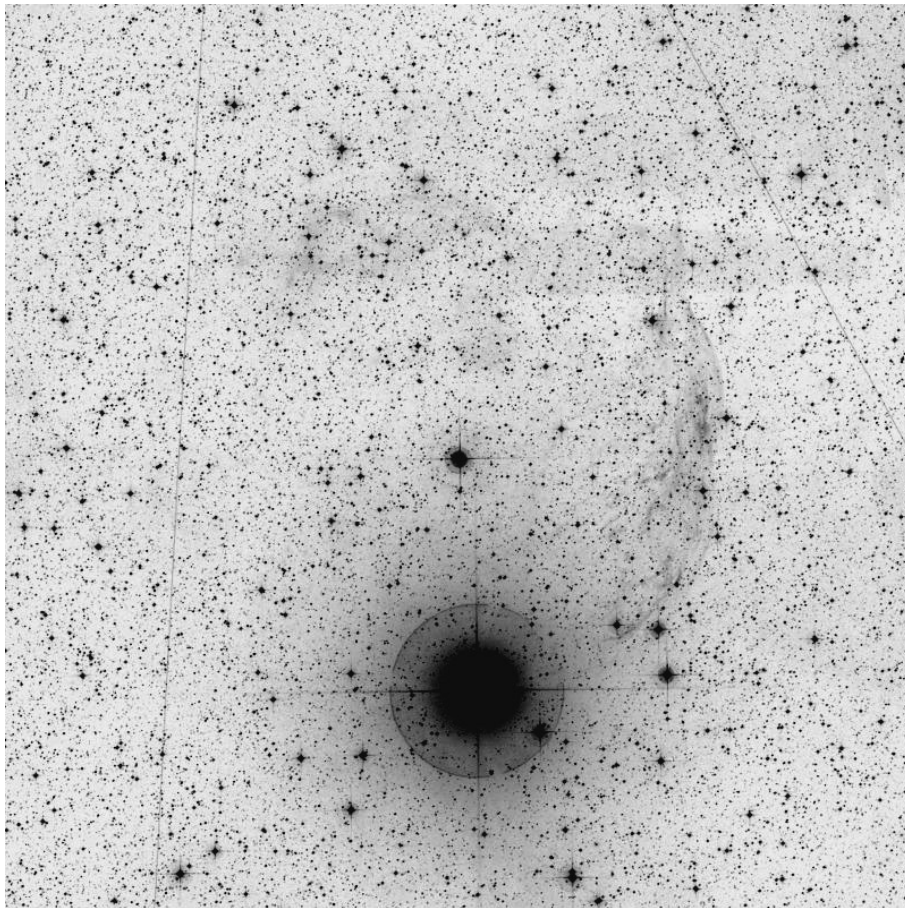
Stern d: 17,8 (B) und 17,1 (R)

| | other | RA | Dek | comments |
|--|-------|-------------|-------------|--------------------|
| | | 08 31 41.59 | +52 45 17.0 | z=3.911, 12 Mrd Ly |

Observing notes:

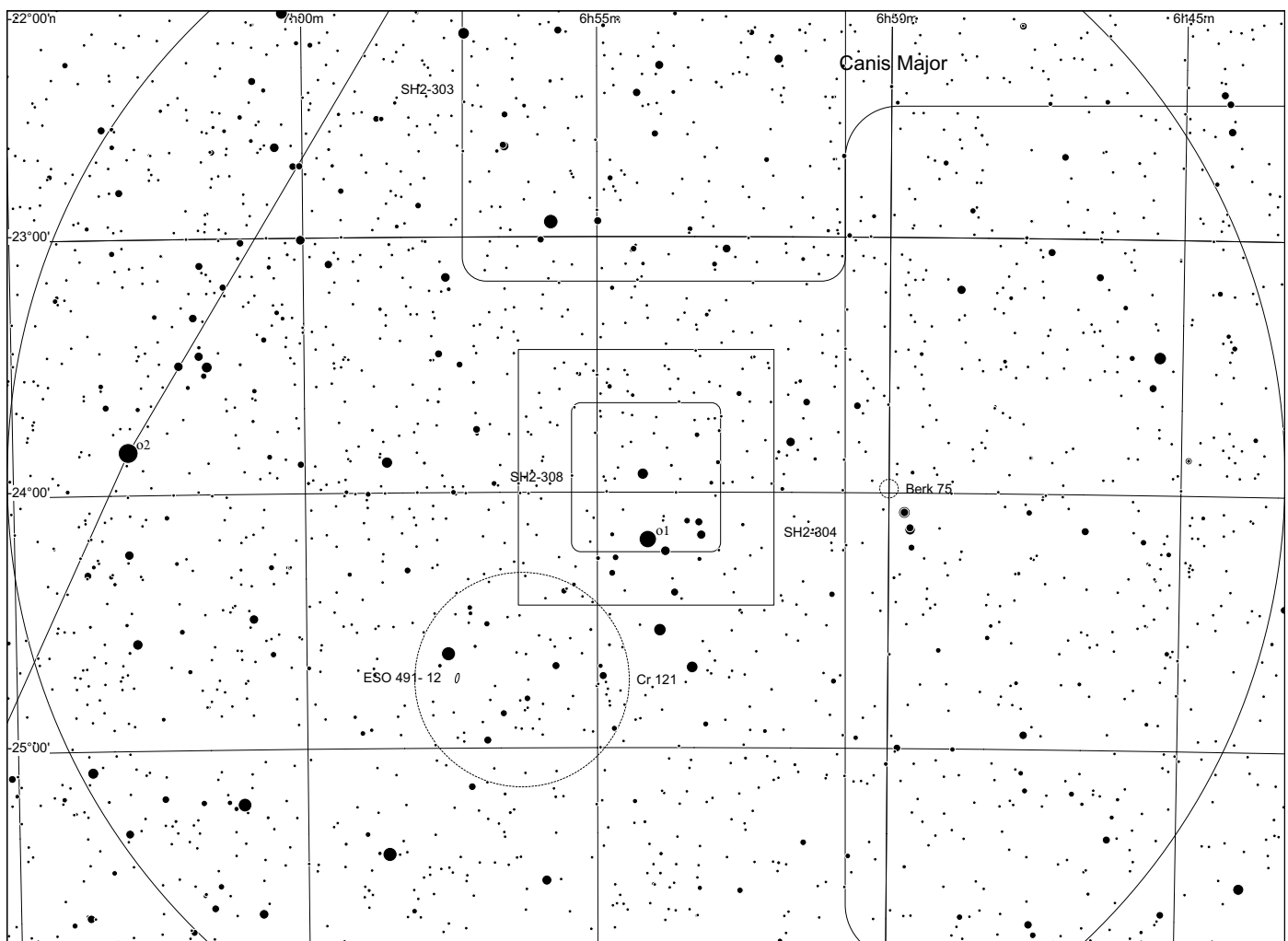
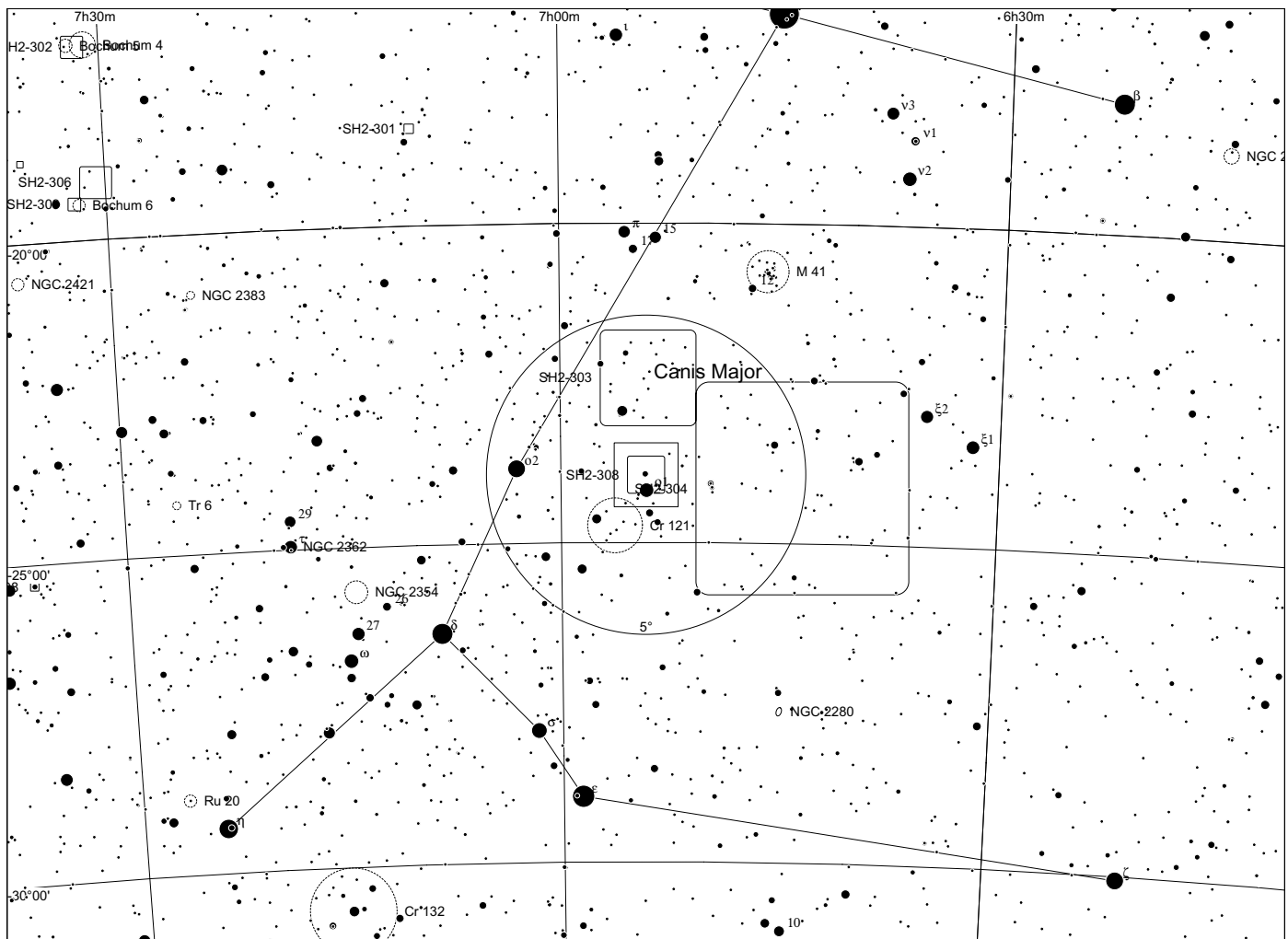


Sharpless 308 in Canis Major

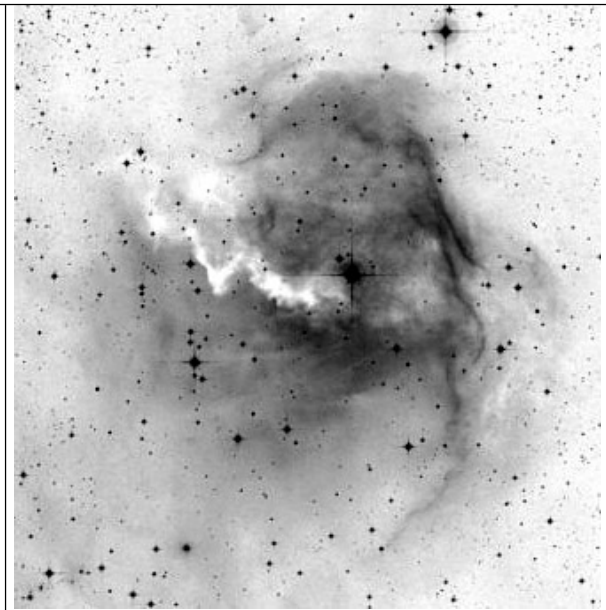
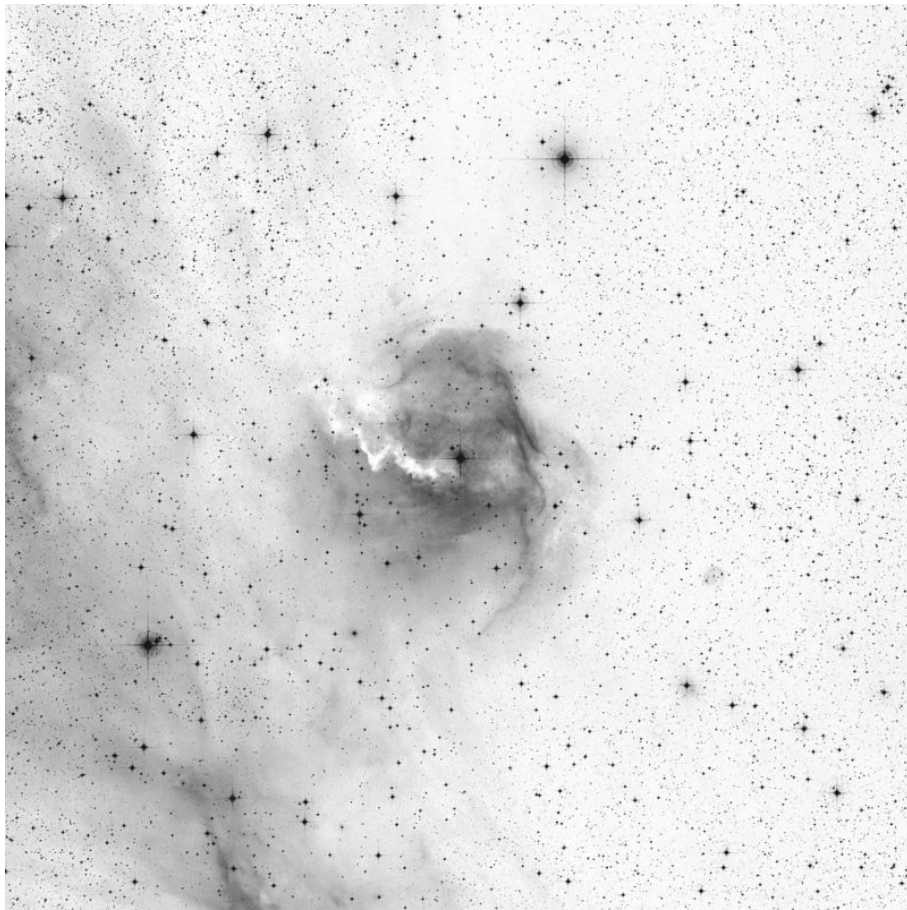


Sh2-308

06 54 00 -23 55 00

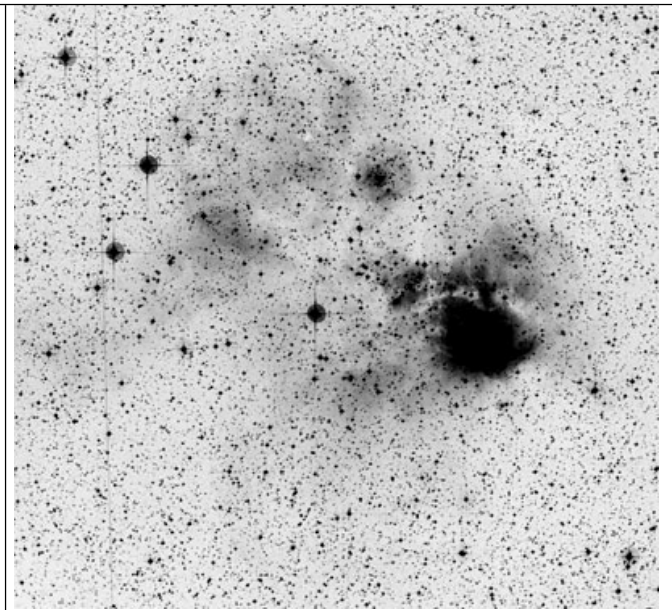
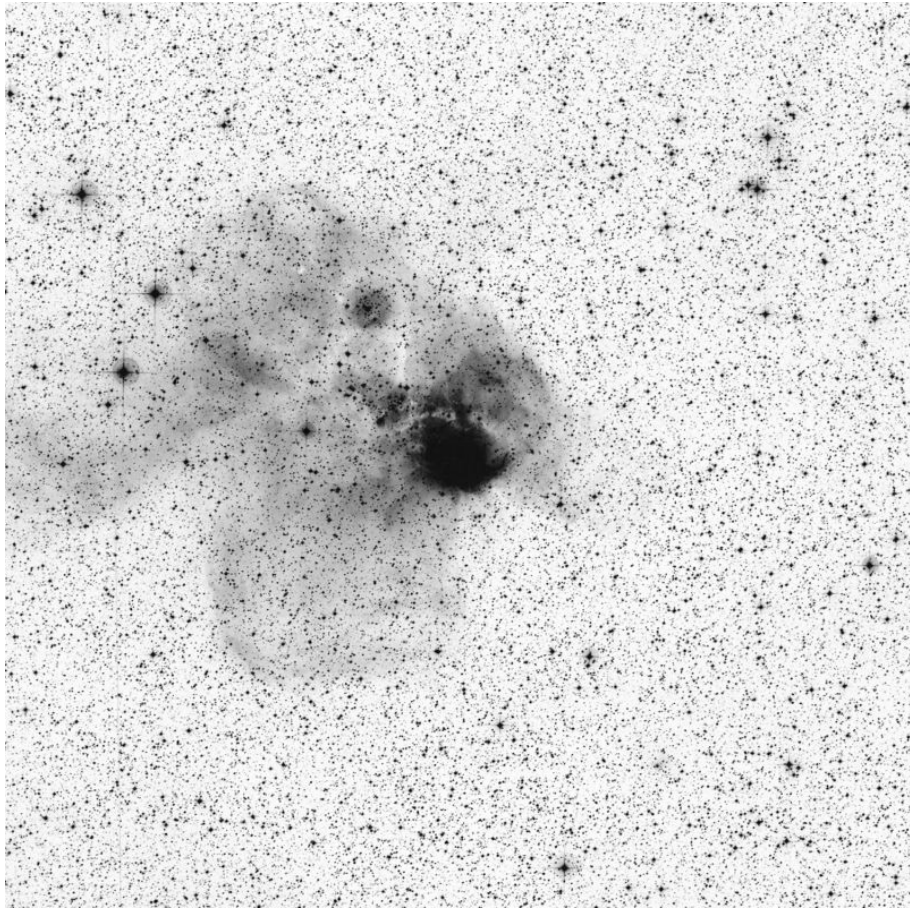


Gum 1 in Monoceros



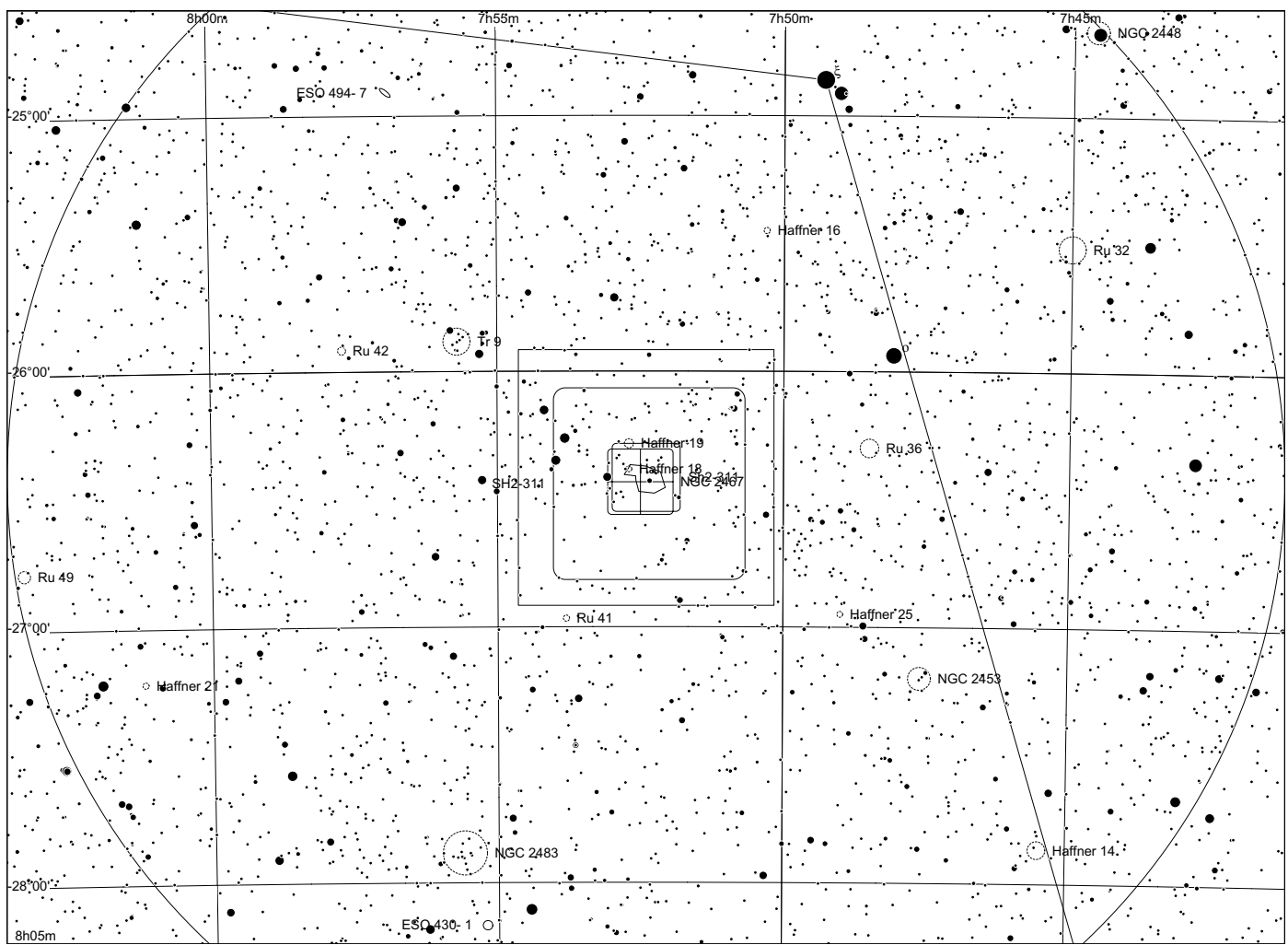
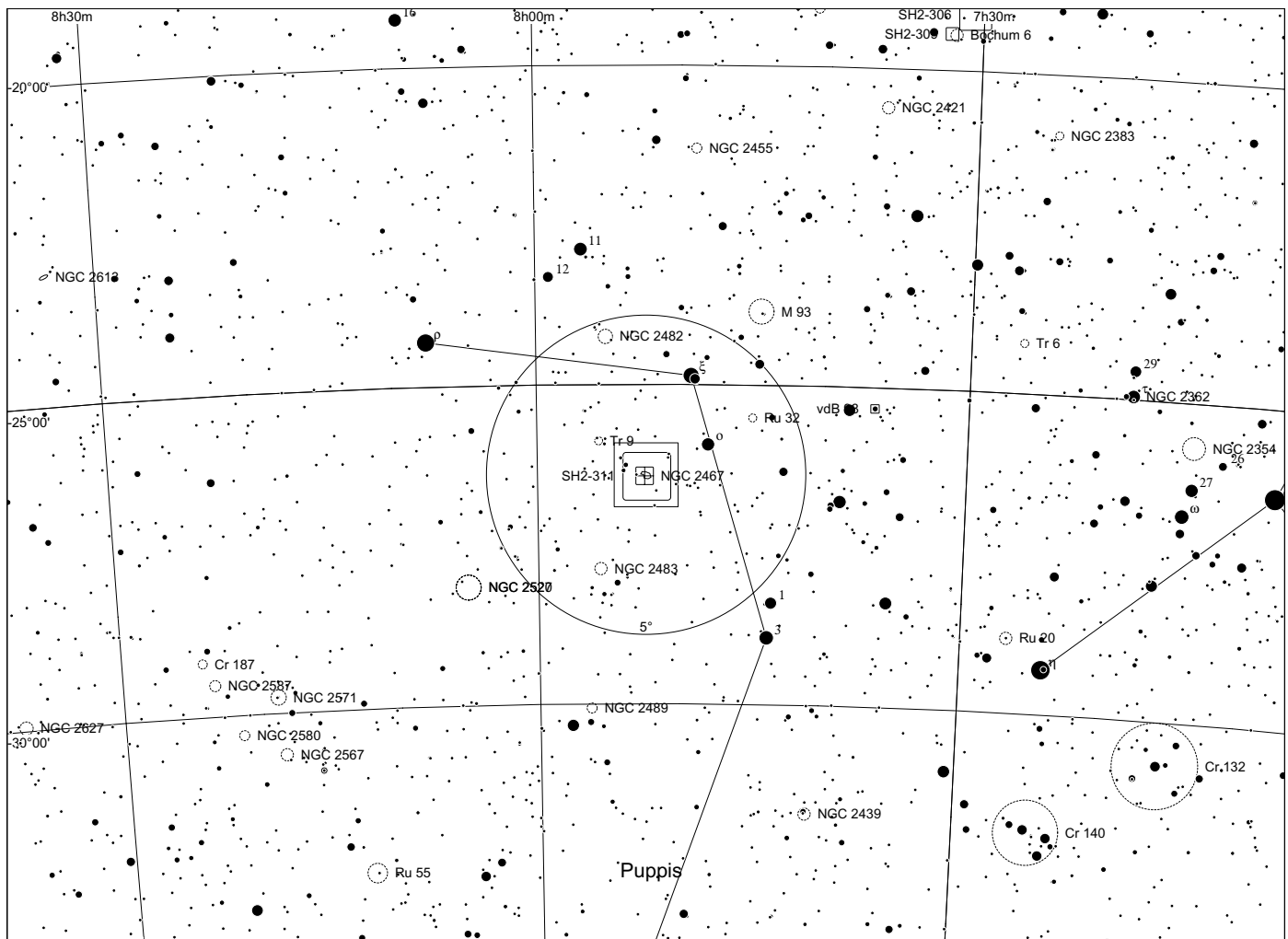
| | | |
|------------------------|--------------------|--|
| Gum 1, Sh2-292, vdB 93 | 07 04 25 -10 27 16 | |
|------------------------|--------------------|--|

Sharpless 311 in Puppis

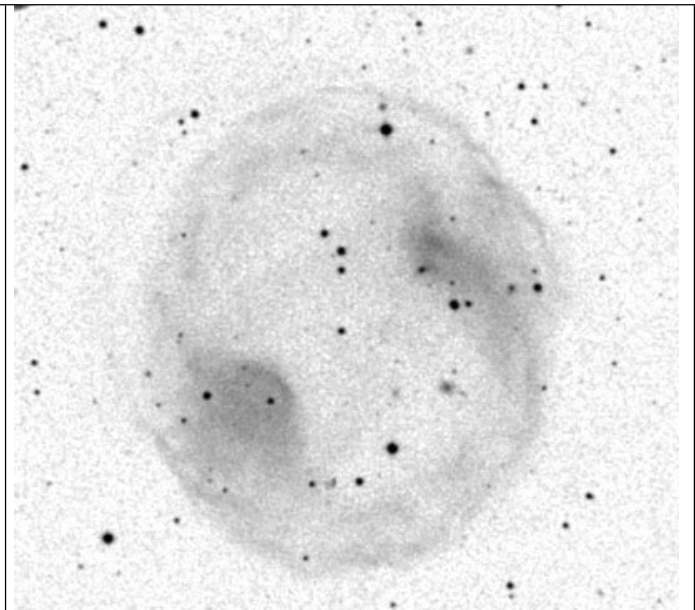
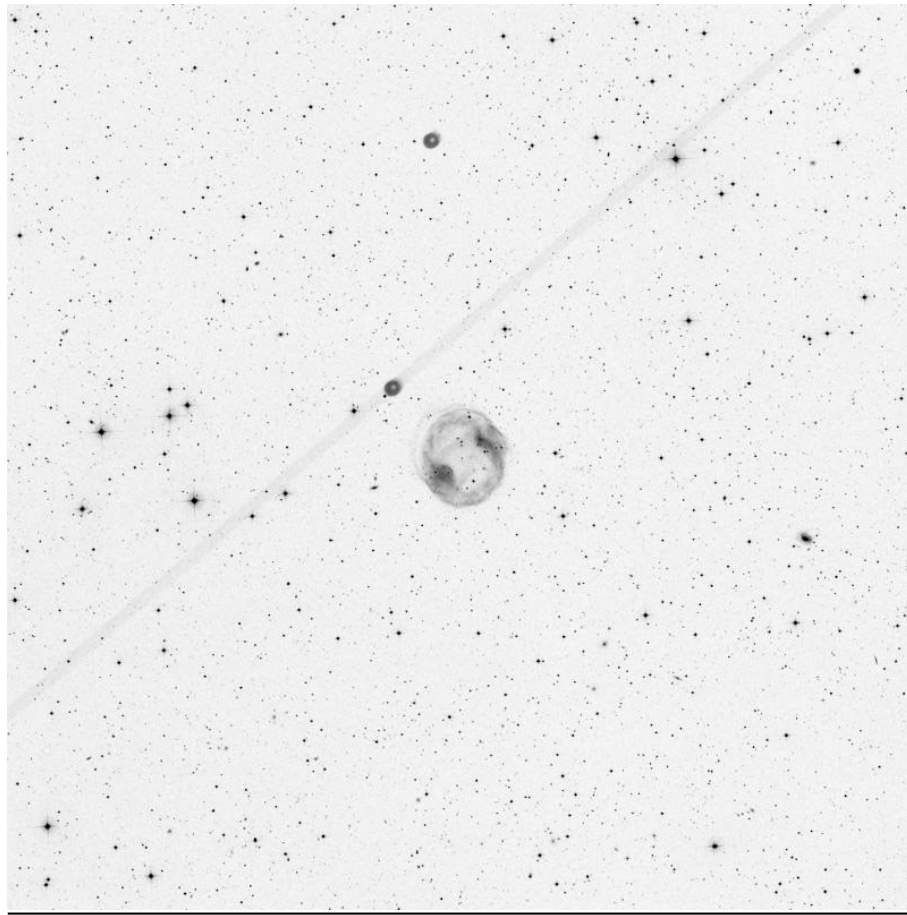


Sh2-311, NGC 2467

07 52 19 -26 26 30

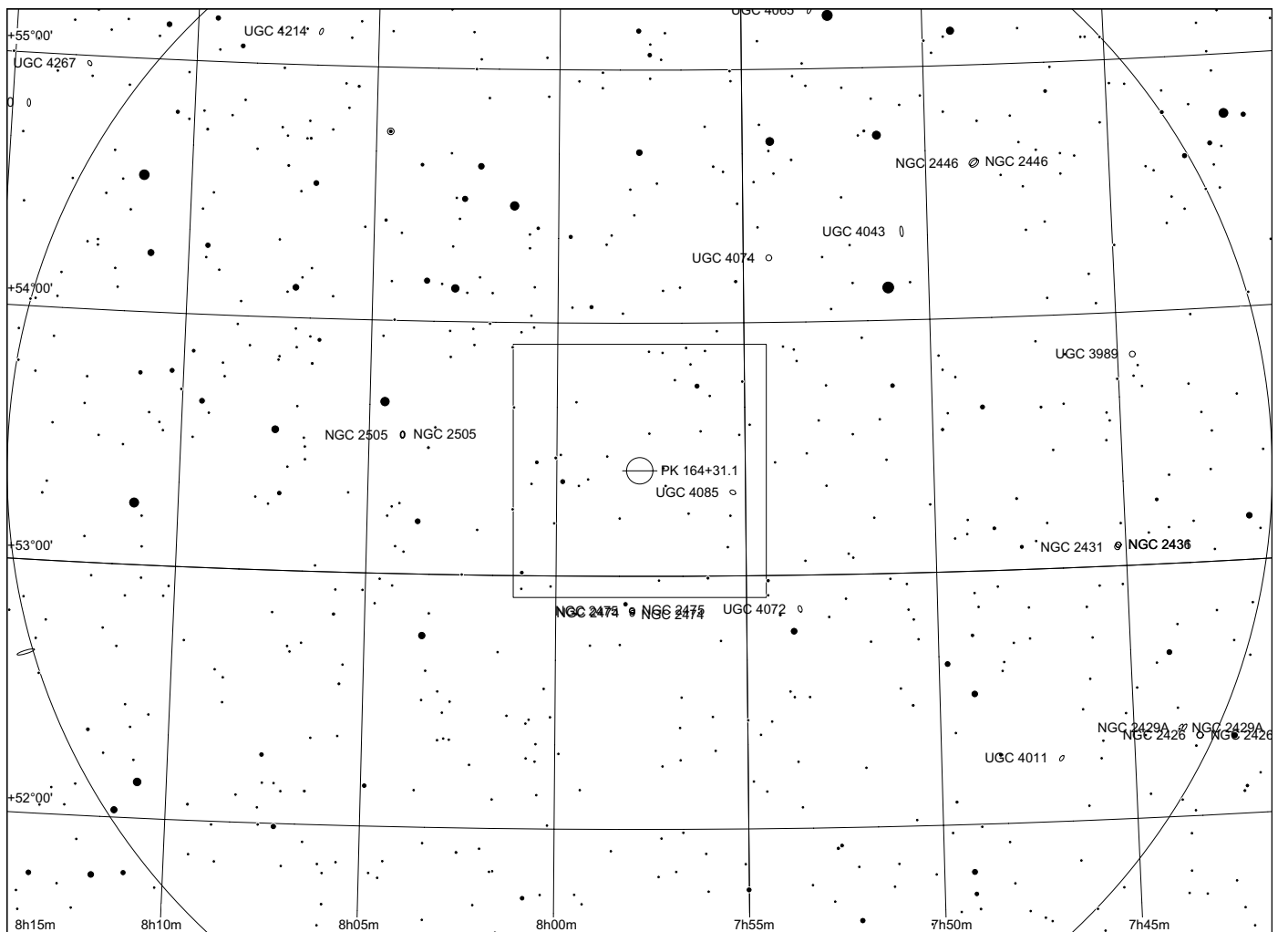
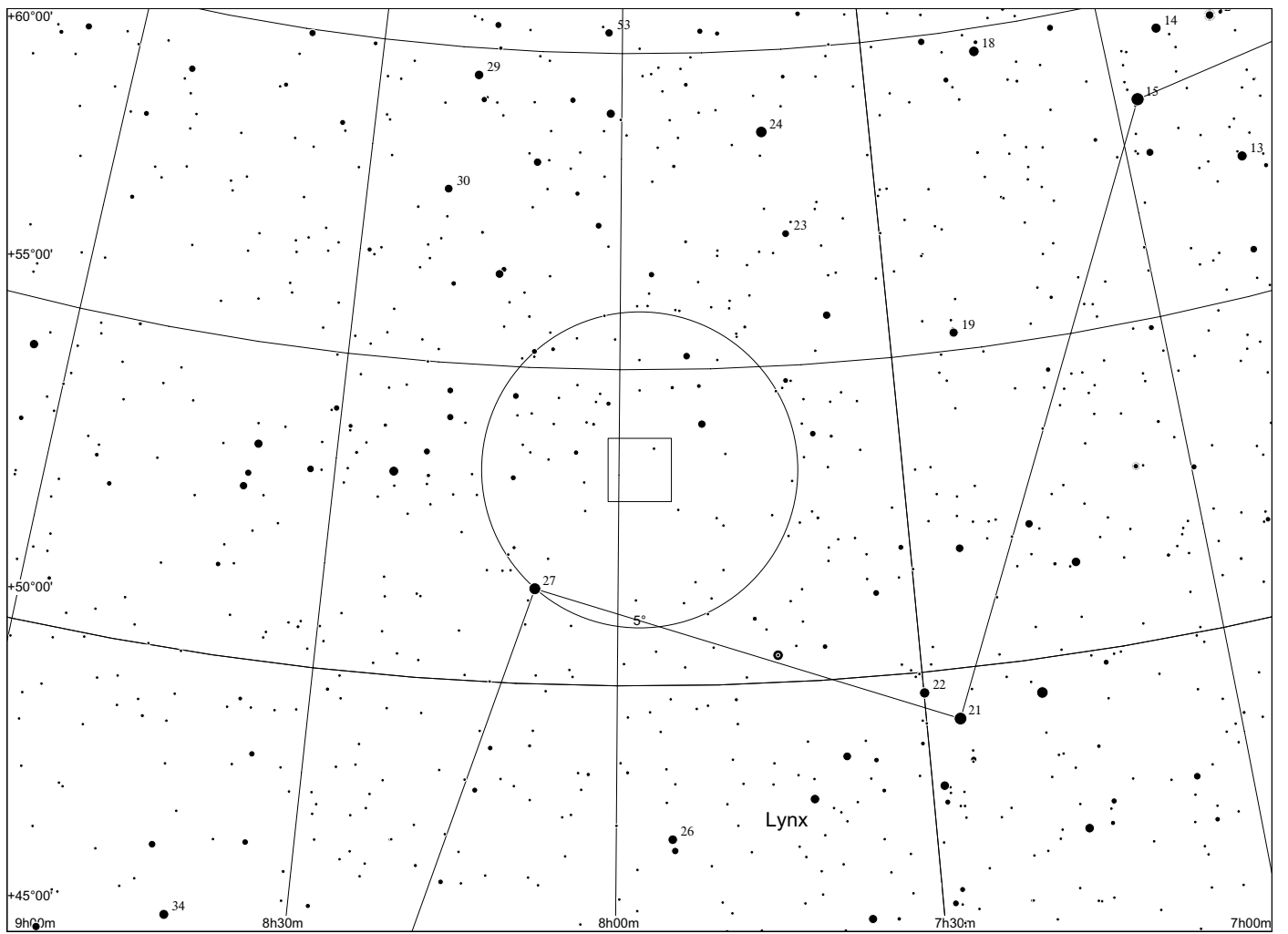


Jones-Emberson 1 in Lynx

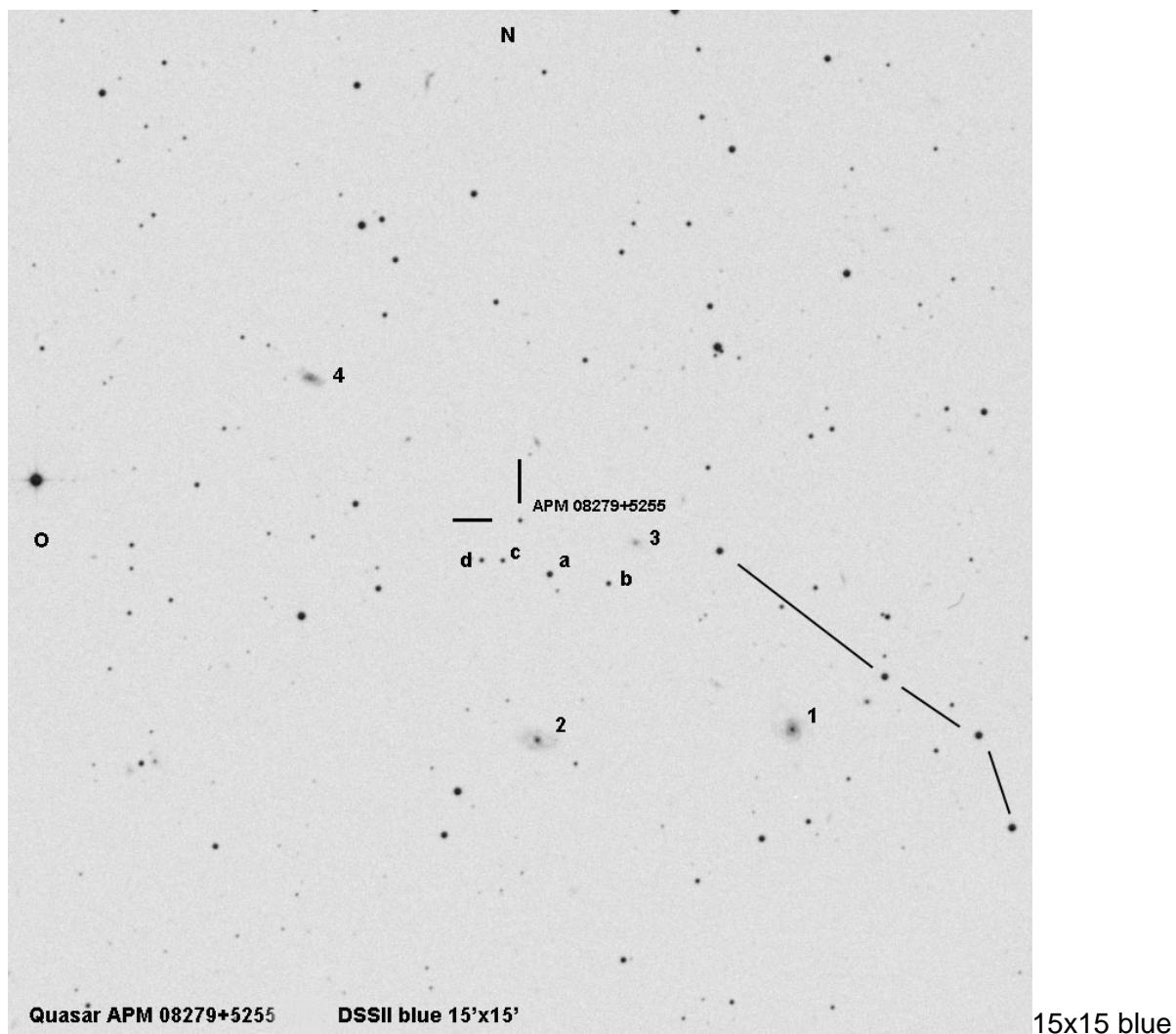


PK164+31.1

07 57 52 +53 25 17



APM 08279+5255 in Lynx



Stern a: 16,5 (Blau) und 15,3 (Rot)

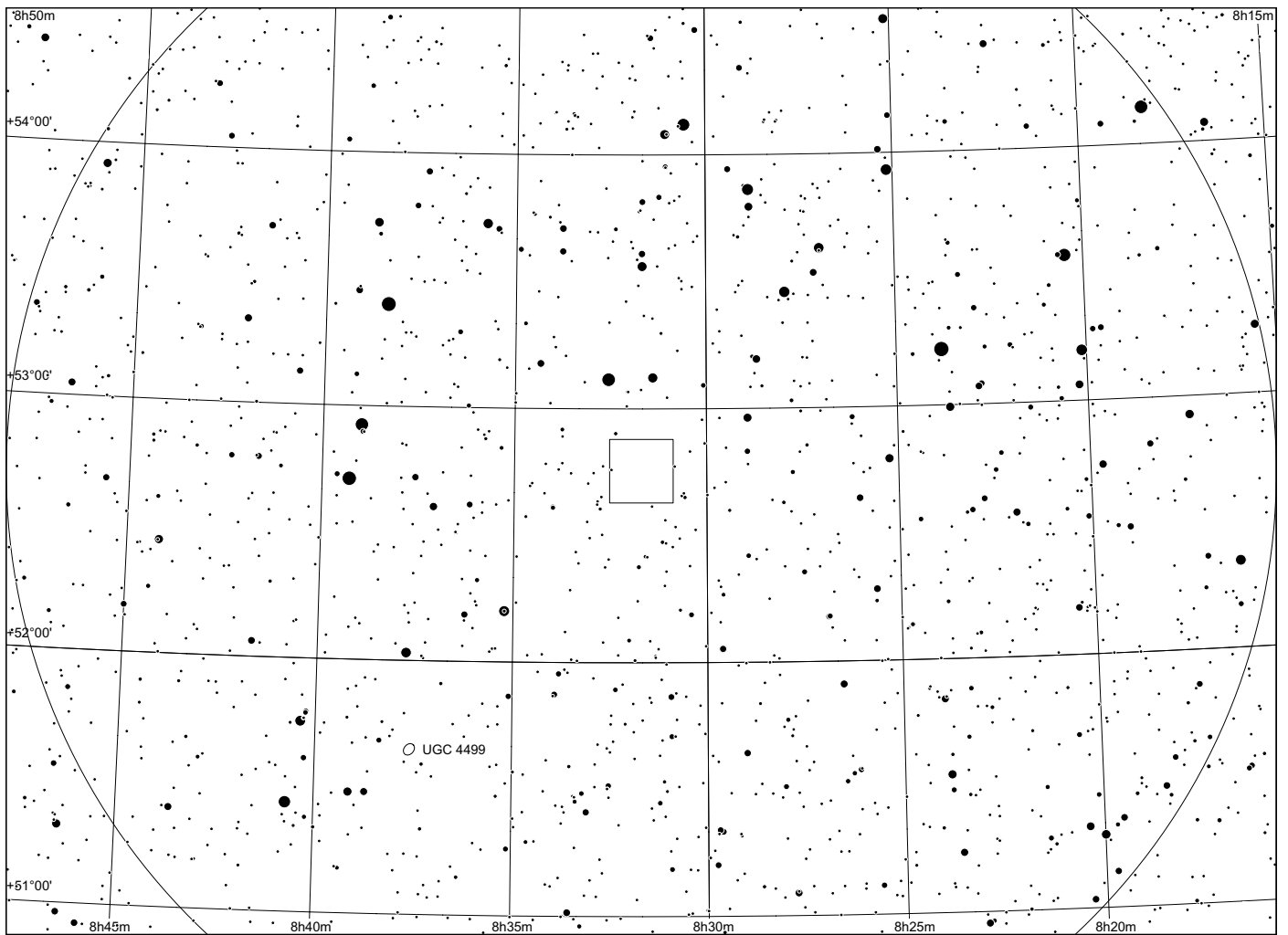
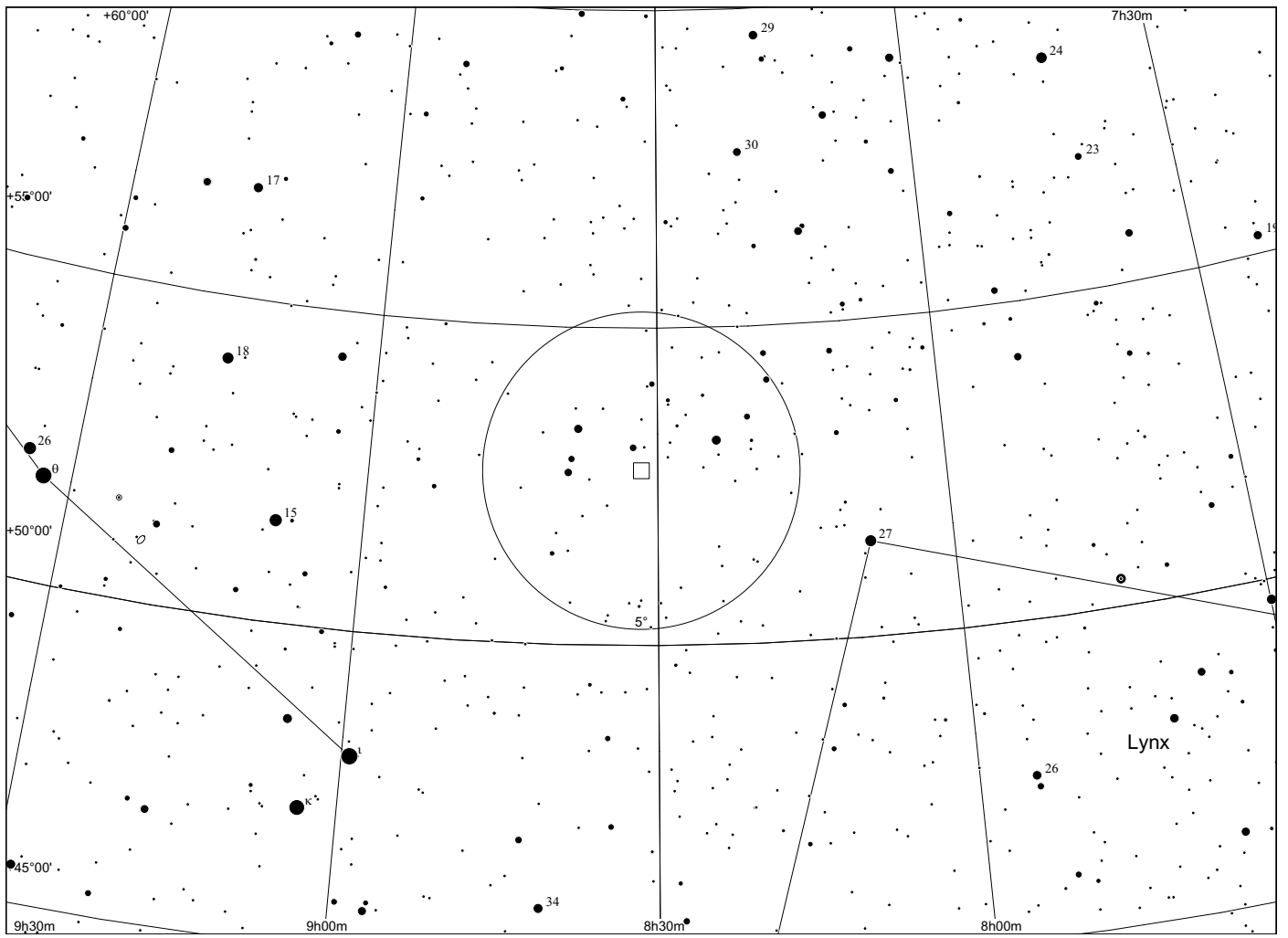
Stern b: 17,6 (B) und 16,1 (R)

Stern c: 18,3 (B) und 16,6 (R)

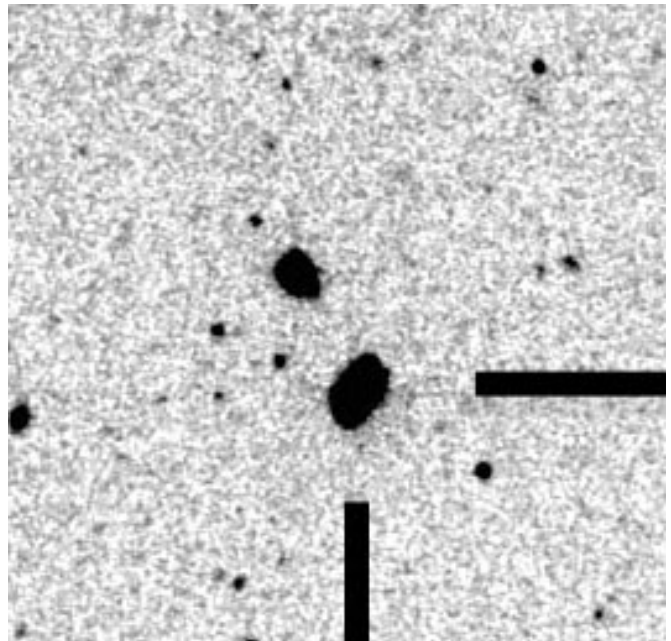
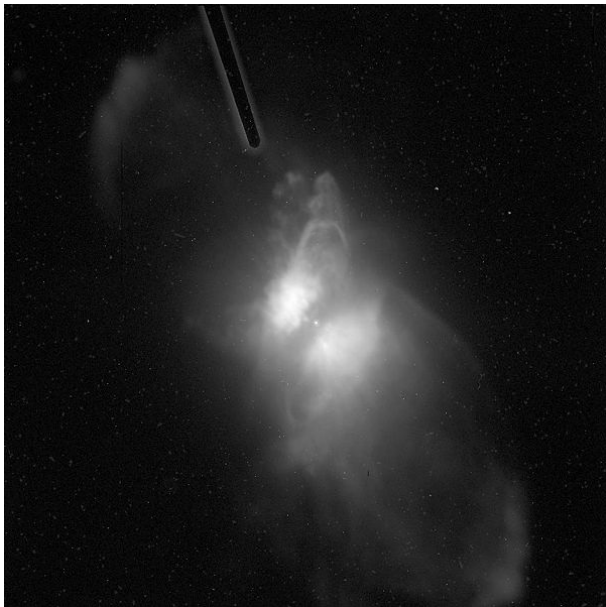
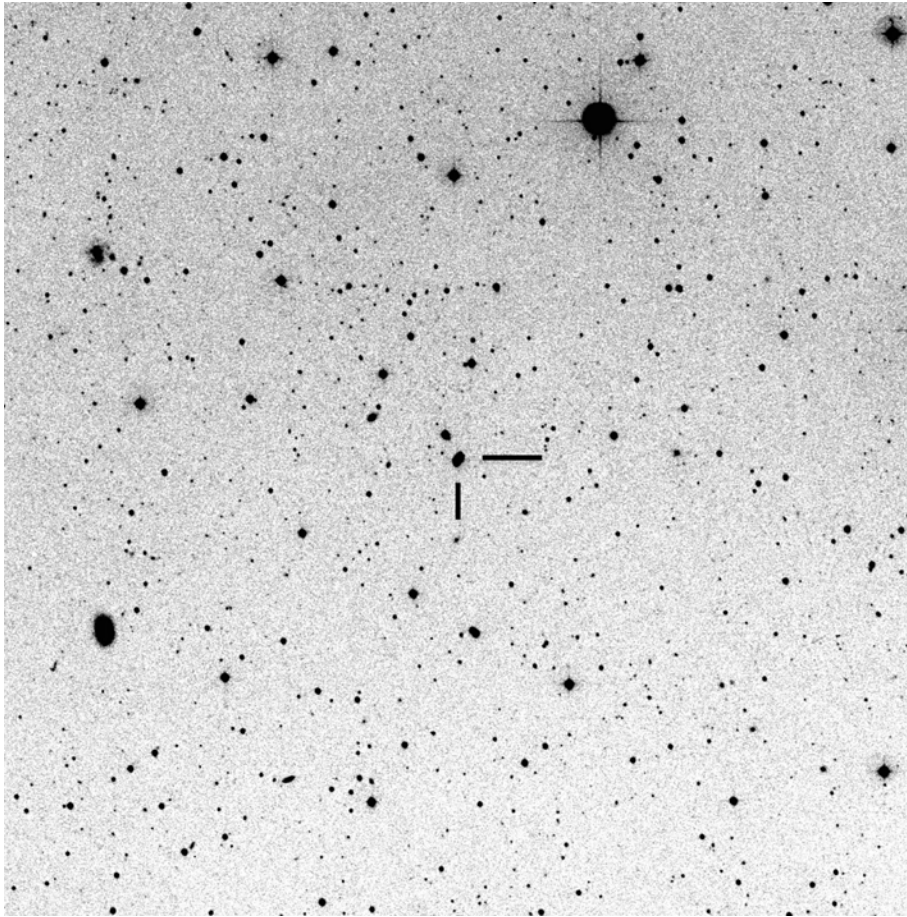
Stern d: 17,8 (B) und 17,1 (R)

| | other | RA | Dek | comments |
|--|-------|-------------|-------------|--------------------|
| | | 08 31 41.59 | +52 45 17.0 | z=3.911, 12 Mrd Ly |

Observing notes:

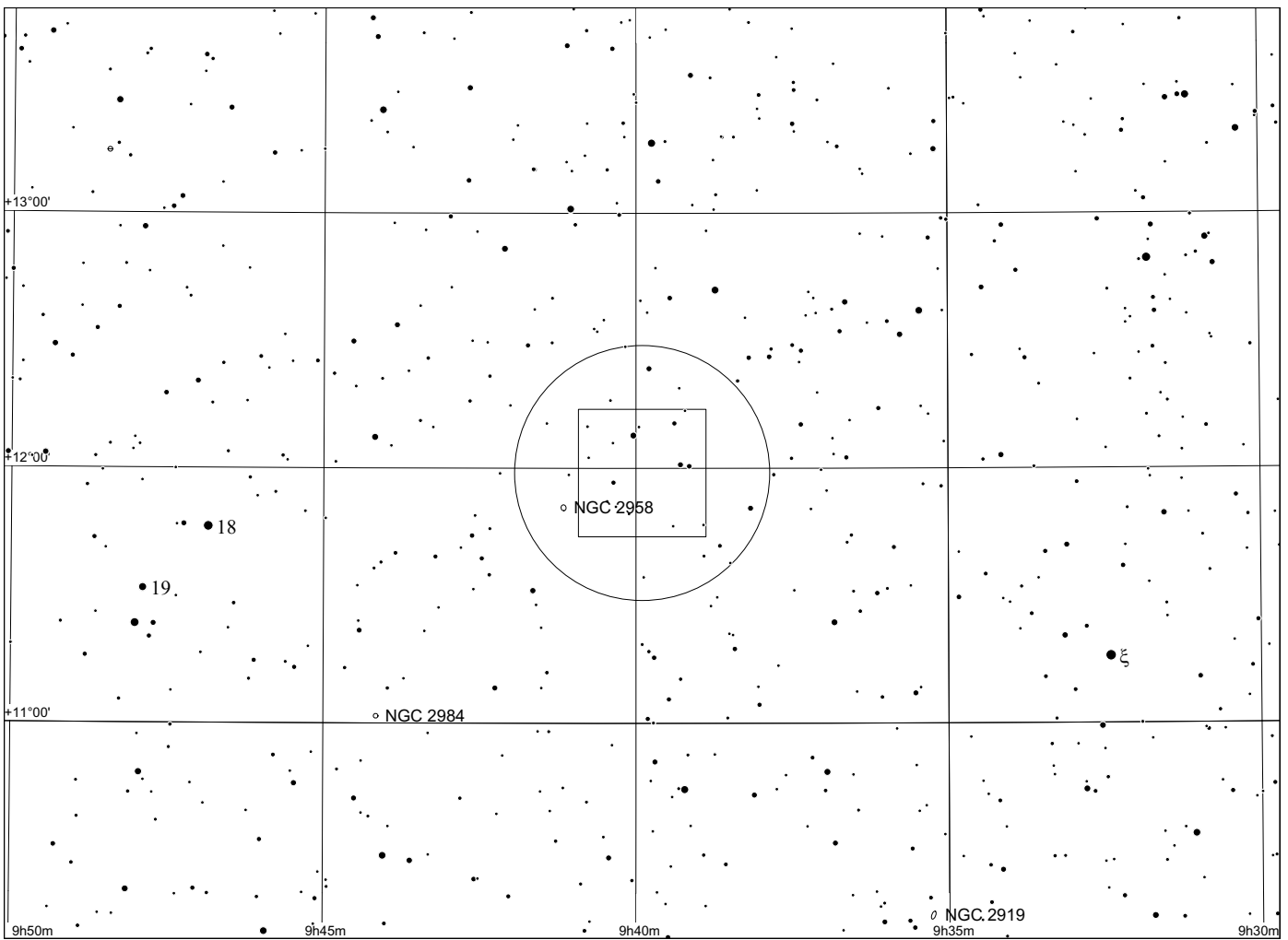
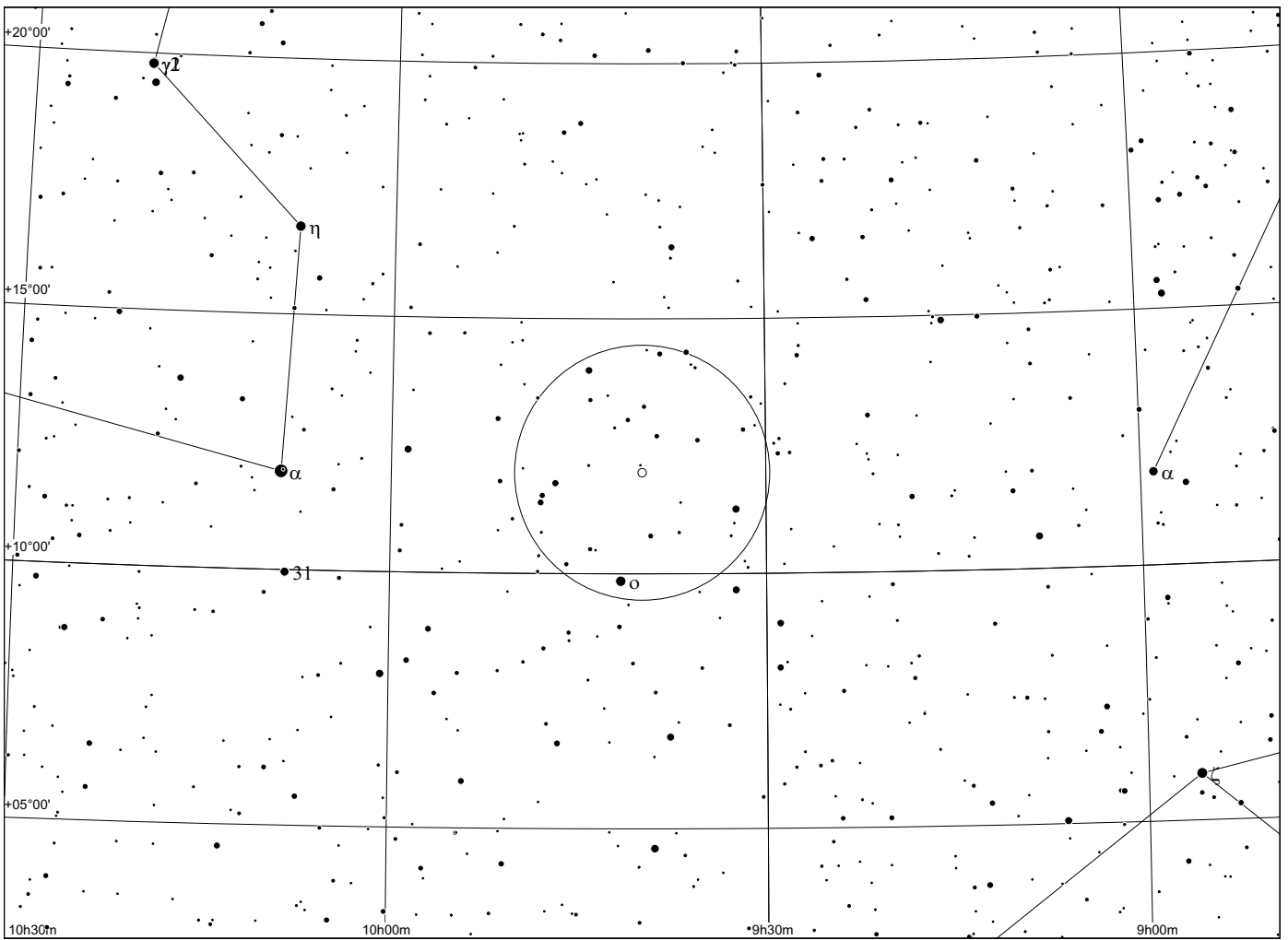


Frosty Leo in Leo

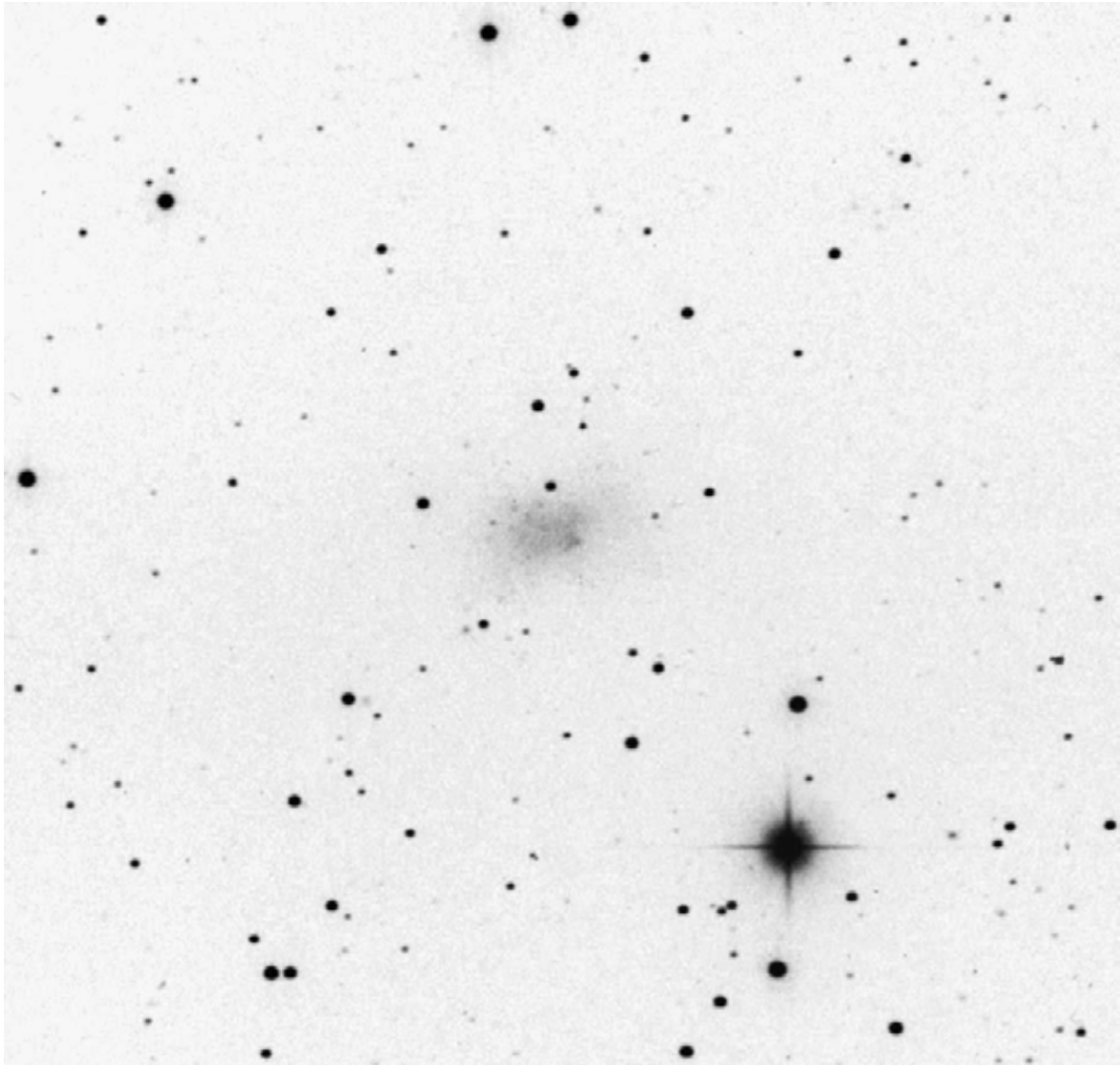


| | | RA | Dek | other names |
|------------------------|------------|---------------|--------------|-------------|
| IRAS 09371+1212 | Frosty Leo | 09h 39m 53.6s | +11° 58' 54" | |

Observing notes:

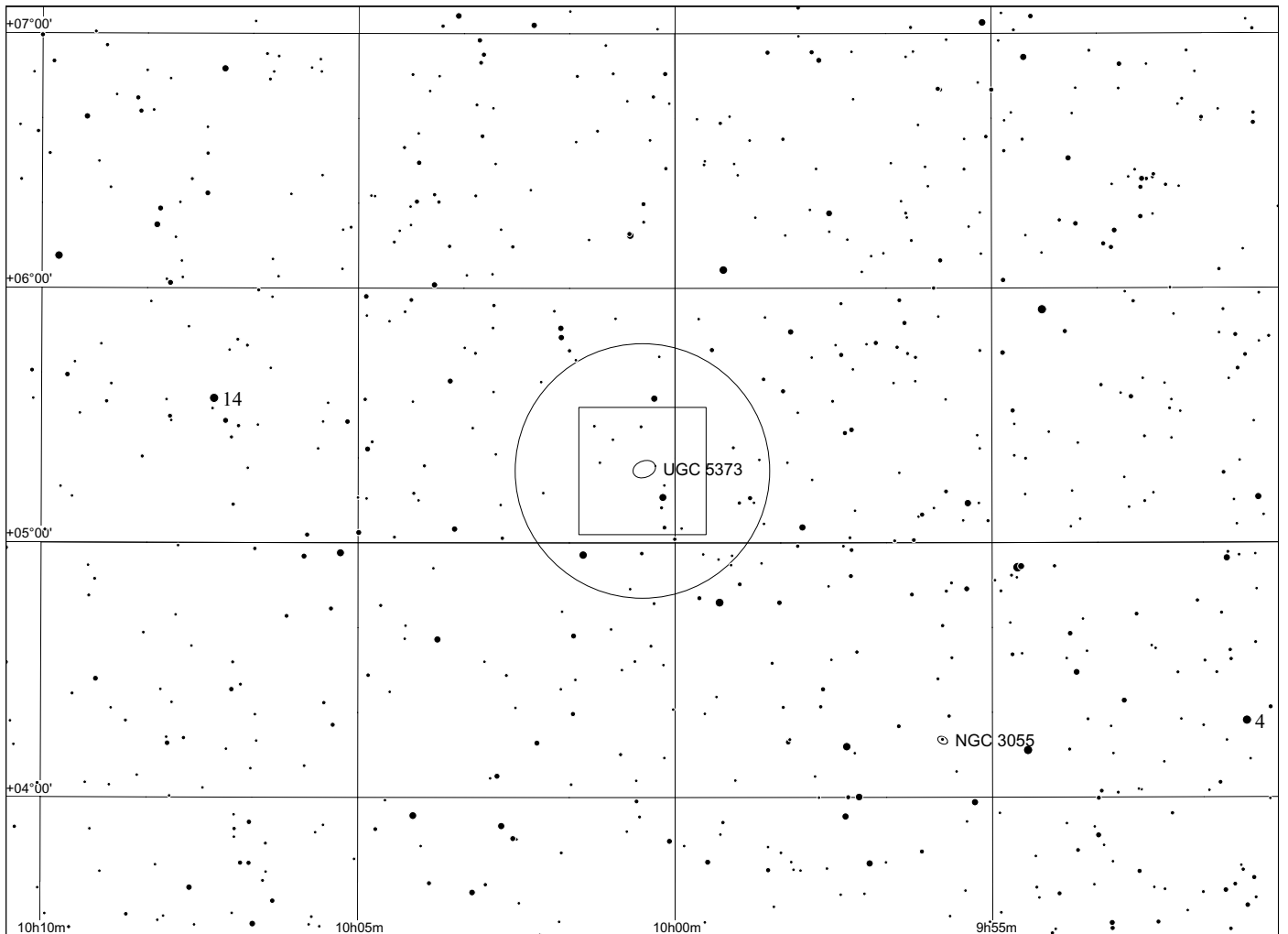
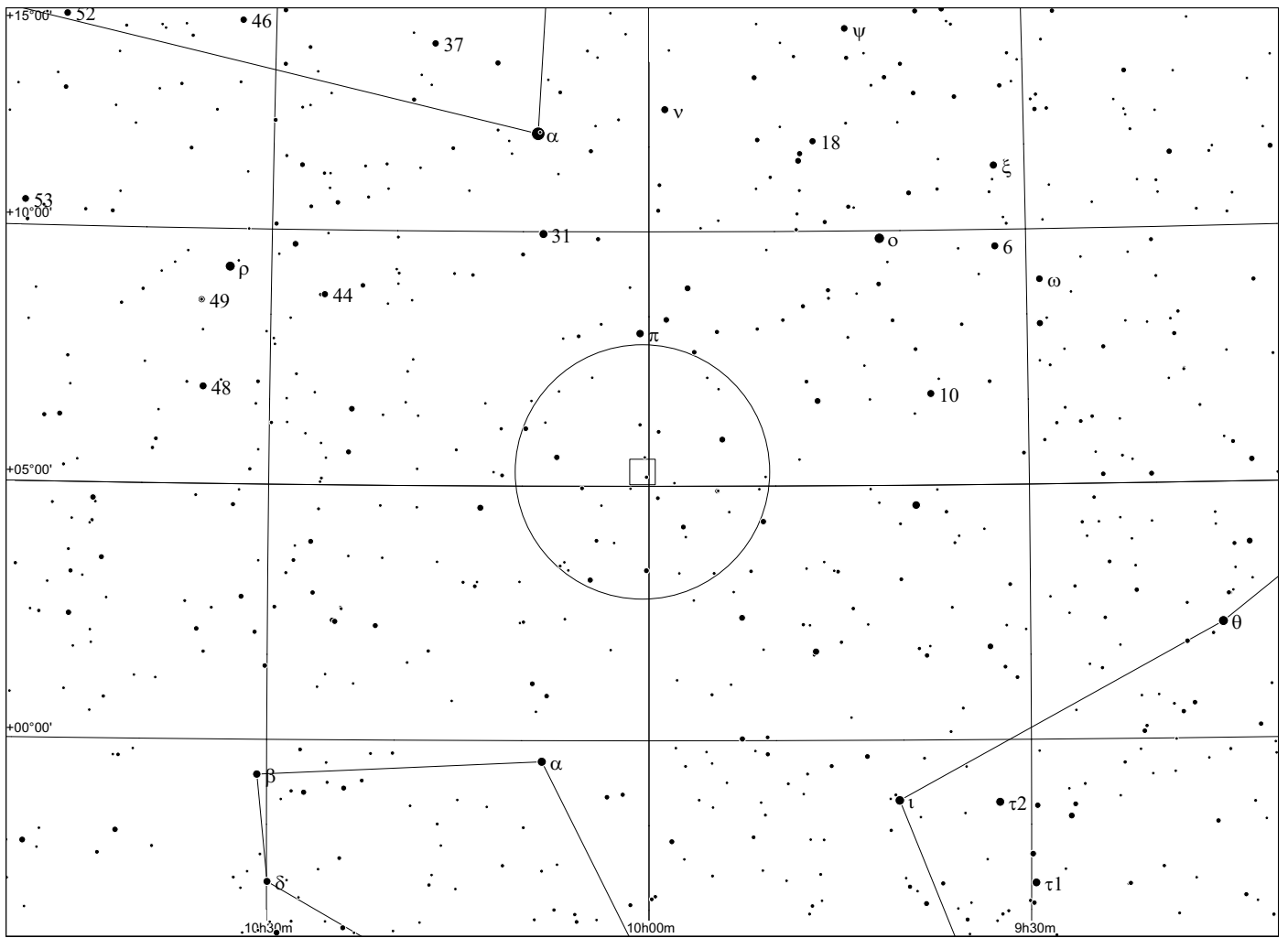


Sextans B in Sextans

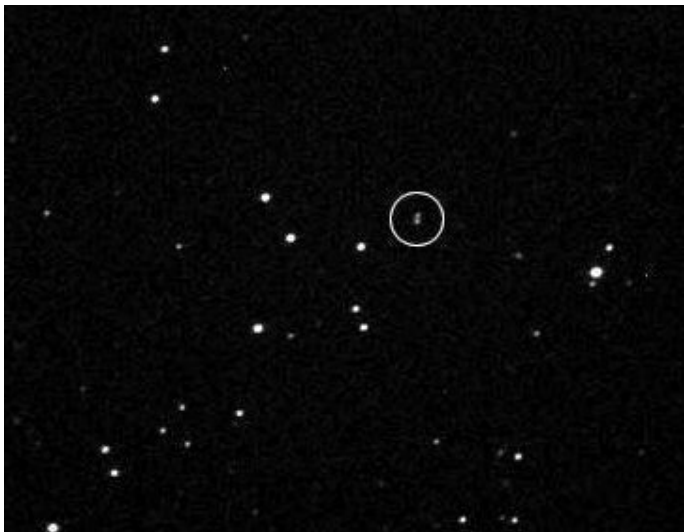
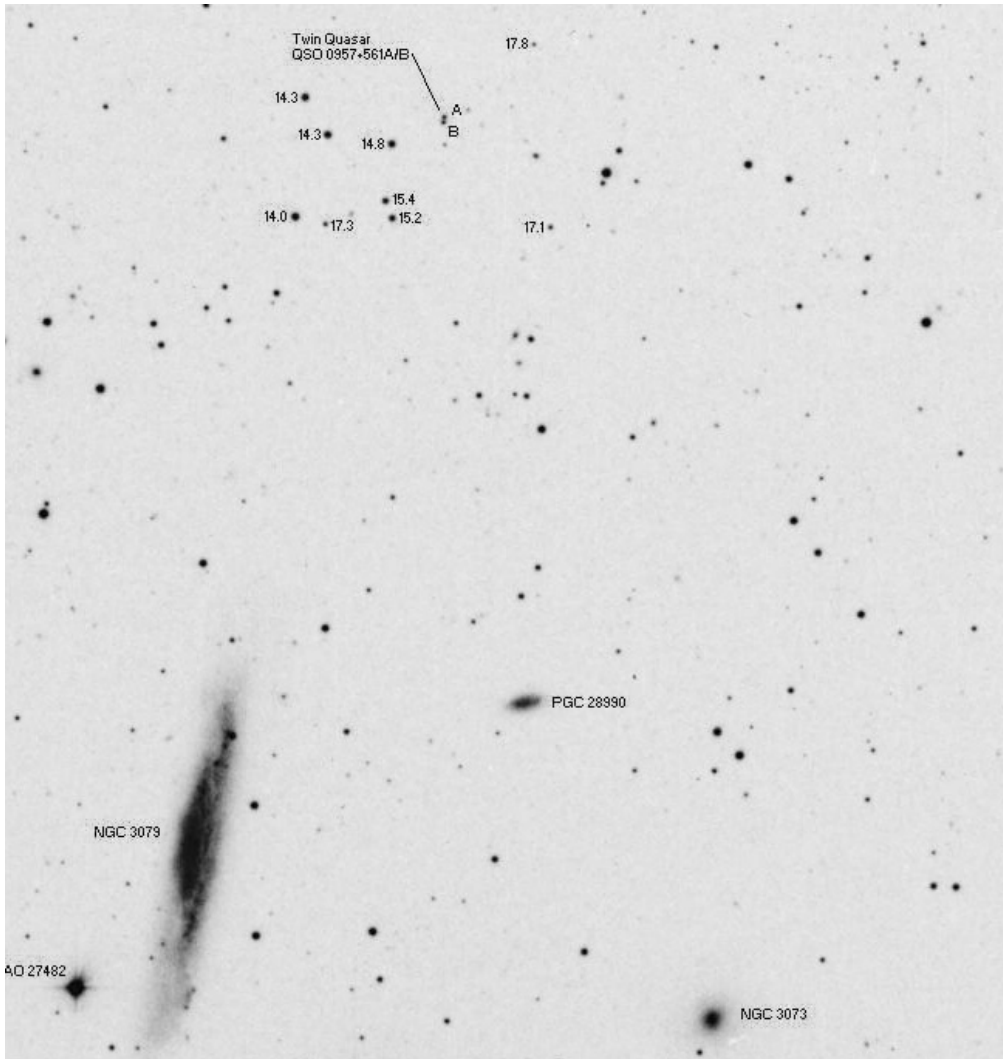


| | other | RA | Dek | comments |
|------------------|---------|----------|-----------|----------|
| Sextans B | UGC5373 | 10 00 00 | +05 19 56 | |

Sextans B ist eine Zwerggalaxie der Lokalen Gruppe. Sie ist heller als die Zwerggalaxien im Leo oder WLM oder IC1603, aber schwächer als NGC 147 oder 185 bei M31.

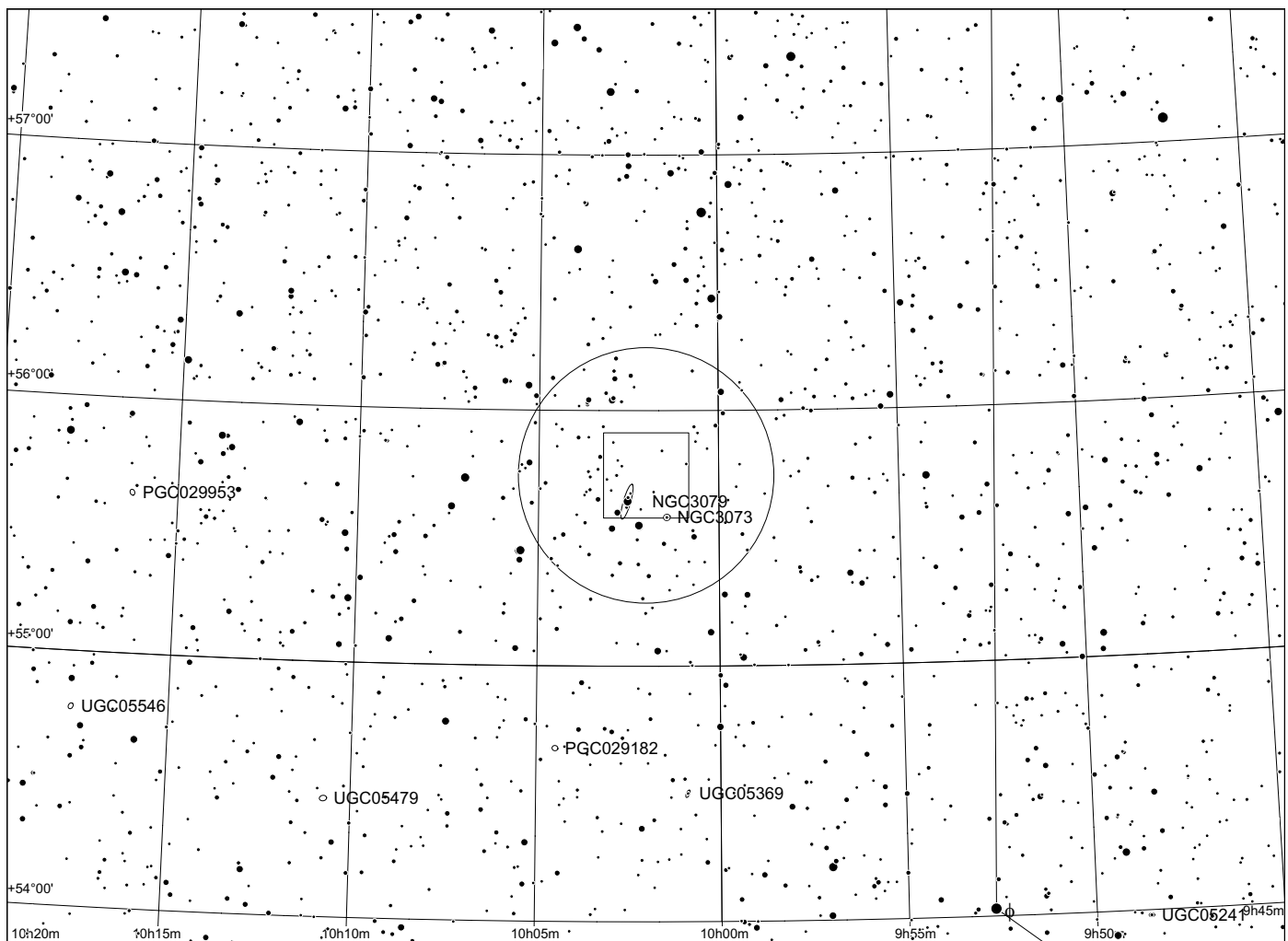
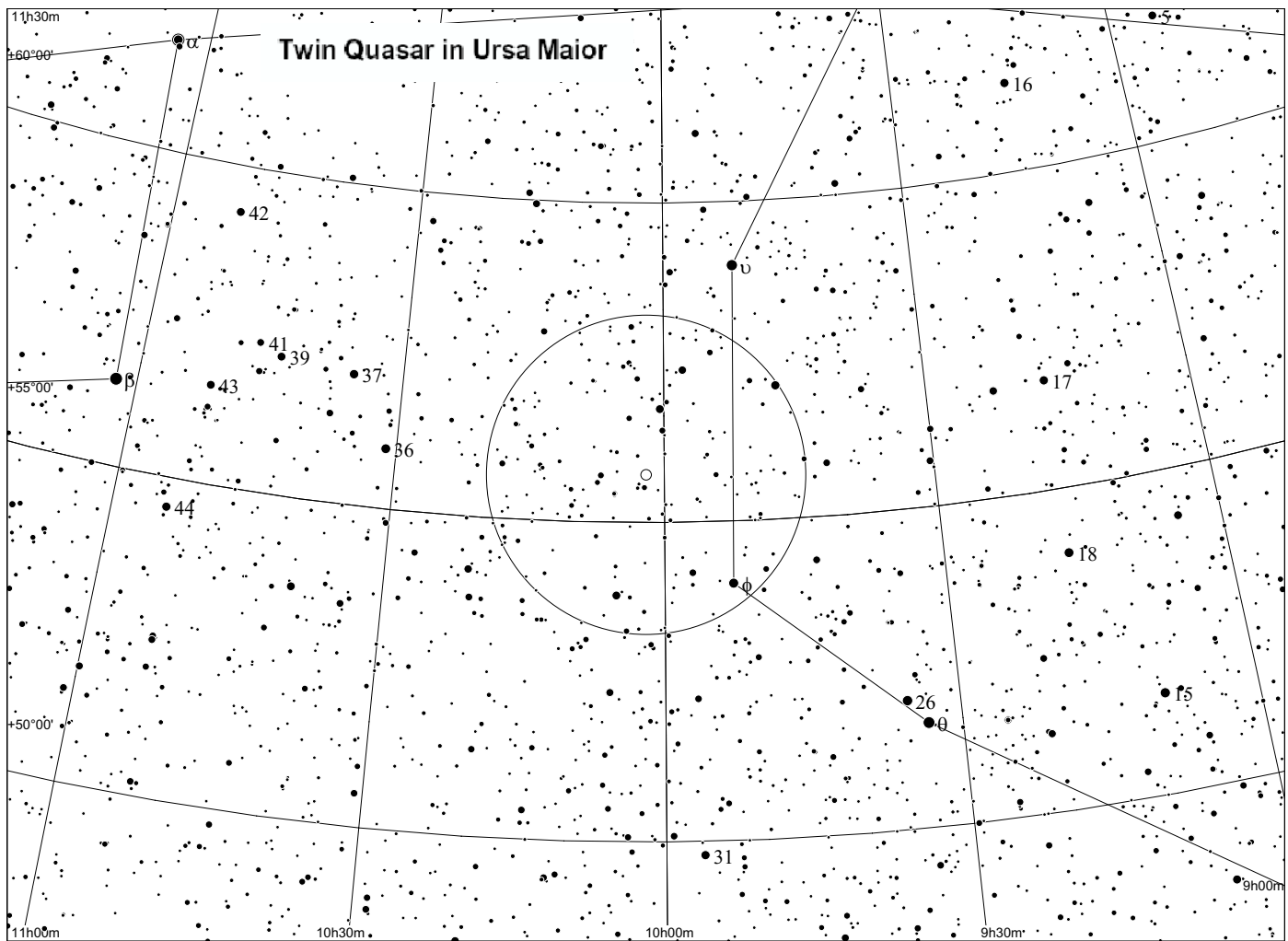


Twin Quasar in Ursa Maior

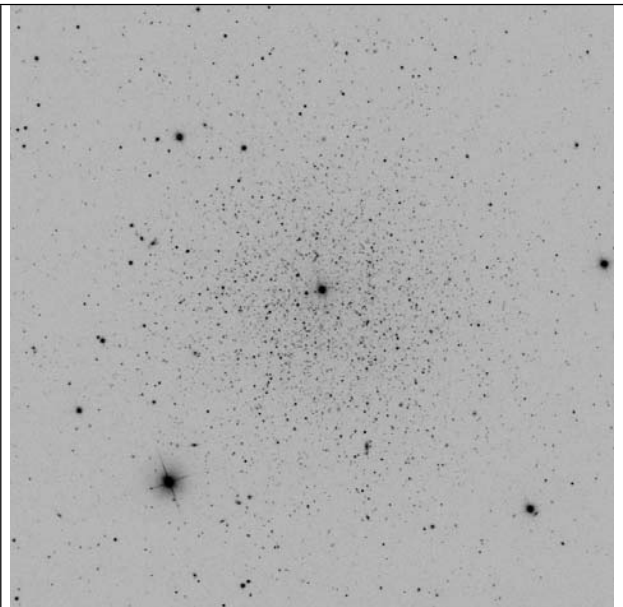
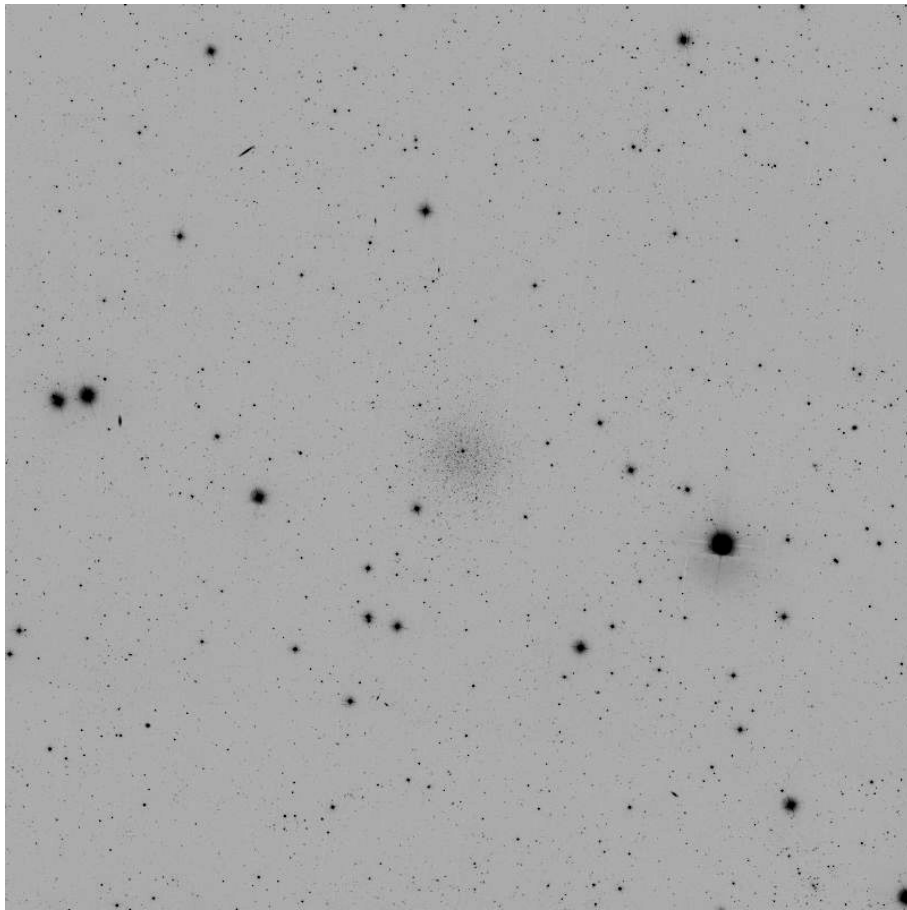


| | other | RA | Dek | comments |
|--------------------|-------|-------------|--------------|------------------------------------|
| QSO 0957+561A/B | | 10h 01m 21s | +55° 53' 54" | mag 16.4 / 17.0 , sep 6" z 1.39 |

Observing notes:

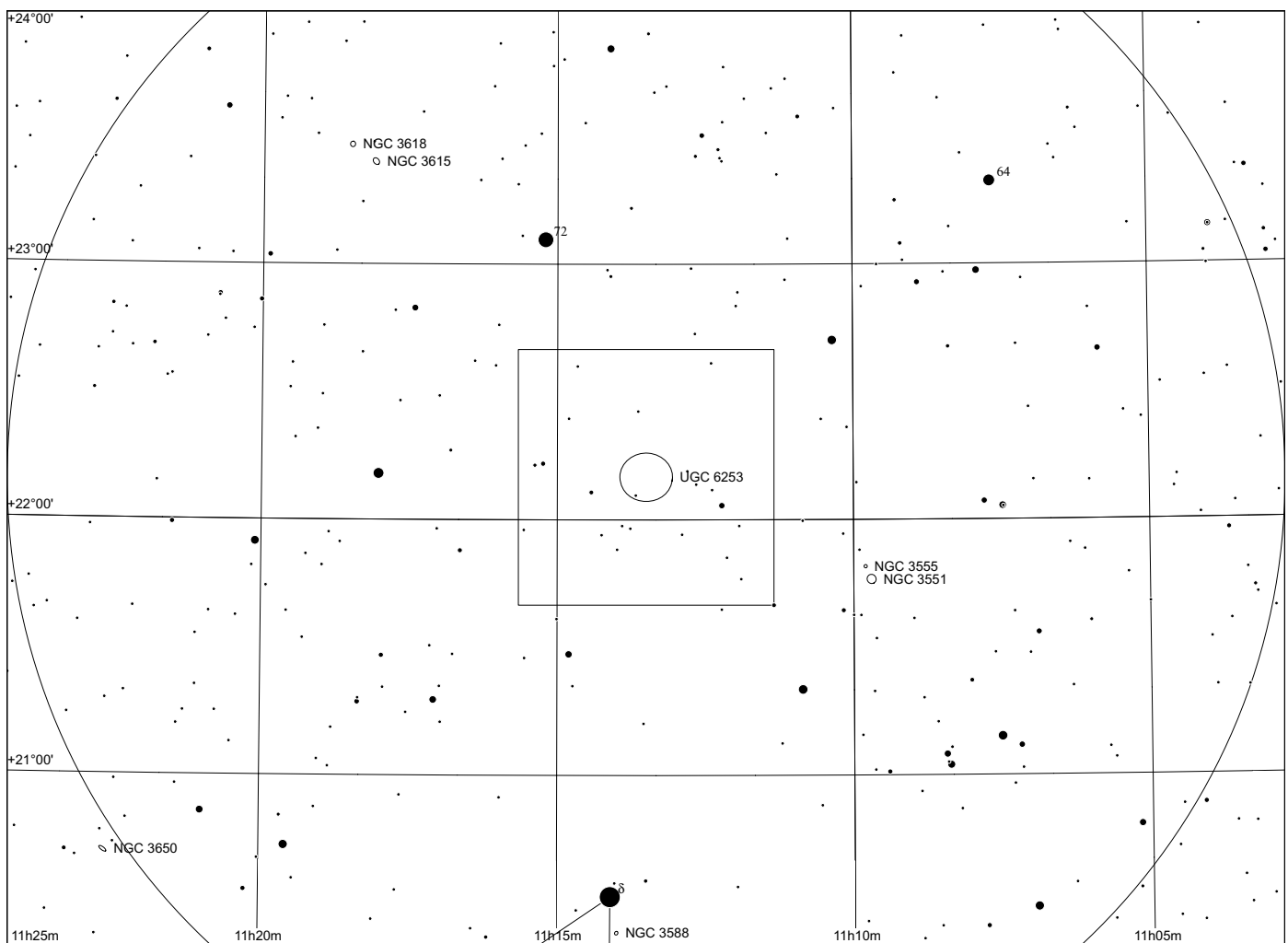
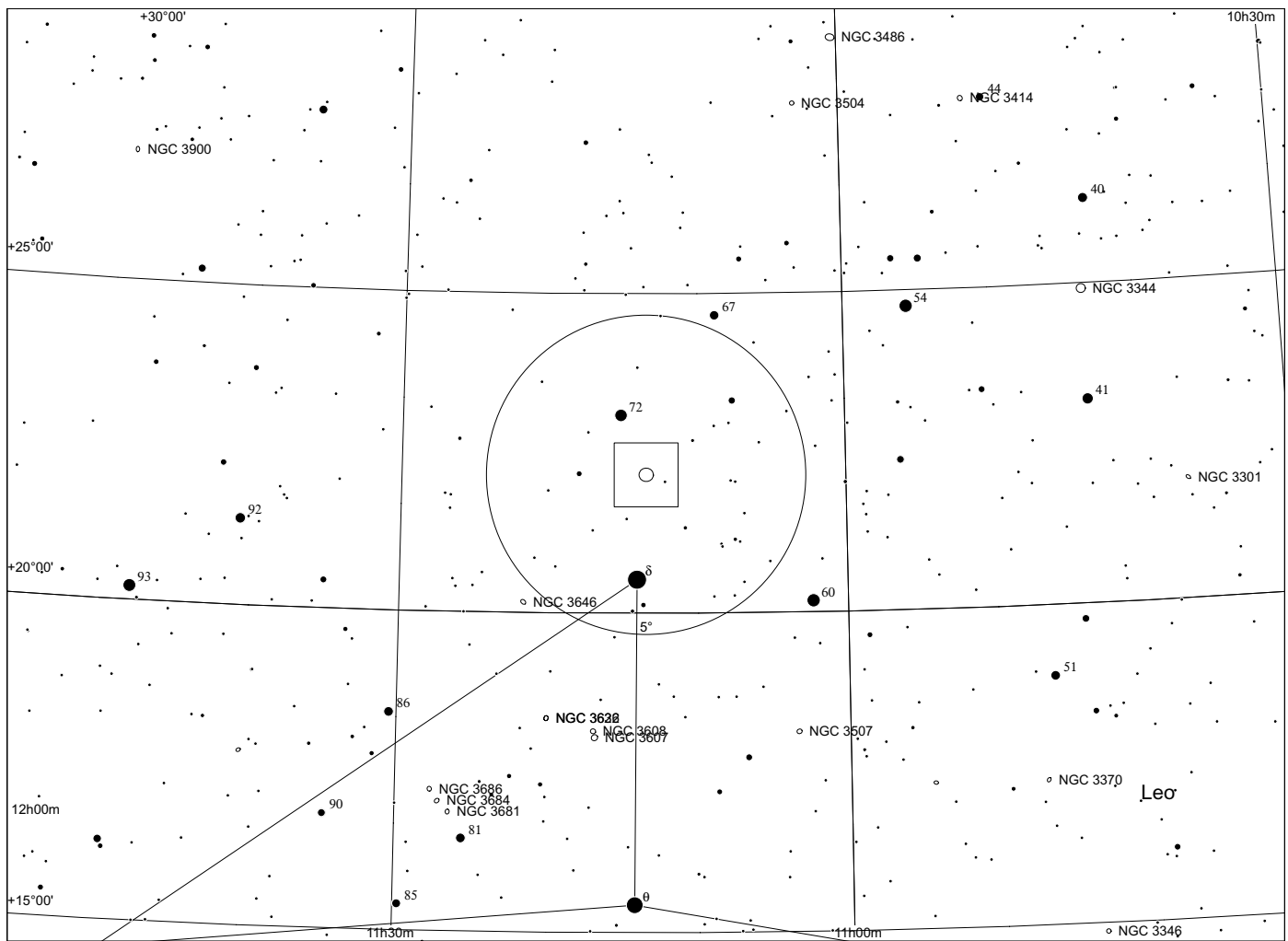


Leo II in Leo

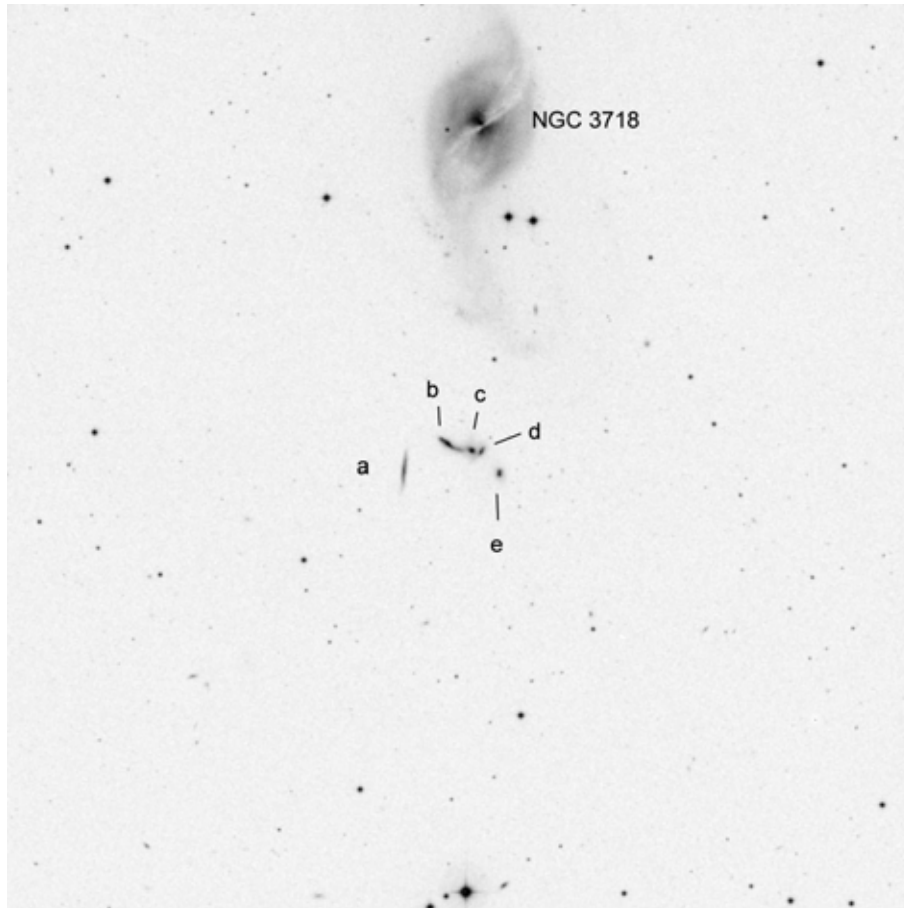


Leo II

11 13 29 +22 09 12



Hickson 56 in Ursa Major

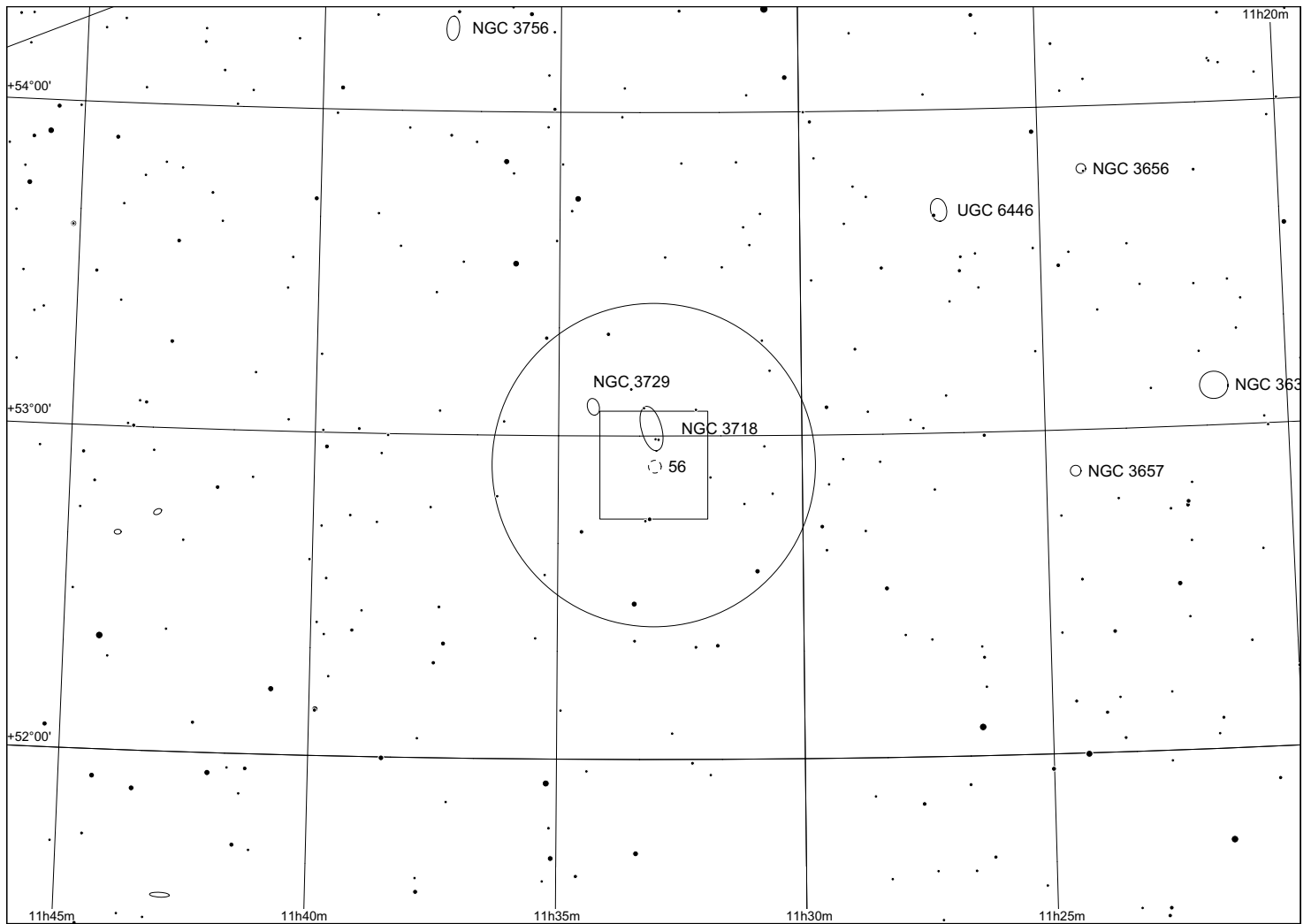
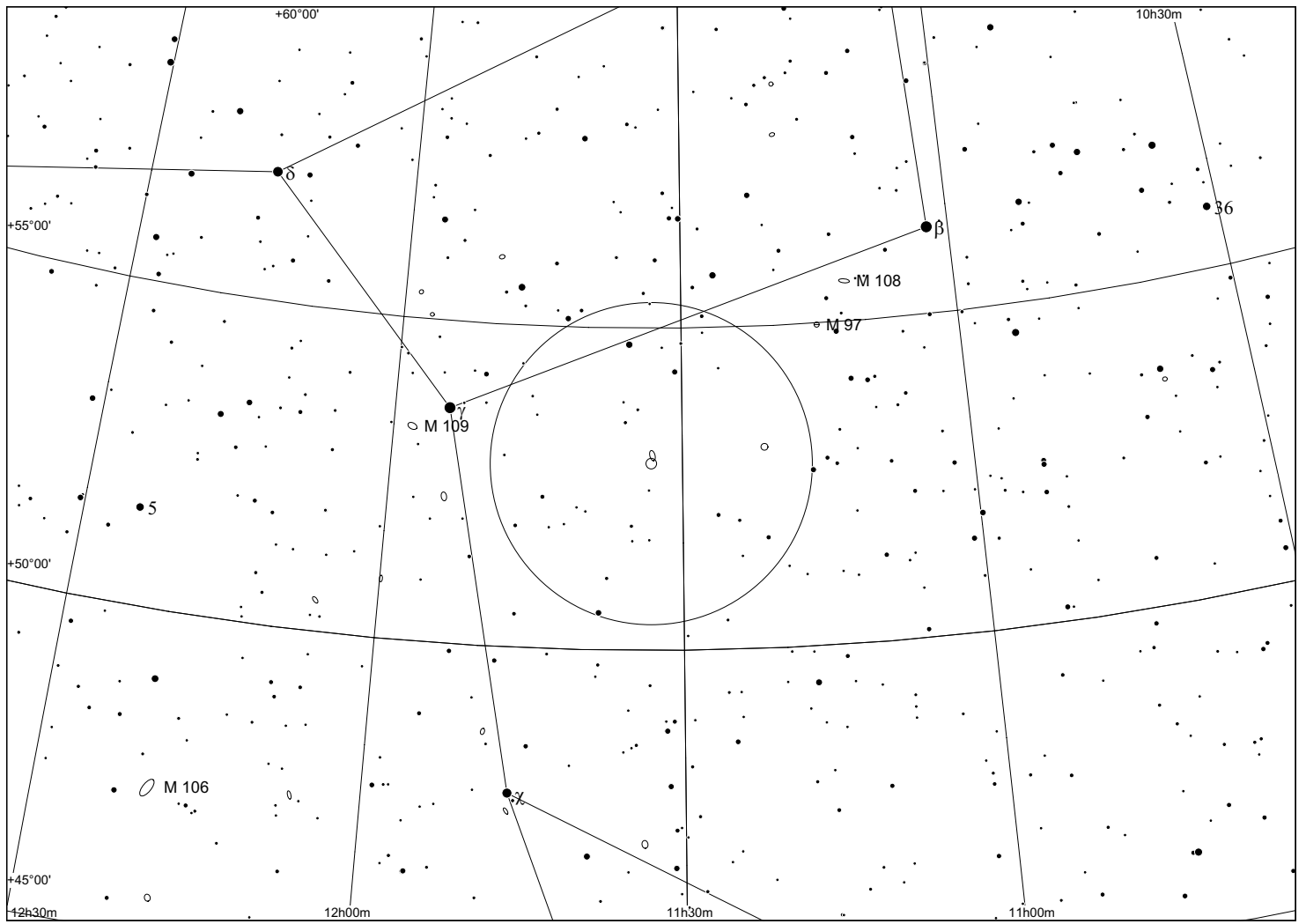


HCG Const. coordinates (2000) bright. memb. mag
 56 UMa 11h 32m 32s +52° 57' 14.5

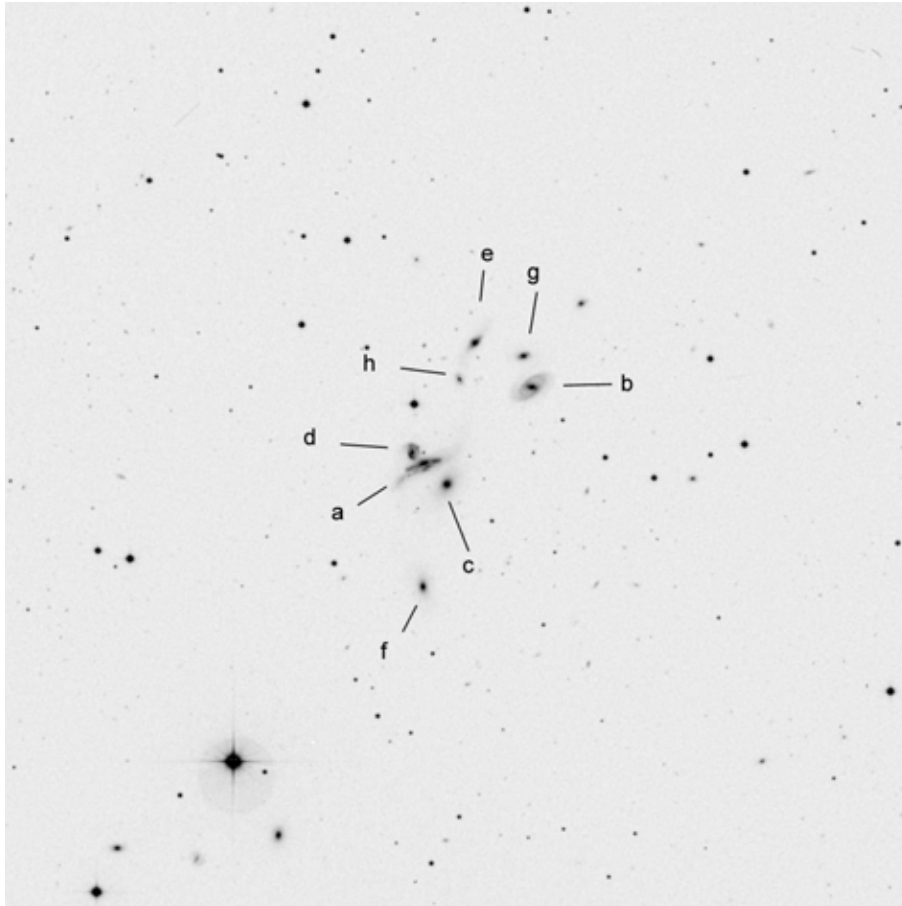
| galaxy | ra (1950) | dec | a " | b " | type | T | B-I | C | D_B " | R-I | C | D_R " | B-R | B_T | B_TC | err | v_r km/s | err km/s | C | names |
|--------|-------------|-------------|--------|--------|------|---|-------|---|----------|-------|---|----------|------|-------|-------|------|-------------|-------------|---|-------|
| 56a | 11 30 01.85 | 53 13 01.5 | 27.90 | 7.00 | Sc | 7 | 16.36 | 0 | 24.30 | 14.81 | 0 | 27.10 | 1.51 | 15.96 | 15.24 | 0.20 | 8245 | 35 | 0 | Mk176 |
| 56b | 11 29 55.61 | +53 13 36.0 | 17.10 | 10.40 | SB0 | 1 | 15.00 | 1 | 33.60 | 13.52 | 1 | 41.20 | 1.43 | 14.83 | 14.50 | 0.20 | 7919 | 38 | 0 | U6257 |
| 56c | 11 29 51.83 | +53 13 25.4 | 18.40 | 14.00 | S0 | 1 | 15.87 | 1 | 23.70 | 14.27 | 1 | 30.70 | 1.52 | 15.66 | 15.37 | 0.20 | 8110 | 28 | 0 | U6257 |
| 56d | 11 29 50.42 | +53 13 24.2 | 12.50 | 7.90 | S0 | 1 | 17.01 | 1 | 18.70 | 15.32 | 1 | 24.40 | 1.62 | 16.84 | 16.52 | 0.20 | 8346 | 56 | 0 | U6257 |
| 56e | 11 29 47.85 | +53 12 55.3 | 12.50 | 9.50 | S0 | 1 | 16.54 | 0 | 20.30 | 15.19 | 0 | 29.30 | 1.20 | 16.52 | 16.23 | 0.10 | 7924 | 63 | 0 | |

HCG 56 ist ein Prototyp der Hickson Gruppen. Steht nahe bei der interessanten Galaxie NGC 3718 und erscheint in kleineren Teleskopen als schwache, kaum auflösbare Aneinanderreihung von Knoten.

Mit größeren Teleskopen kann die Kette in drei Knoten getrennt werden, b, c/d und e (etwas abseits). c und d können mit hoher Vergrößerung ebenfalls getrennt werden. a ist am schwierigsten und kann selbst mit 22" nur indirekt als längliche Aufhellung gesehen werden.



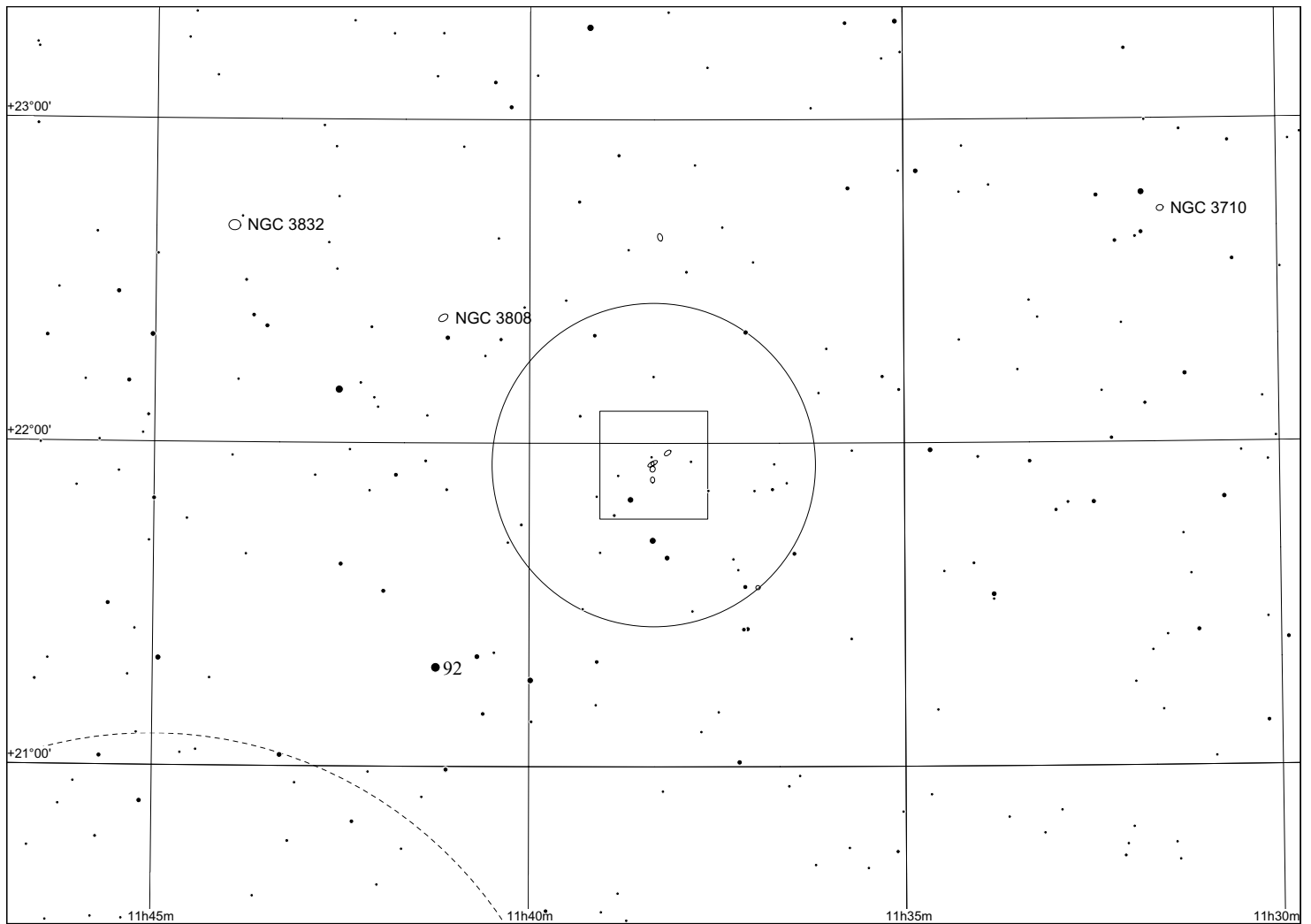
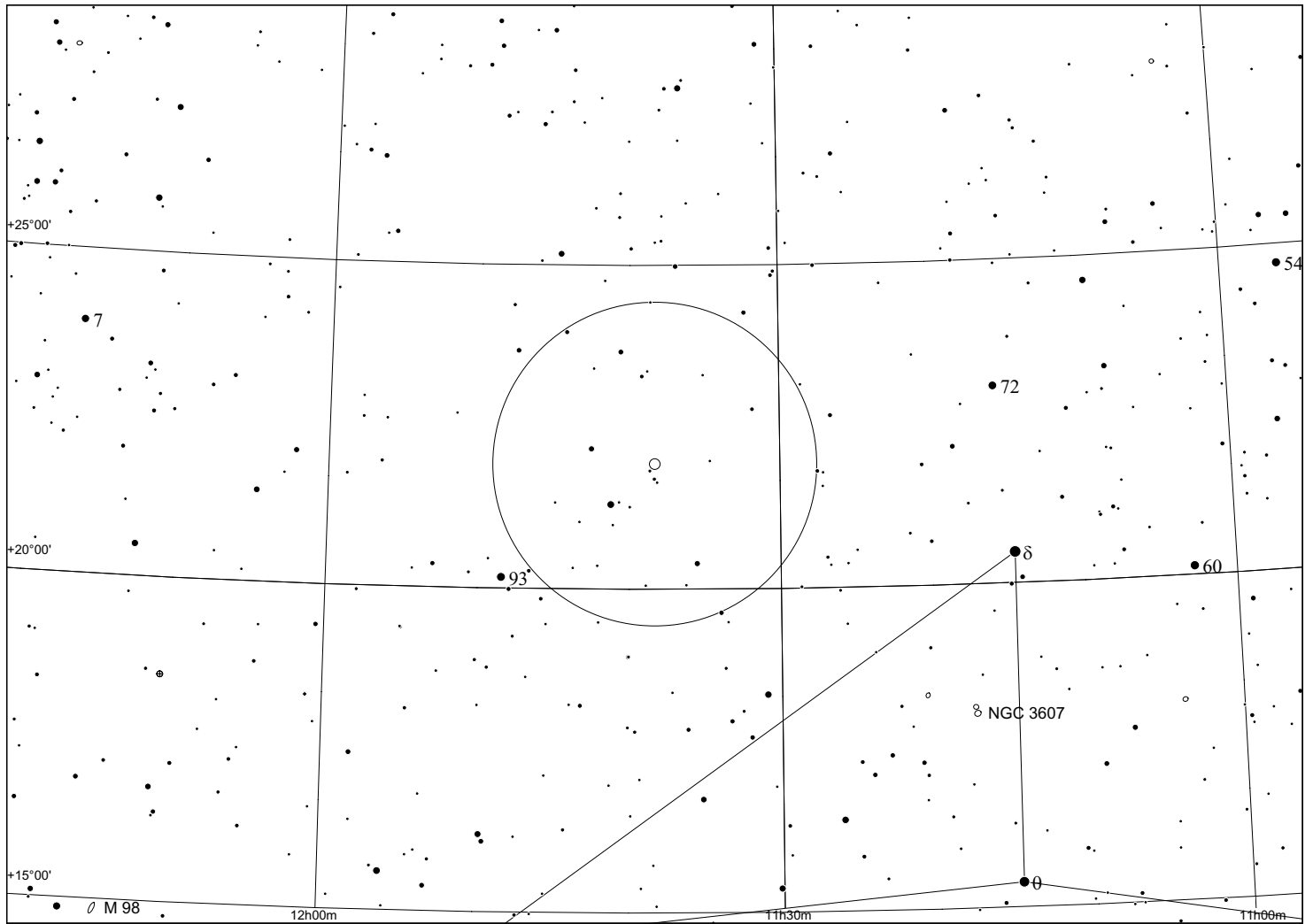
Hickson 57 in Leo



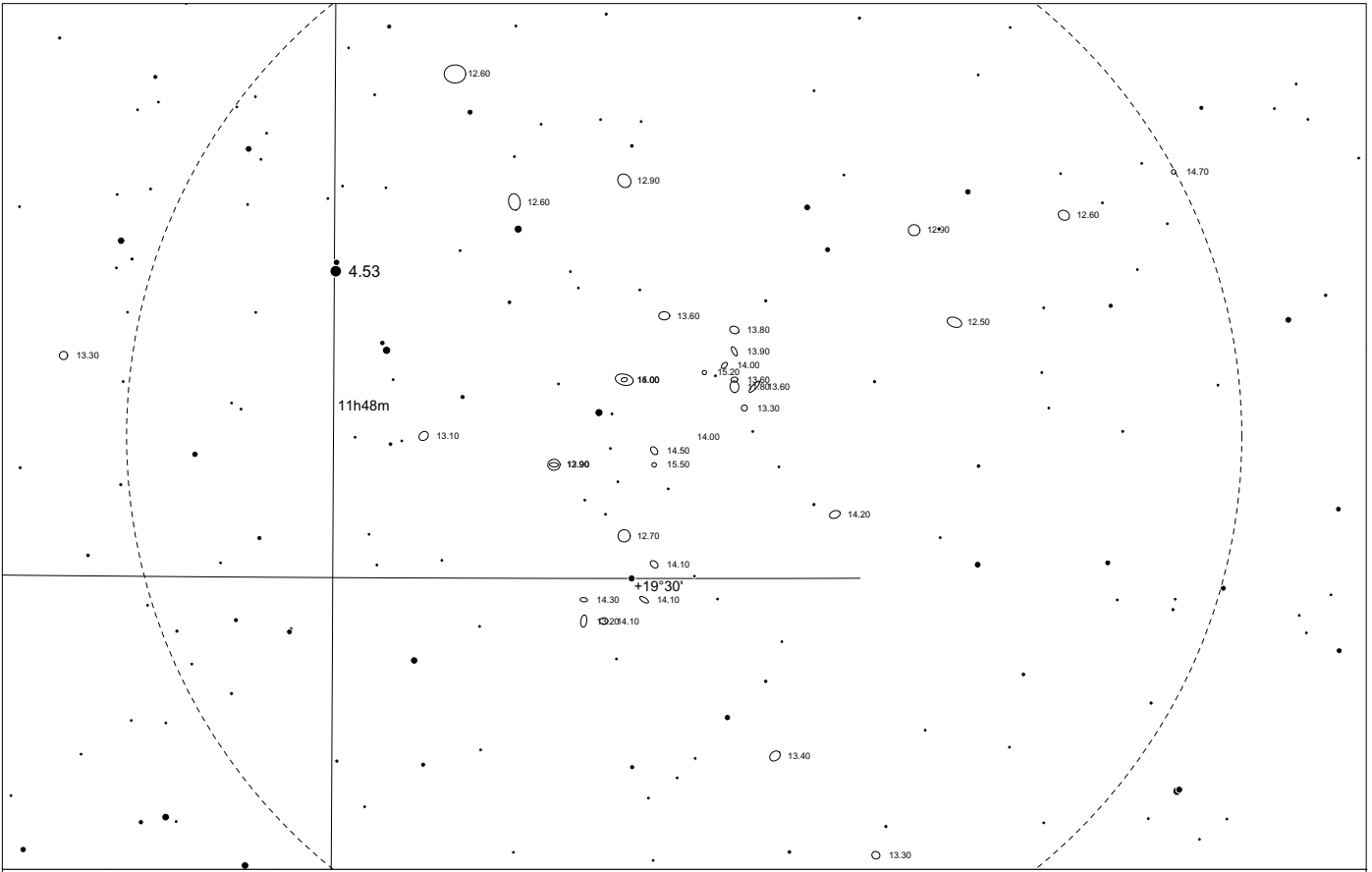
HCG Const. coordinates (2000) bright. memb. mag
 57 Leo 11h 37m 51s +21° 59' NGC 3753 14.0 Copeland's
 Septet

| galaxy | ra (1950) | dec | a " | b " | type | T | B-I | C | D _B " | R-I | C | D _R " | B-R | B _T | B _{TC} | err | v _r km/s | err km/s | C | names |
|--------|-------------|-------------|--------|--------|------|---|-------|---|---------------------|-------|---|---------------------|------|----------------|-----------------|------|------------------------|-------------|---|--------|
| 57a | 11 35 17.26 | +22 15 27.9 | 51.50 | 19.10 | Sb | 5 | 14.66 | 1 | 56.60 | 12.74 | 1 | 81.10 | 1.73 | 14.52 | 13.99 | 0.20 | 8727 | 31 | 0 | N3753, |
| U6602a | | | | | | | | | | | | | | | | | | | | |
| 57b | 11 35 07.13 | +22 17 10.4 | 30.00 | 18.90 | SBB | 5 | 15.15 | 0 | 43.50 | 13.45 | 0 | 53.70 | 1.55 | 14.67 | 14.32 | 0.20 | 9022 | 20 | 0 | N3746, |
| U6597 | | | | | | | | | | | | | | | | | | | | |
| 57c | 11 35 15.23 | +22 15 02.7 | 27.40 | 21.00 | E3 | 0 | 15.23 | 1 | 35.10 | 13.52 | 1 | 49.10 | 1.57 | 14.82 | 14.63 | 0.20 | 9081 | 36 | 0 | N3750 |
| 57d | 11 35 18.60 | +22 15 45.2 | 17.30 | 15.50 | SBC | 7 | 15.20 | 1 | 44.30 | 14.06 | 1 | 47.40 | 1.26 | 14.74 | 14.51 | 0.20 | 8977 | 41 | 0 | N3754 |
| 57e | 11 35 12.63 | +22 18 09.6 | 18.00 | 9.10 | SOa | 2 | 15.91 | 0 | 43.50 | 14.10 | 0 | 36.50 | 1.71 | 15.76 | 15.37 | 0.10 | 8992 | 105 | 0 | N3748 |
| 57f | 11 35 17.57 | +22 12 46.8 | 20.80 | 12.00 | E4 | 0 | 15.23 | 0 | 48.00 | 14.07 | 0 | 53.80 | 1.07 | 15.41 | 15.22 | 0.10 | 9594 | 105 | 0 | N3751 |
| 57g | 11 35 08.06 | +22 17 51.8 | 13.40 | 7.90 | SB0 | 1 | 16.35 | 0 | 16.40 | 14.56 | 0 | 14.60 | 1.65 | 16.12 | 15.84 | 0.10 | 9416 | 105 | 0 | N3745 |
| 57h | 11 35 14.16 | +22 17 19.6 | 10.00 | 8.50 | SBB | 5 | 17.38 | 0 | 16.70 | 15.75 | 0 | 20.60 | 1.53 | 16.99 | 16.75 | 0.10 | 0 | 0 | 0 | |

Copeland's Septett ist eine der Paradegruppen im Hickson Katalog. Schwieriger als Stephan's Quintett, aber noch nicht so schwer wie Seyfert's Sextett. Die Gruppe zeigt auch in kleineren Teleskopen schon Details. Die Galaxien bilden zwei Gruppen, mit f etwas abseits. Einzelgalaxien können mit Vergrößerungen über 300x getrennt werden. Mit 22" kann die Gruppe bis auf h komplett aufgelöst werden

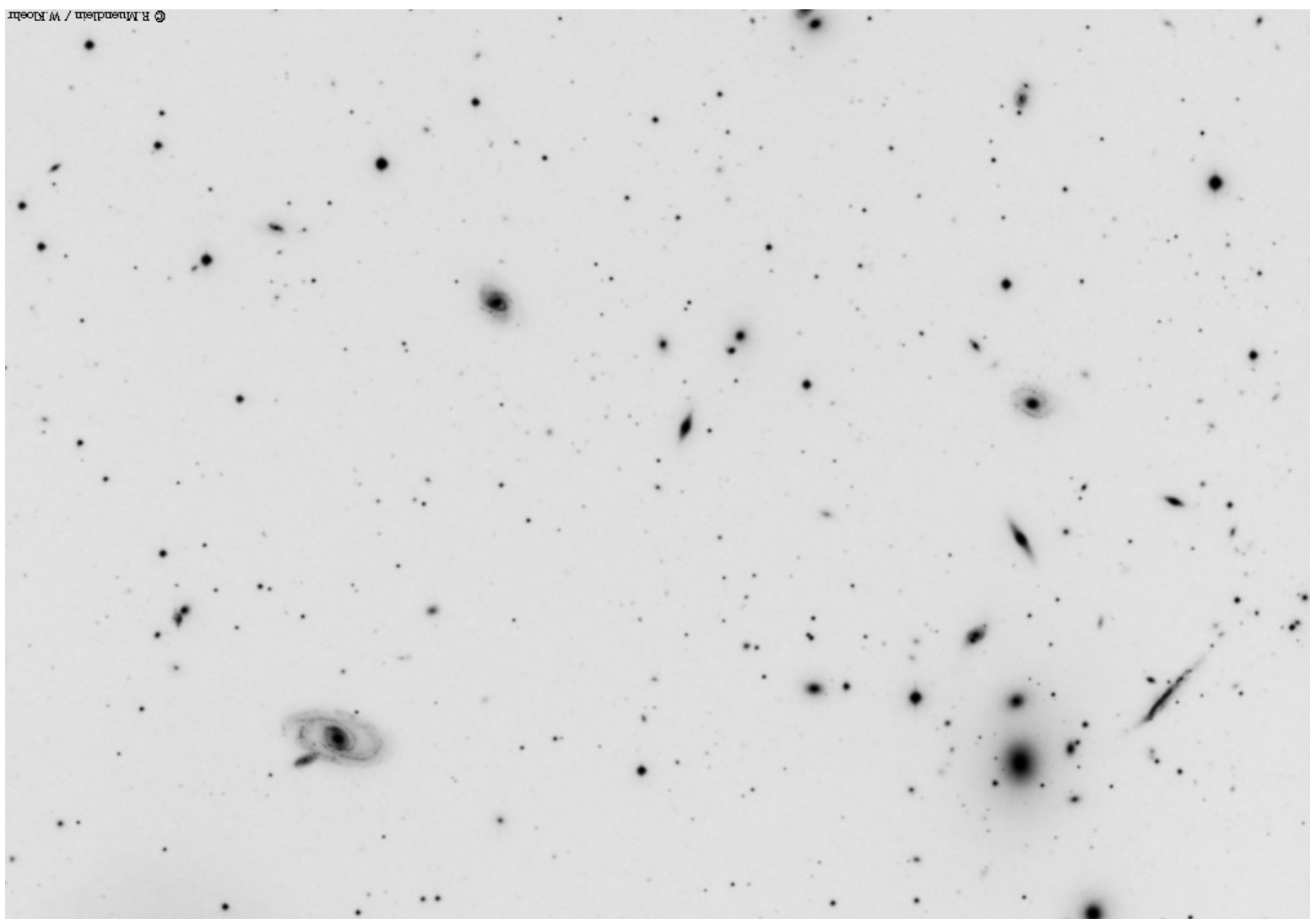


Abell 1367



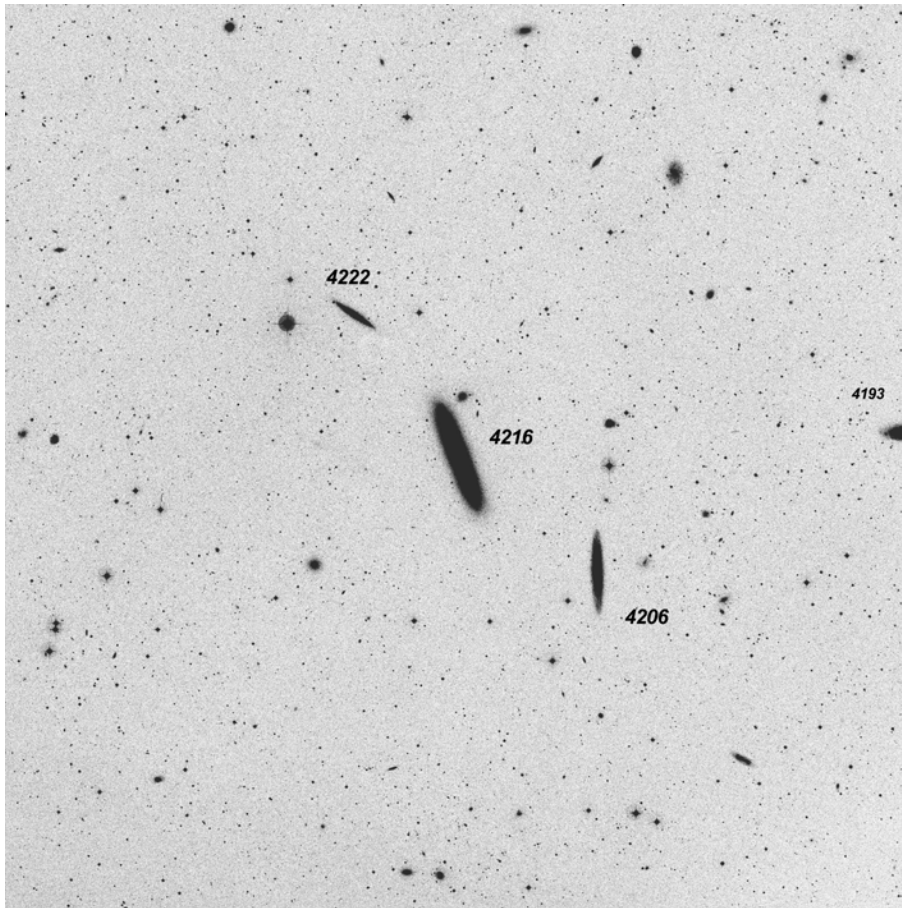
My home 2008-11-18 12h42m C: 11h45m +19°50' L: +03°12' O: 0° ARC EQ Cat: DSL HCG BSC SKY TY2 SAC
 11h44m30.00s +19°50'00.0" Gcl Abell 1367 const: LEO Dim:157.0x157.0' m:14.00 sbr:24.72 desc: 13"-1 gal pF,pL,R 4 others vF,S 10 others nr;More GALXYS >14 mag than any GALCL

| | | | | | |
|---|----------|--------|-------|----------|--------|
| Magnitude: : 0 1 2 3 4 5 6 7 8 9 10 11 12 | Variable | Double | Comet | Asteroid | Planet |
| Nebula: Gx Oc Gc Pl Neb N+C Star Unk | | | | | |



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NGC 4216 and friends in Virgo

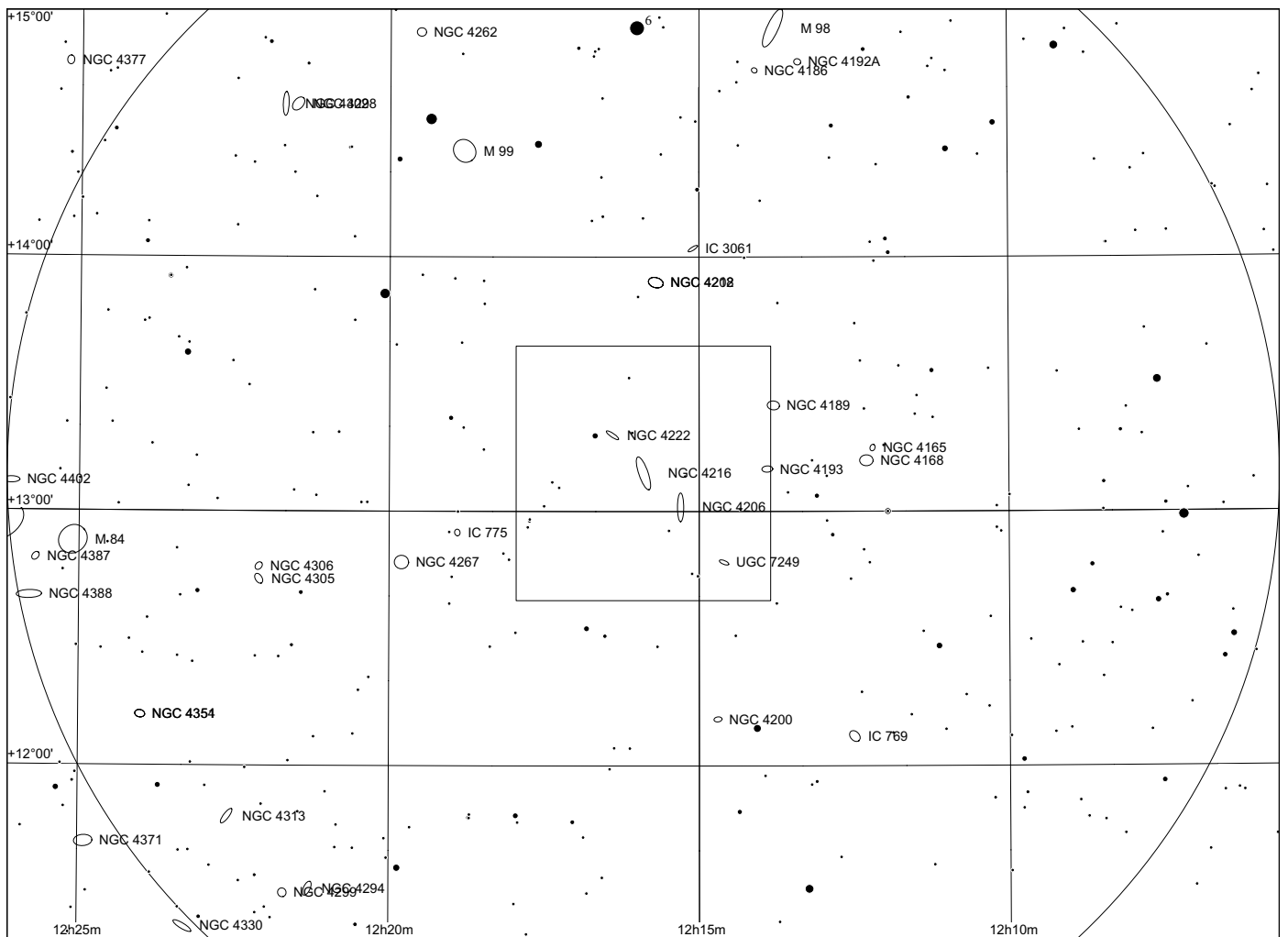
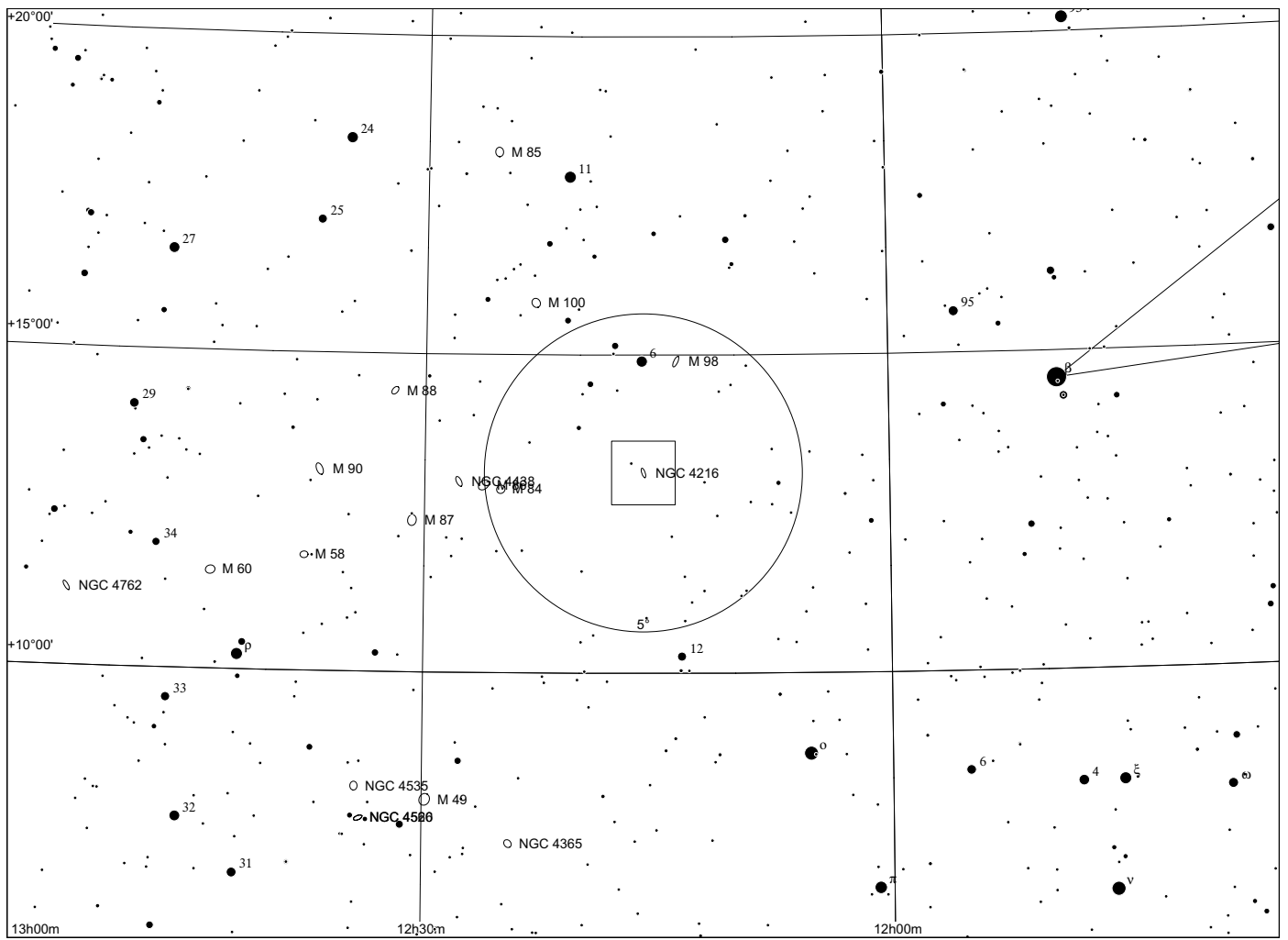


60x60

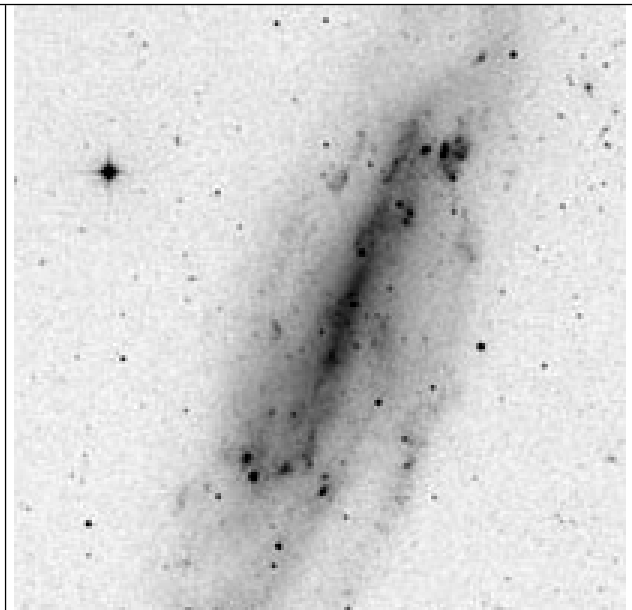
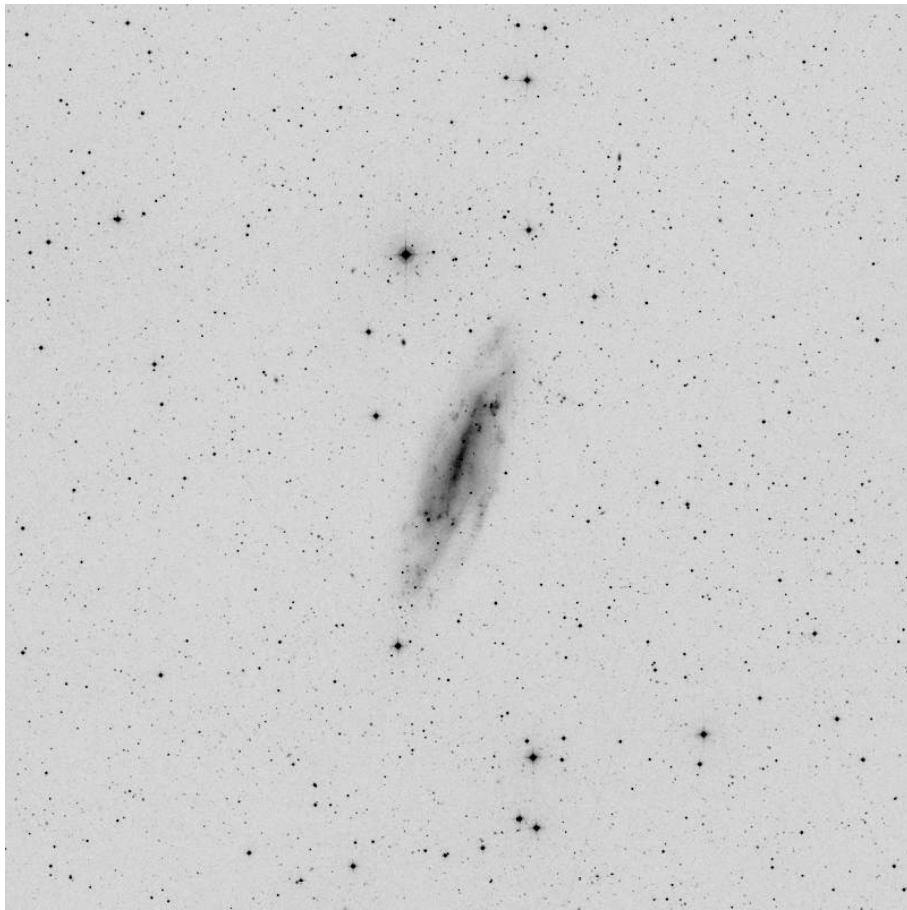


| | other | RA | Dek | comments |
|-----------------|-------|----------|-----------|----------|
| NGC 4216 | | 12 15 54 | +13 08 58 | |

Observing notes:

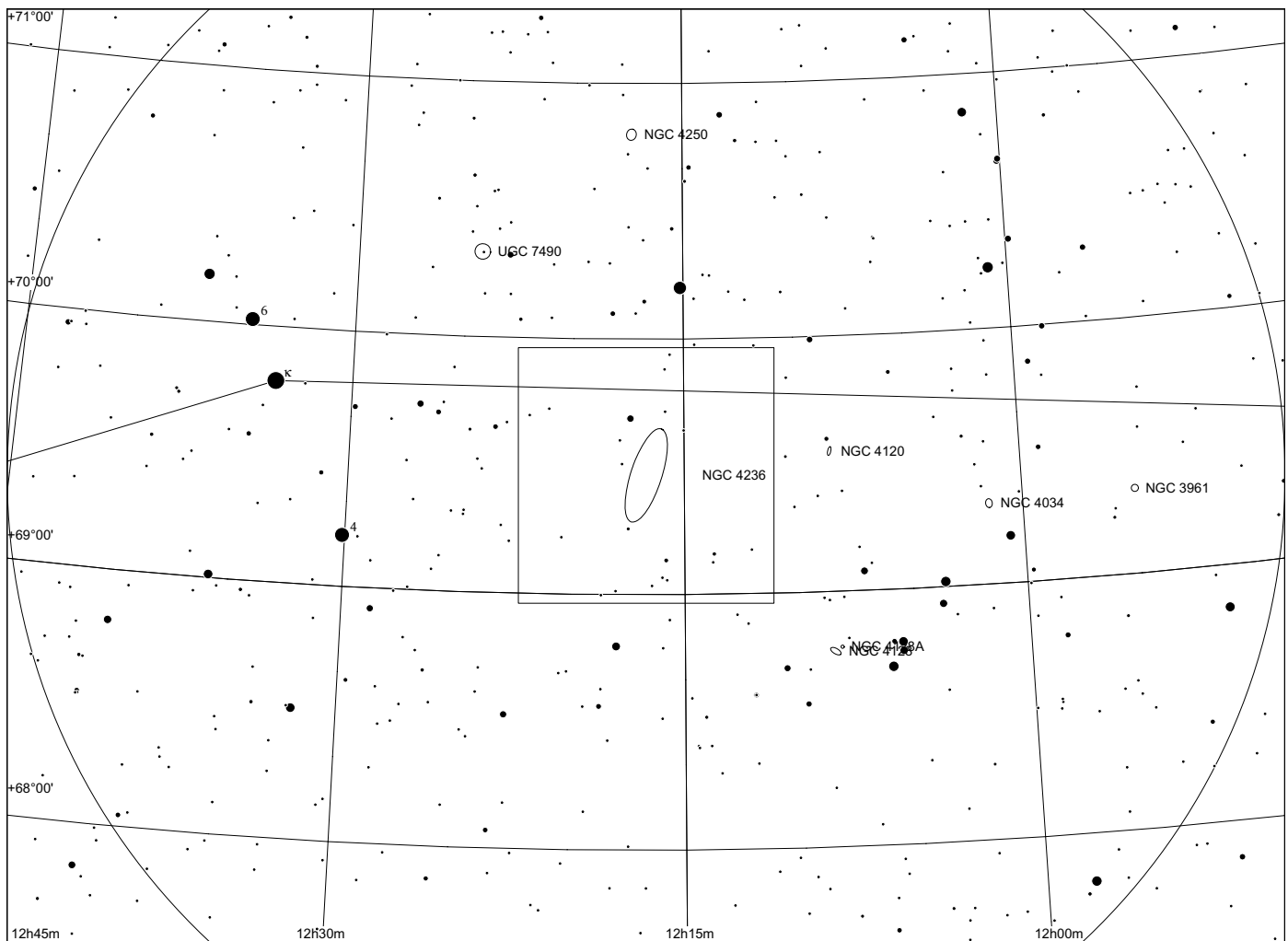
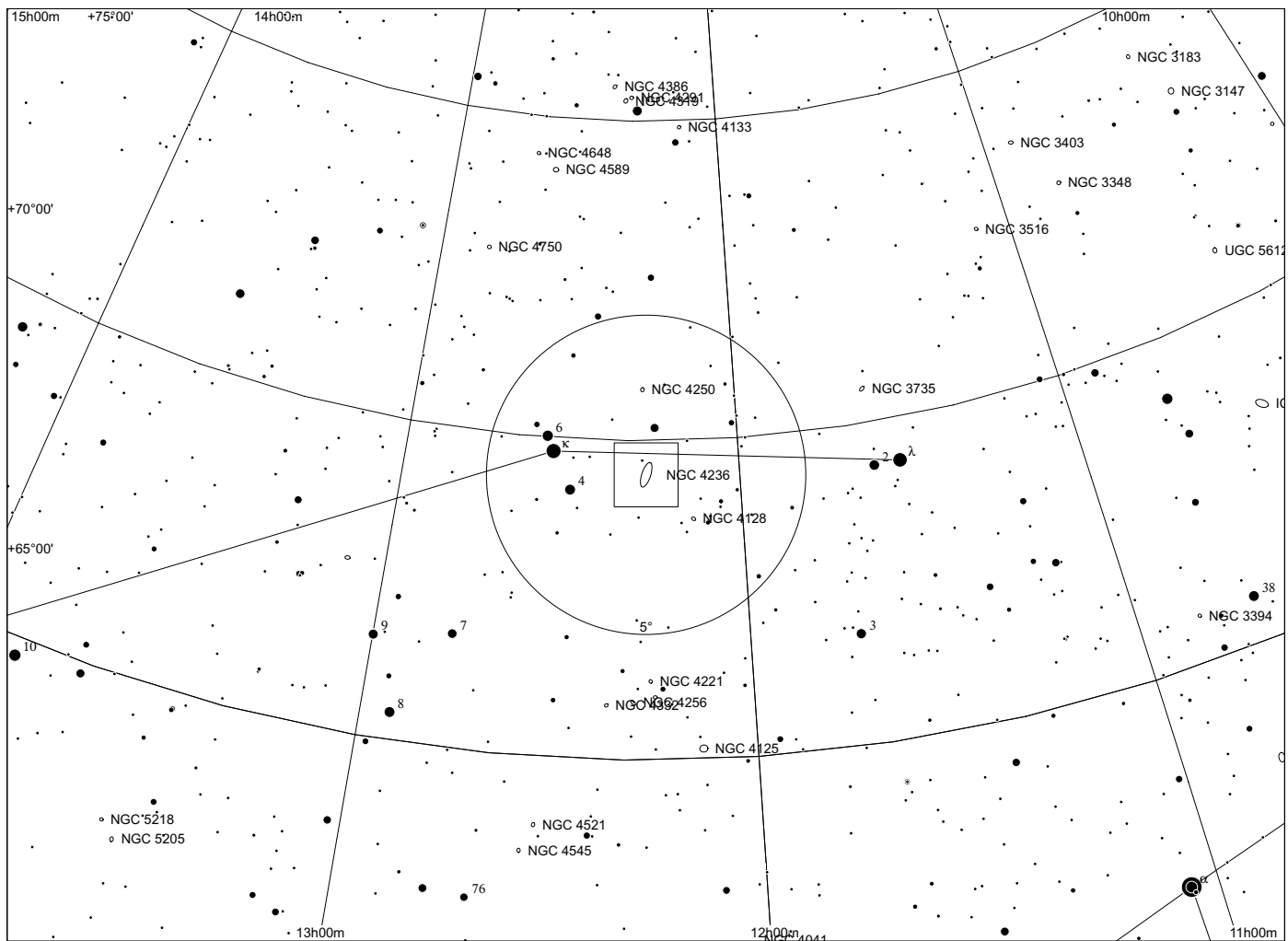


NGC 4236 in Draco

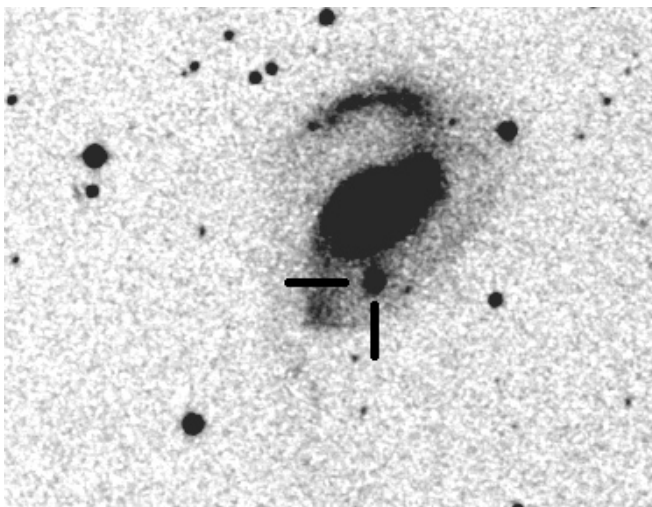
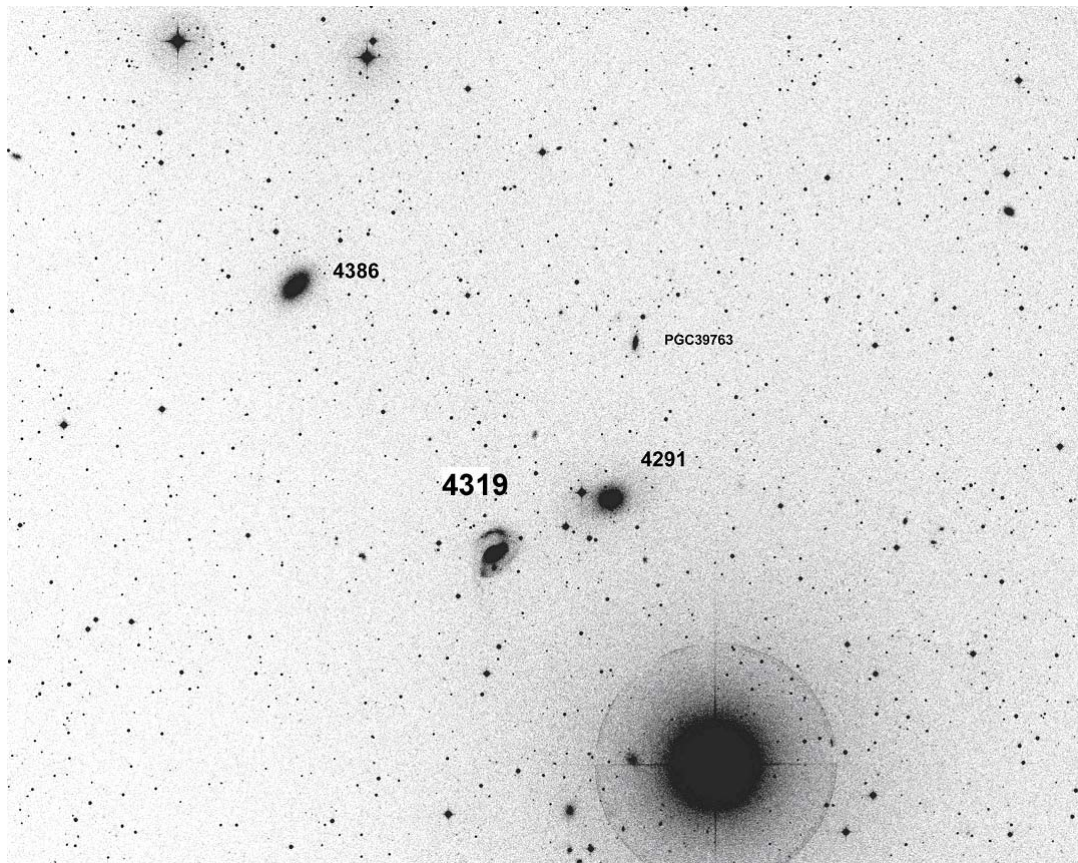


NGC 4236

12 16 41 +69 28 09



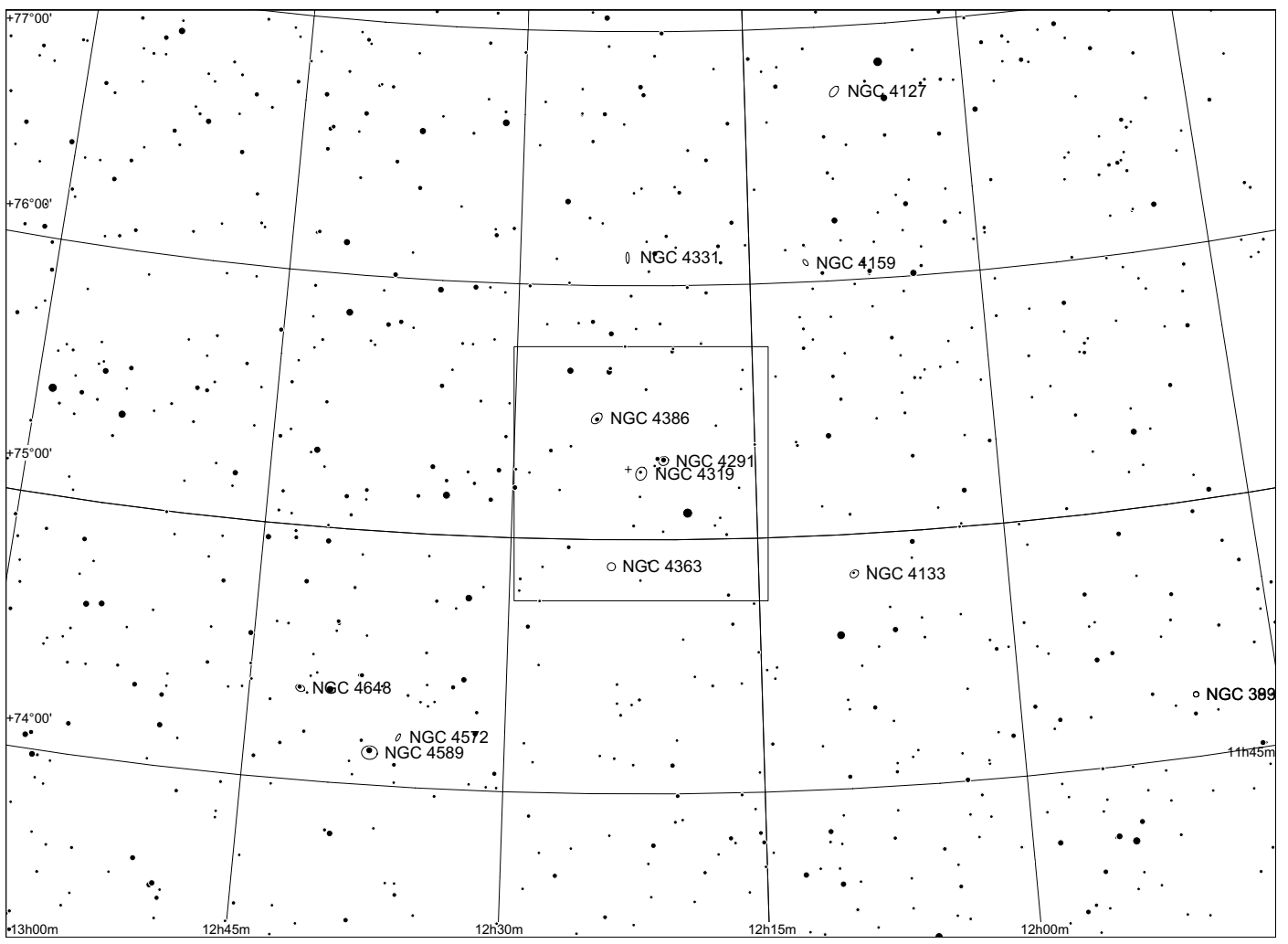
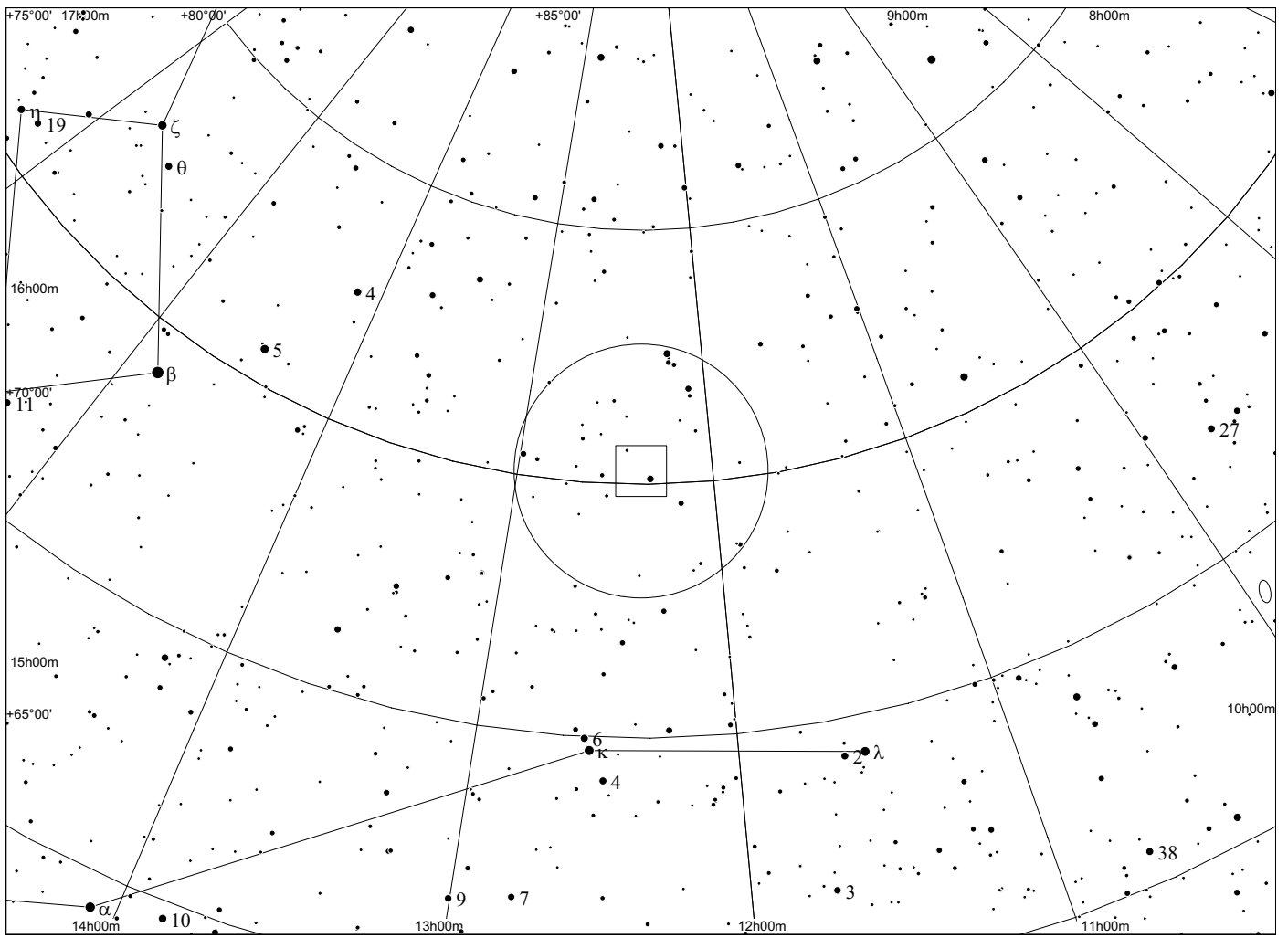
Markarian 205 in Draco



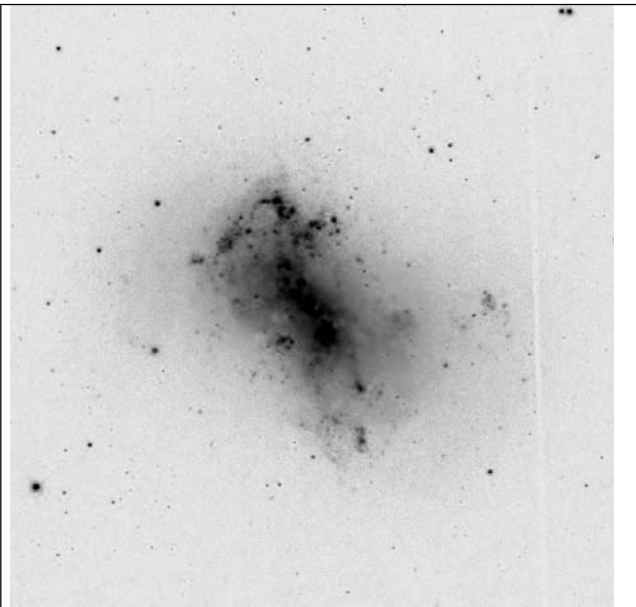
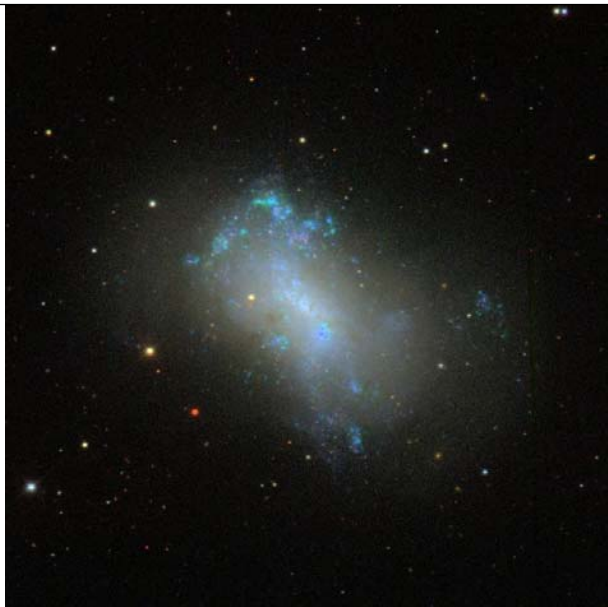
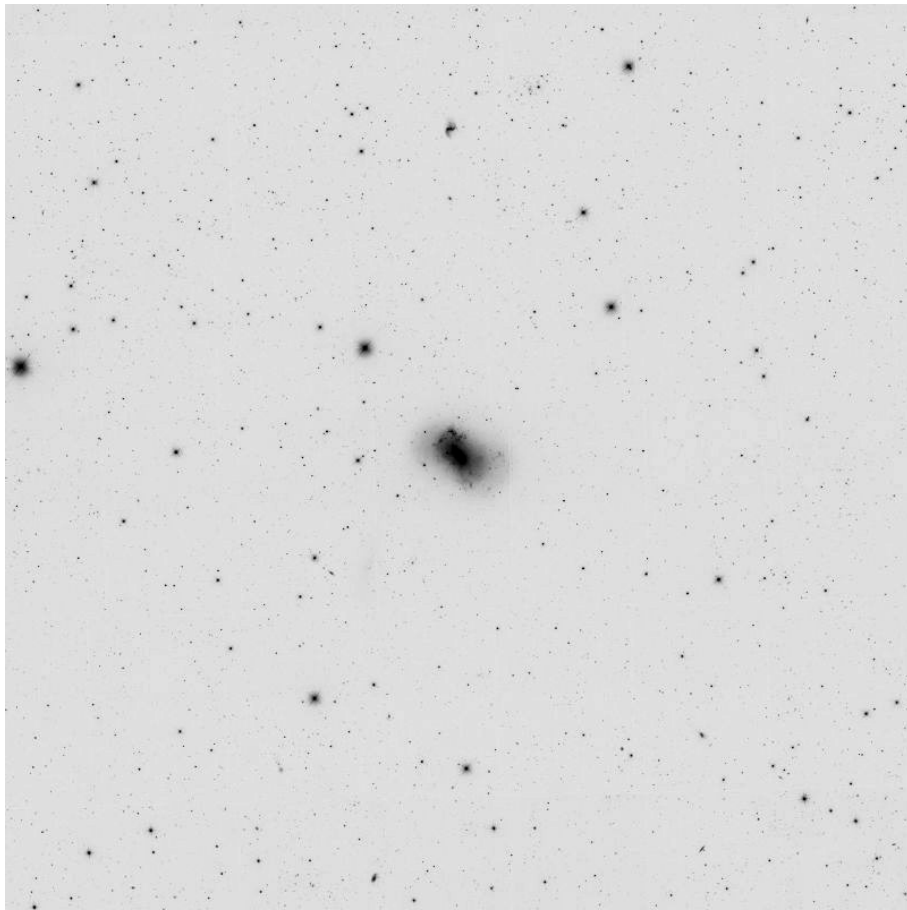
| | other | RA | Dek | comments |
|----------------|--------------------|----------|-----------|----------|
| Mrk 205 | bei NGC4319 | 12 21 43 | +75 19 21 | Quasar |

Mrk 205 ist ein geschichtsträchtiges Objekt. Trotz der extrem unterschiedlichen Rotverschiebungen von Mrk 205 und NGC4319 vermutete Halton Arp eine "Materiebrücke" zwischen beiden. Diese hätte bedeutet, dass beide Objekte nahe beieinander stehen müssen. Arp verfolgte die Hypothese, dass die hohe Rotverschiebung der Quasare nicht auf ihrer Entfernung beruhte, sondern dass sie aus Galaxien ausgestoßene Objekte sind und die Rotverschiebung ihrer Spektren andere Ursachen habe (z.B. Gravitation). Damit stand er im krassen Widerspruch zur damaligen wissenschaftlichen Community, allen voran Allan Sandage, was zu einigen Fehden zwischen den Anhängern der verschiedenen Sichtweisen führte.

Mrk 205 ist nicht einfach, ist aber schon mit 14" gut indirekt zu sehen.

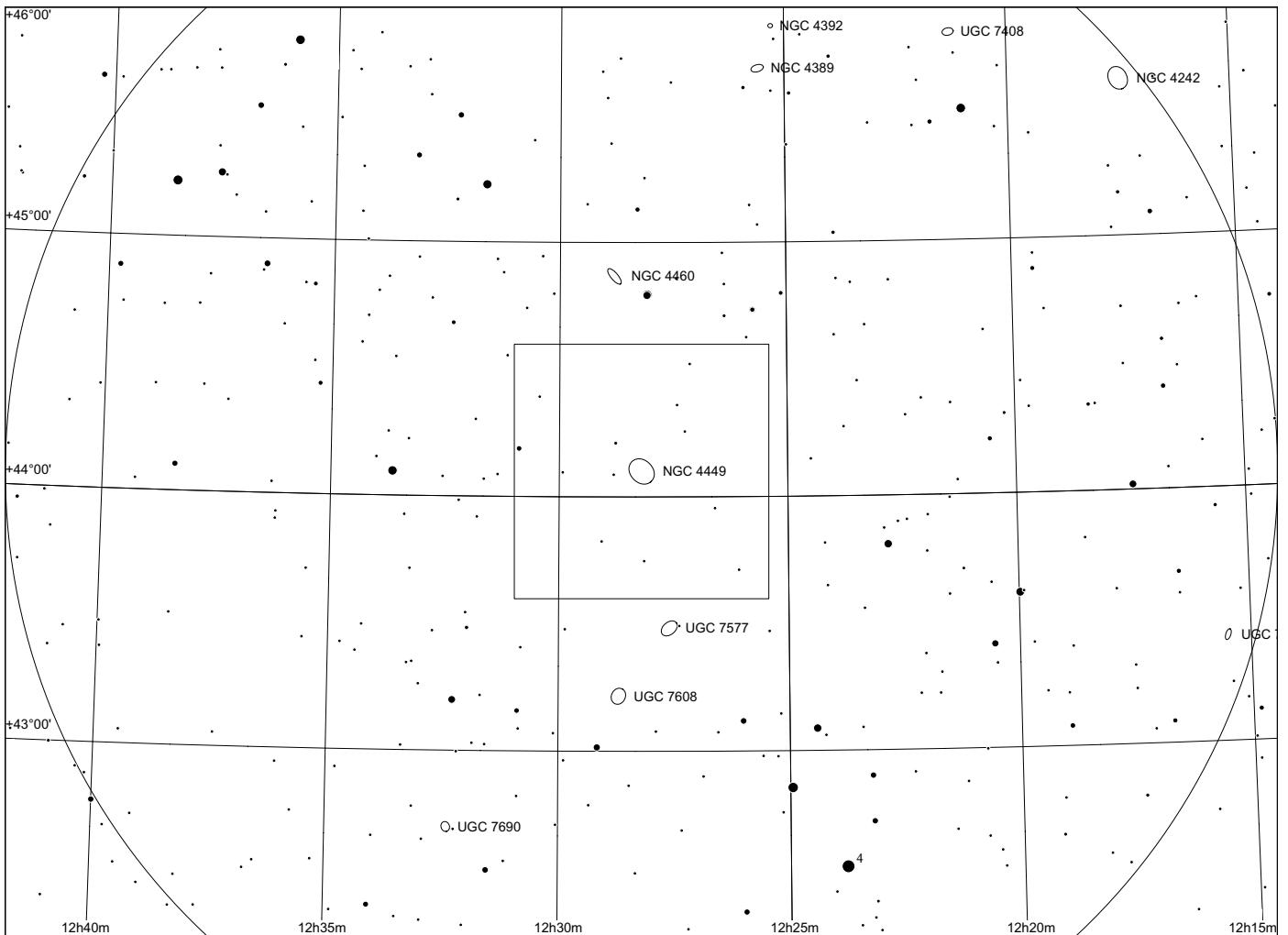
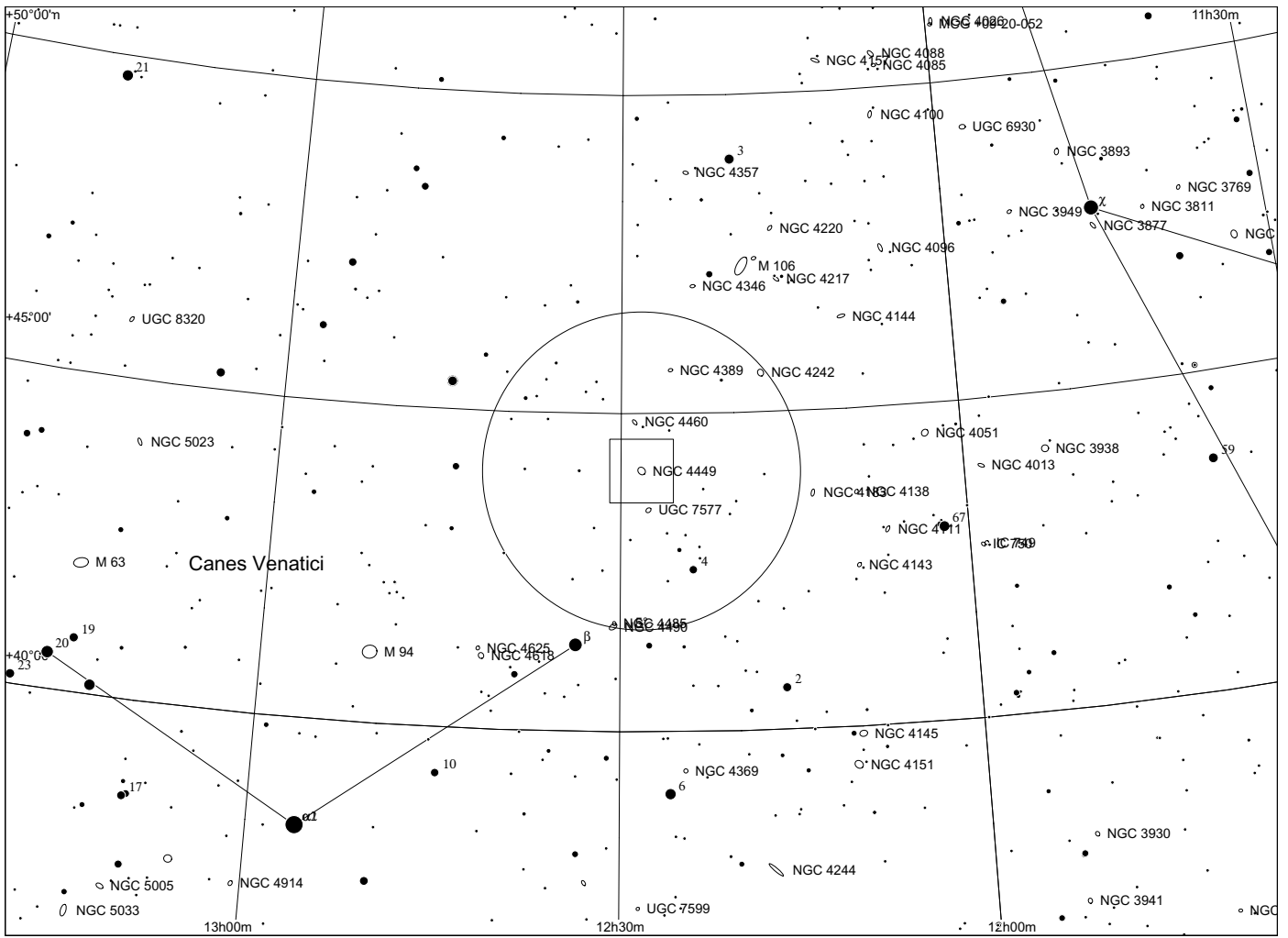


NGC 4449 in Canes Venatici

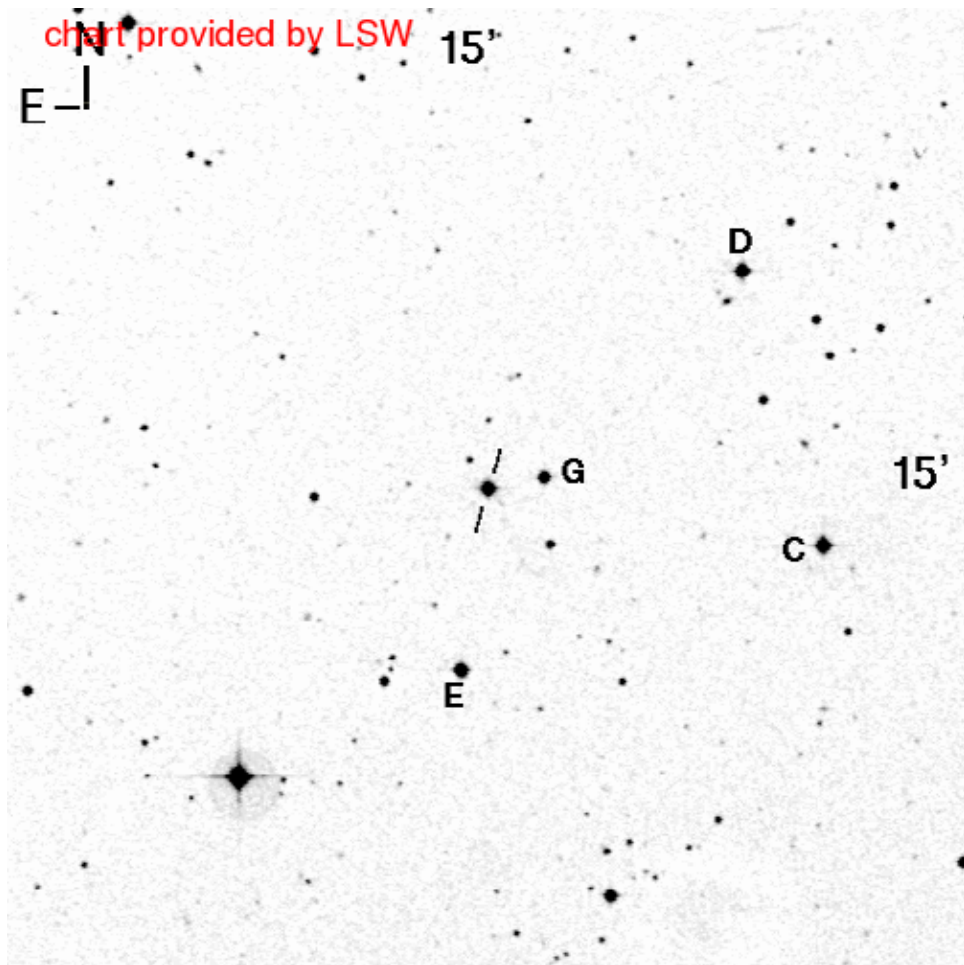


NGC 4449

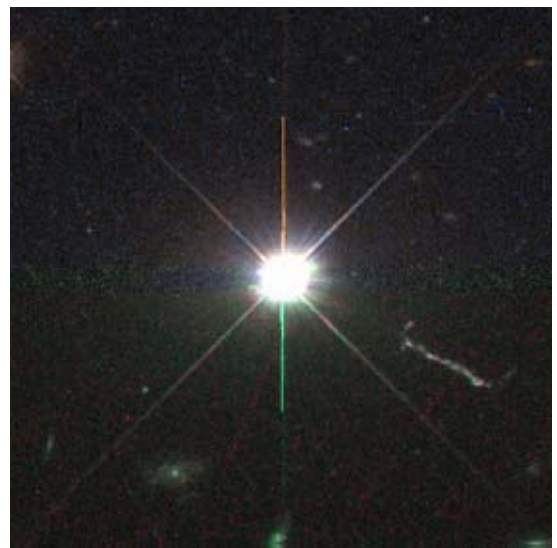
12 28 11 +44 05 33



3C 273 in Virgo

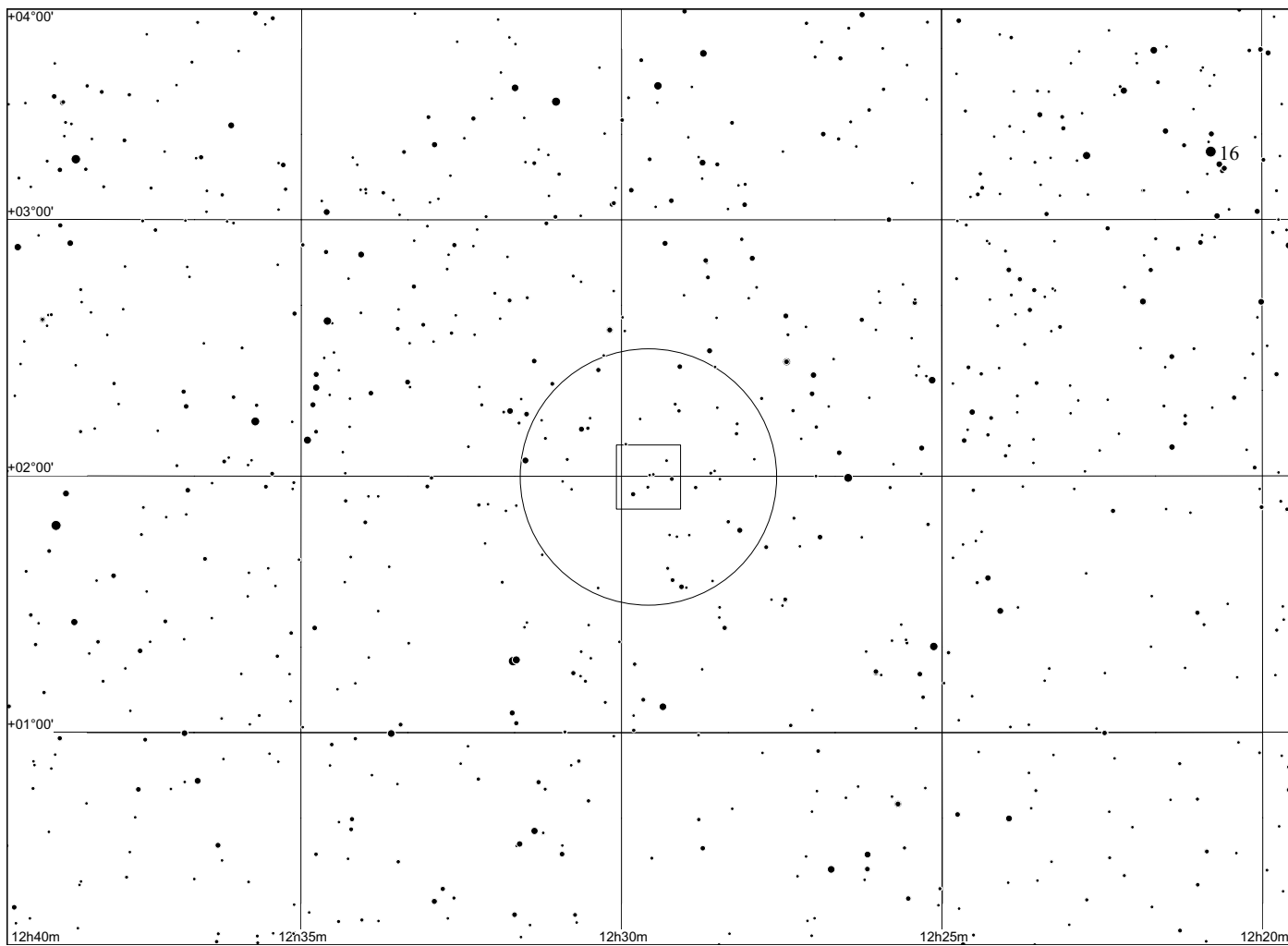
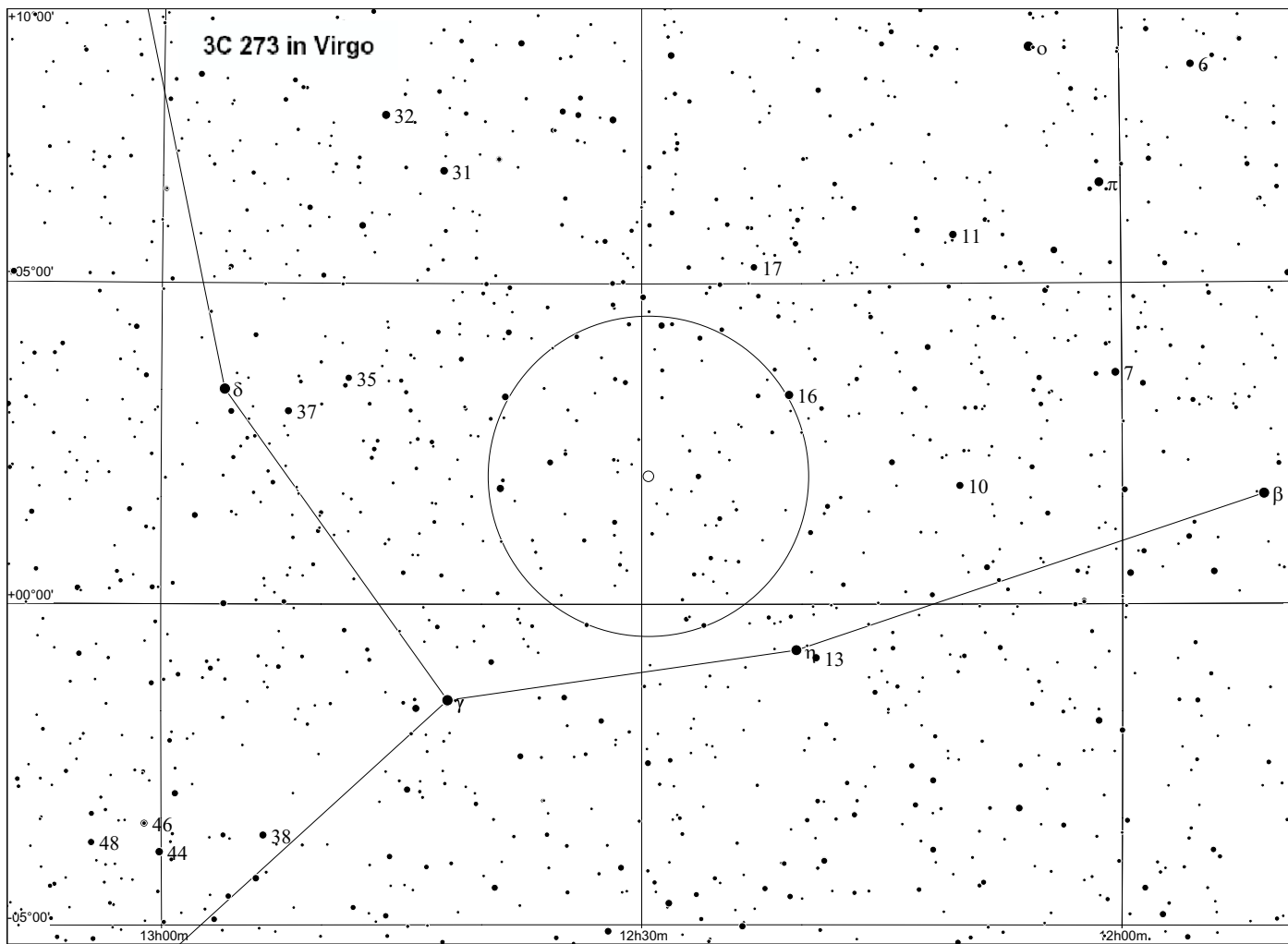


| star | B | V | R |
|----------|-------------|-------------|-------------|
| C | 12.85(0.05) | 11.87(0.04) | 11.30(0.04) |
| D | 13.17(0.05) | 12.68(0.04) | 12.31(0.04) |
| E | 13.33(0.07) | 12.69(0.04) | 12.27(0.05) |
| G | 14.12(0.05) | 13.56(0.05) | 13.16(0.05) |

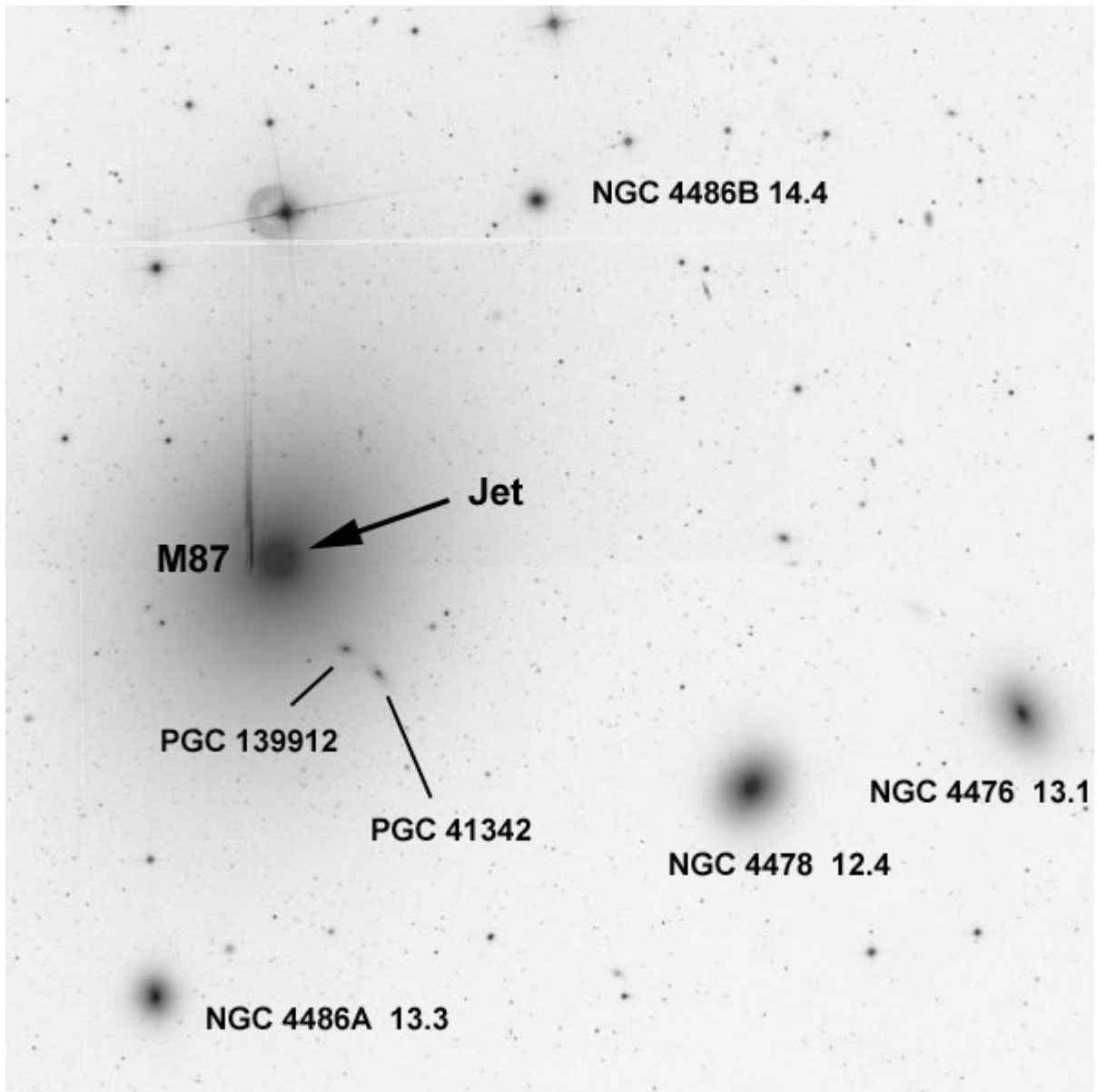


| | other | RA | Dek | comments |
|---------------|-------|----------|-----------|-----------|
| 3C 273 | | 12 29 06 | +02 03 08 | first QSO |

3C273 war der erste Quasar, bei dem das Spektrum von Maarten Schmidt als extrem rotverschoben erkannt wurde (was Allen Sandage, dem Nachfolger von Hubble an Palomar, ziemlich düpierte). Quasar sind Galaxien mit extrem hellen Kernen, in denen Materie auf eine Akkretionsscheibe um ein zentrales Schwarzes Loch stürzt. 3C273 hat eine Rotverschiebung von 0.158 und ist 2.4 Milliarden Lichtjahre entfernt.

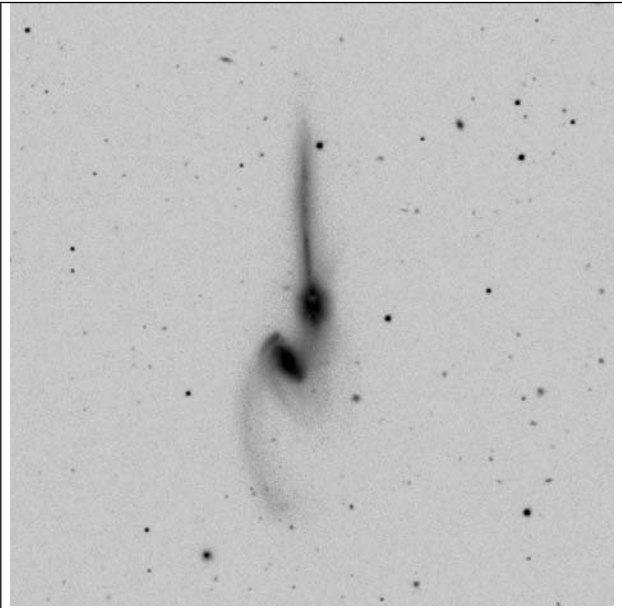
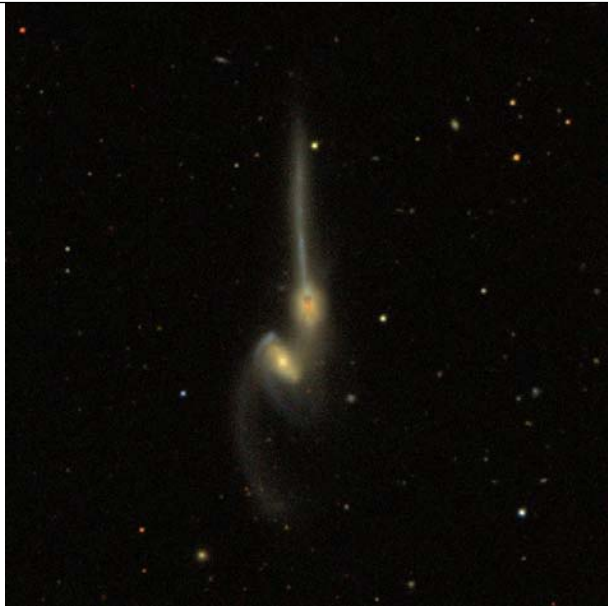
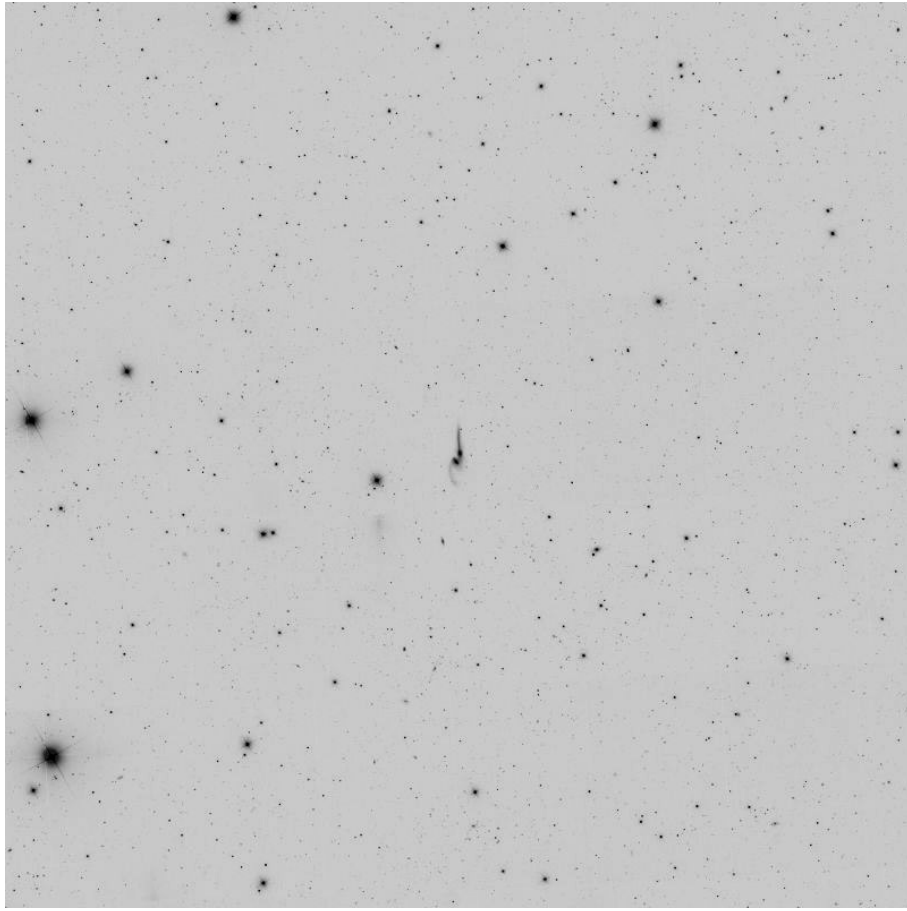


M87 in Virgo



| | | |
|-----|--------------------|--|
| M87 | 12 30 49 +12 23 28 | |
|-----|--------------------|--|

NGC 4676 in Coma Berenices

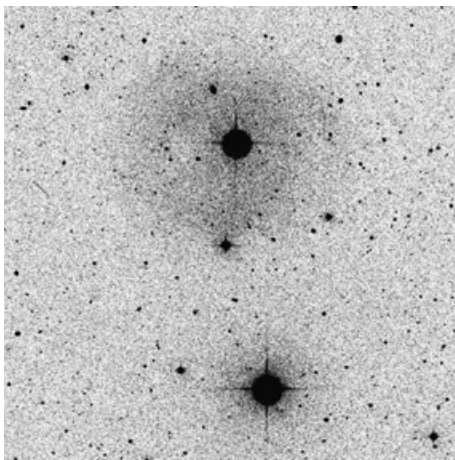
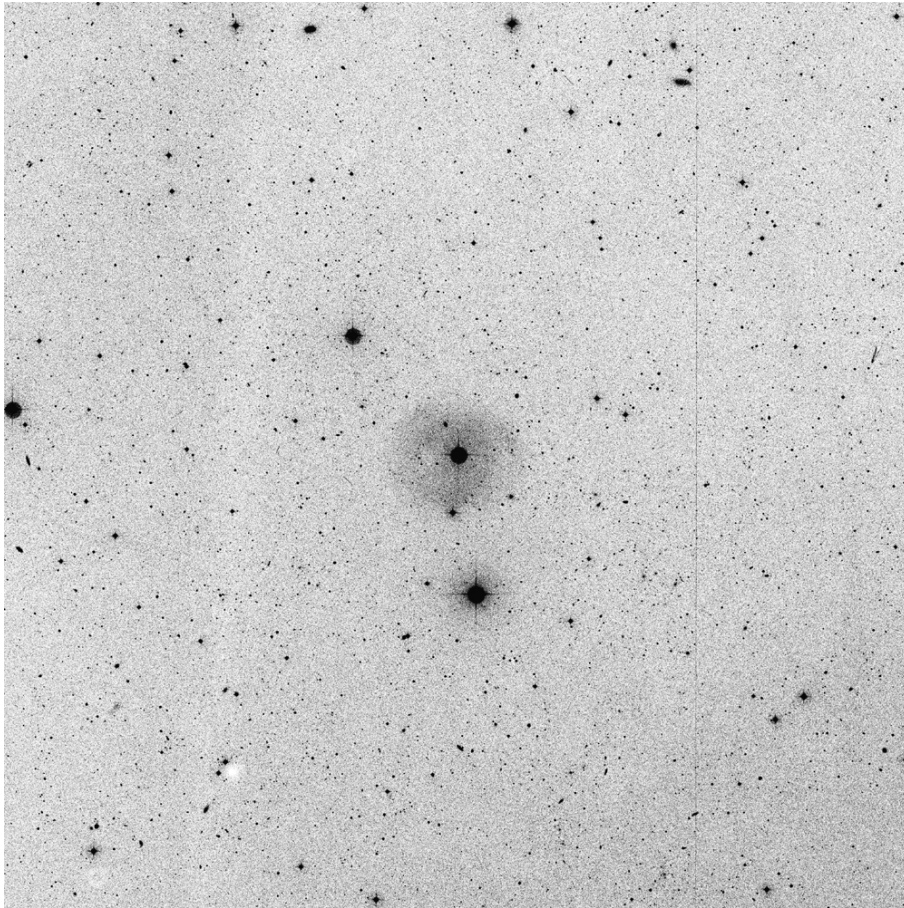


NGC 4676

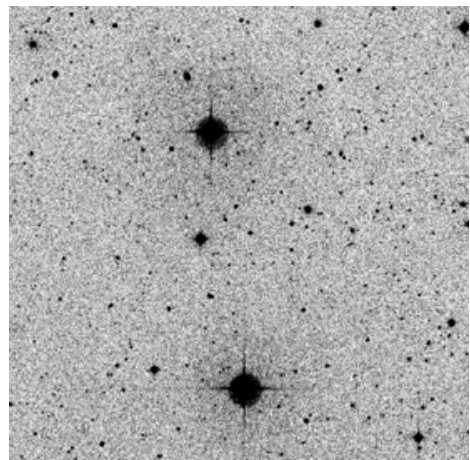
12 46 00 +30 44 00

The Mice

Longmore-Tritton (LoTr) 5 in Coma Berenices



POSS blue



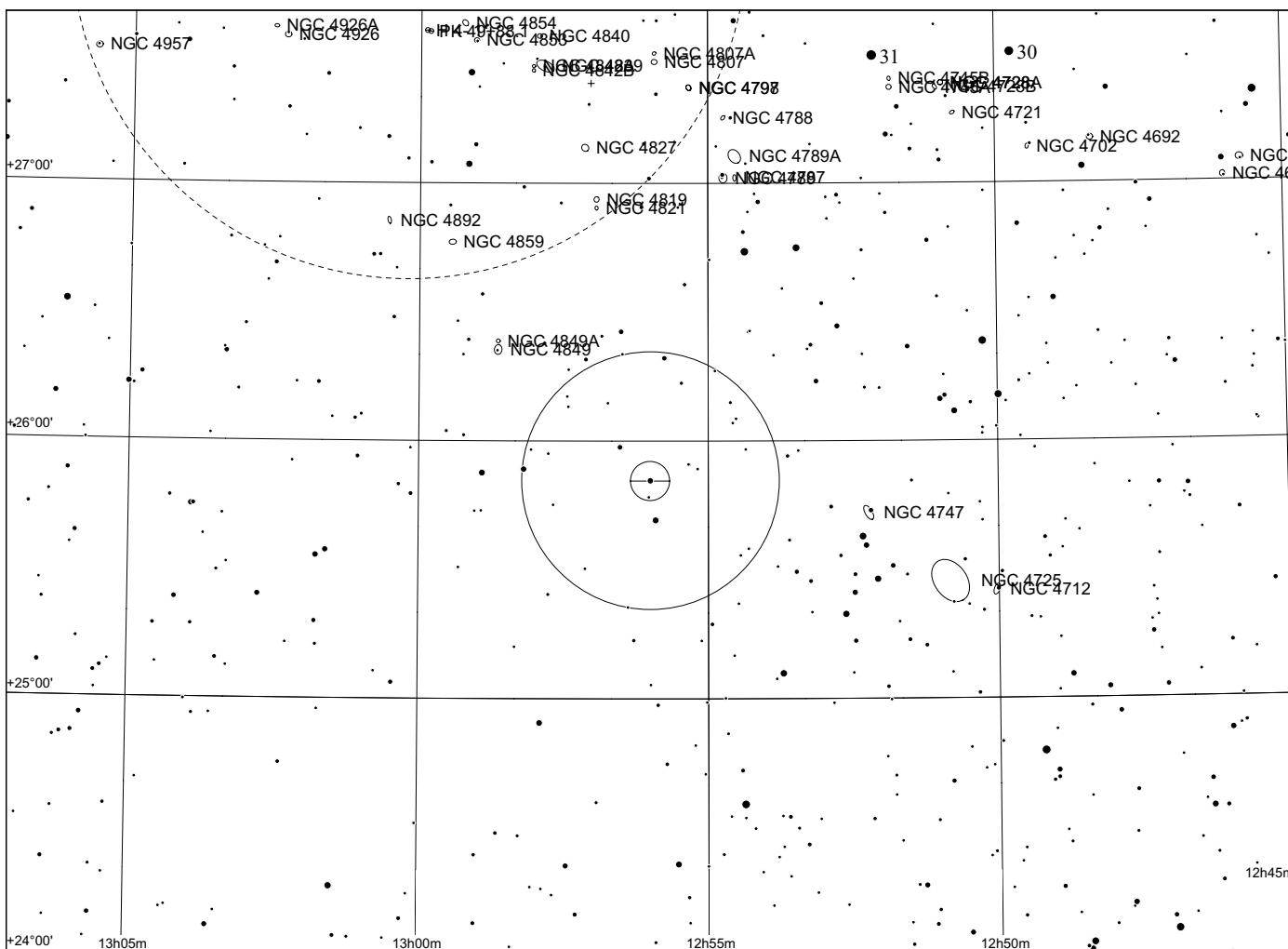
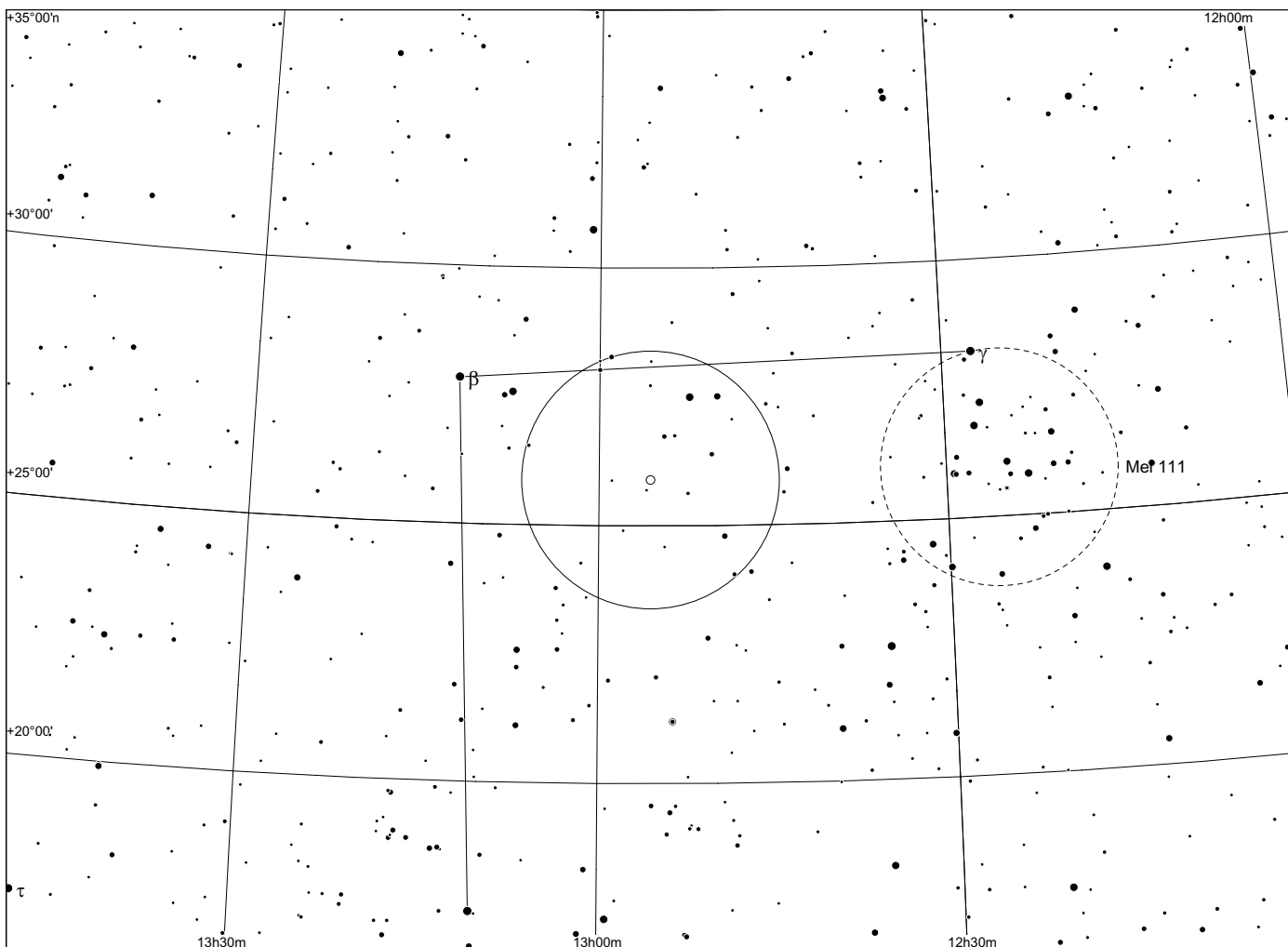
POSS red

| | RA | dec | diam ['] | other | visibility on POSS II |
|---------------|-----------|-----------|----------|-------|---------------------------------|
| LoTr 5 | 12h 55 34 | +25 53 28 | 9* 8 | | good on blue, very faint on red |

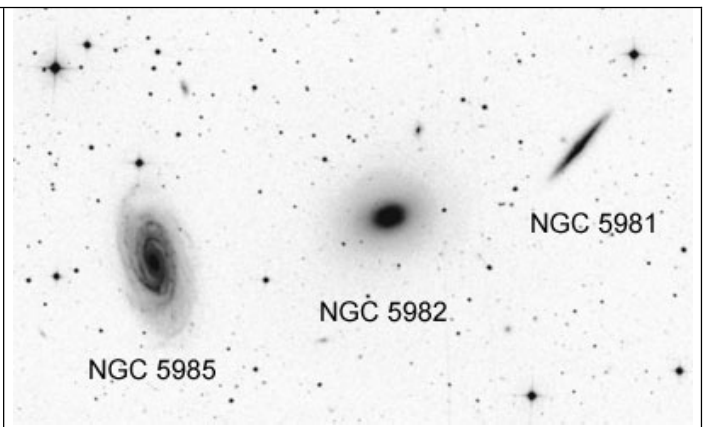
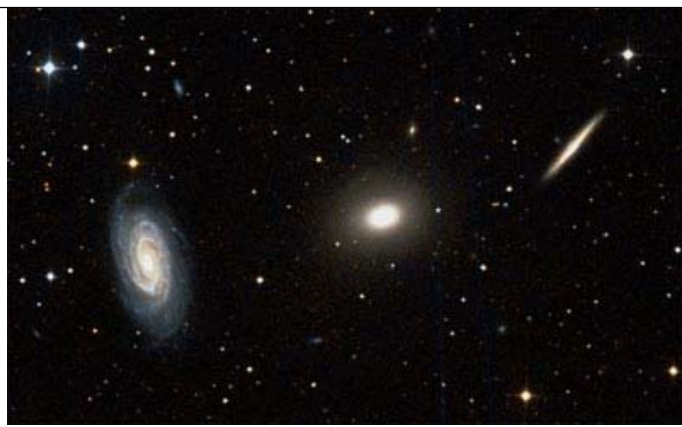
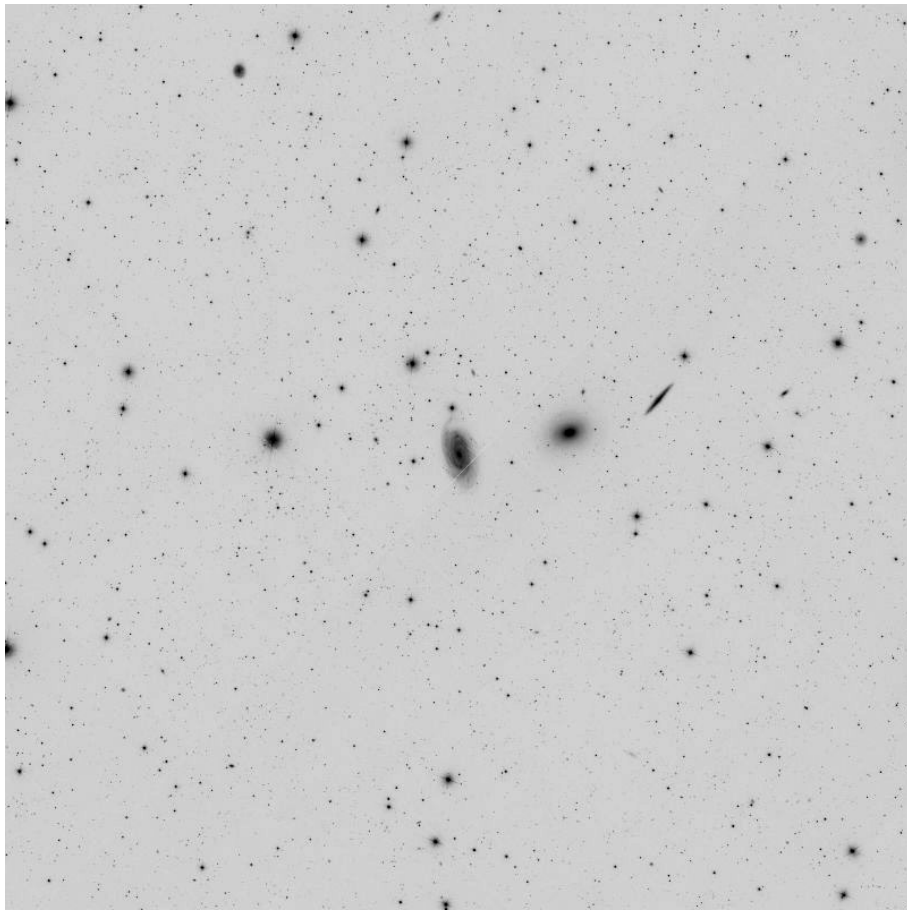
Observing notes:

22" f/4.5

Successfully observed several times with OIII filtering. Not overly difficult. LoTr 5 shows a faint disk with relatively well defined boundary to the S, coinciding with the small star between the CS and the brighter star to the S. Also visible with UHC with somewhat lower contrast.

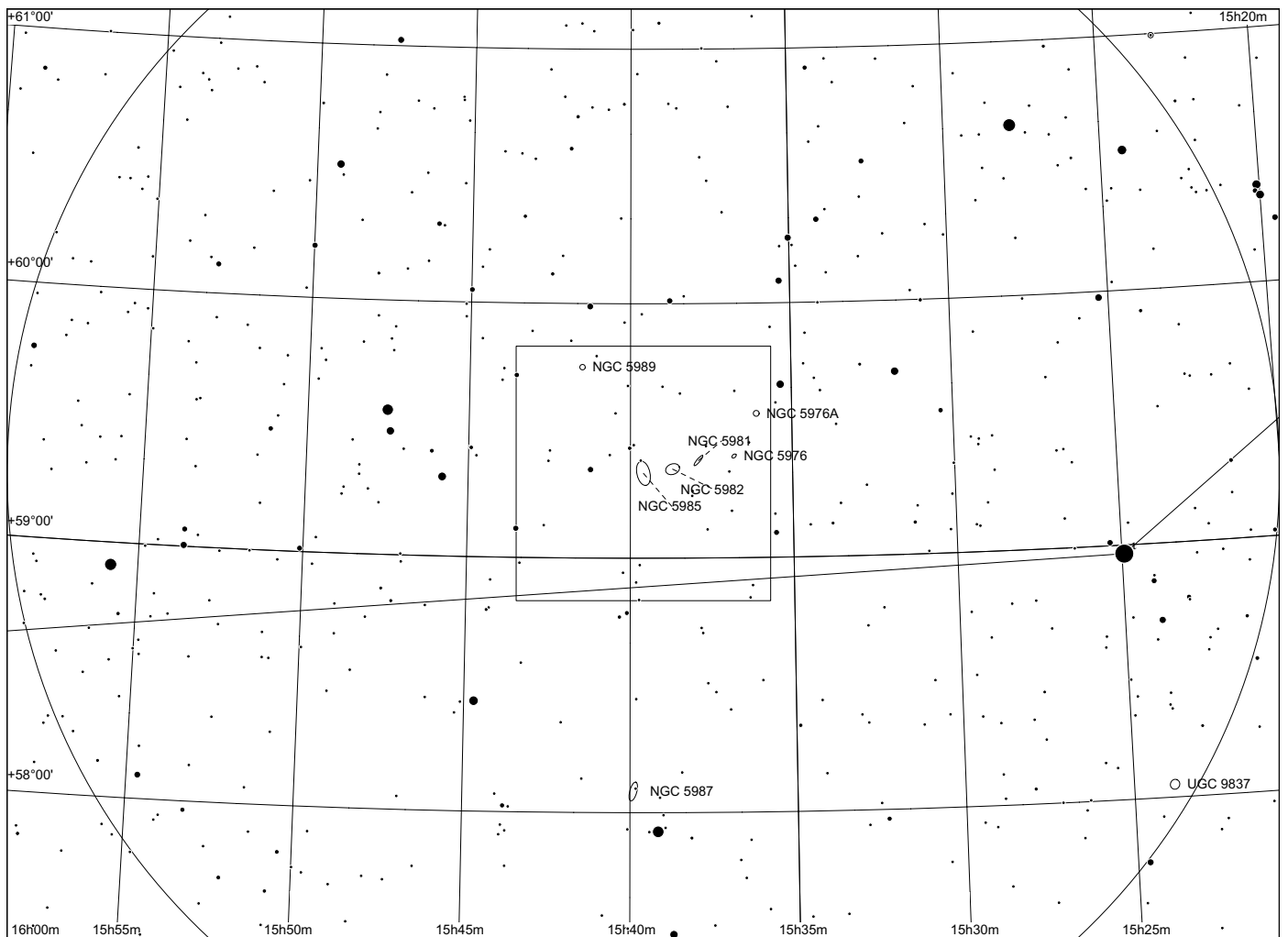
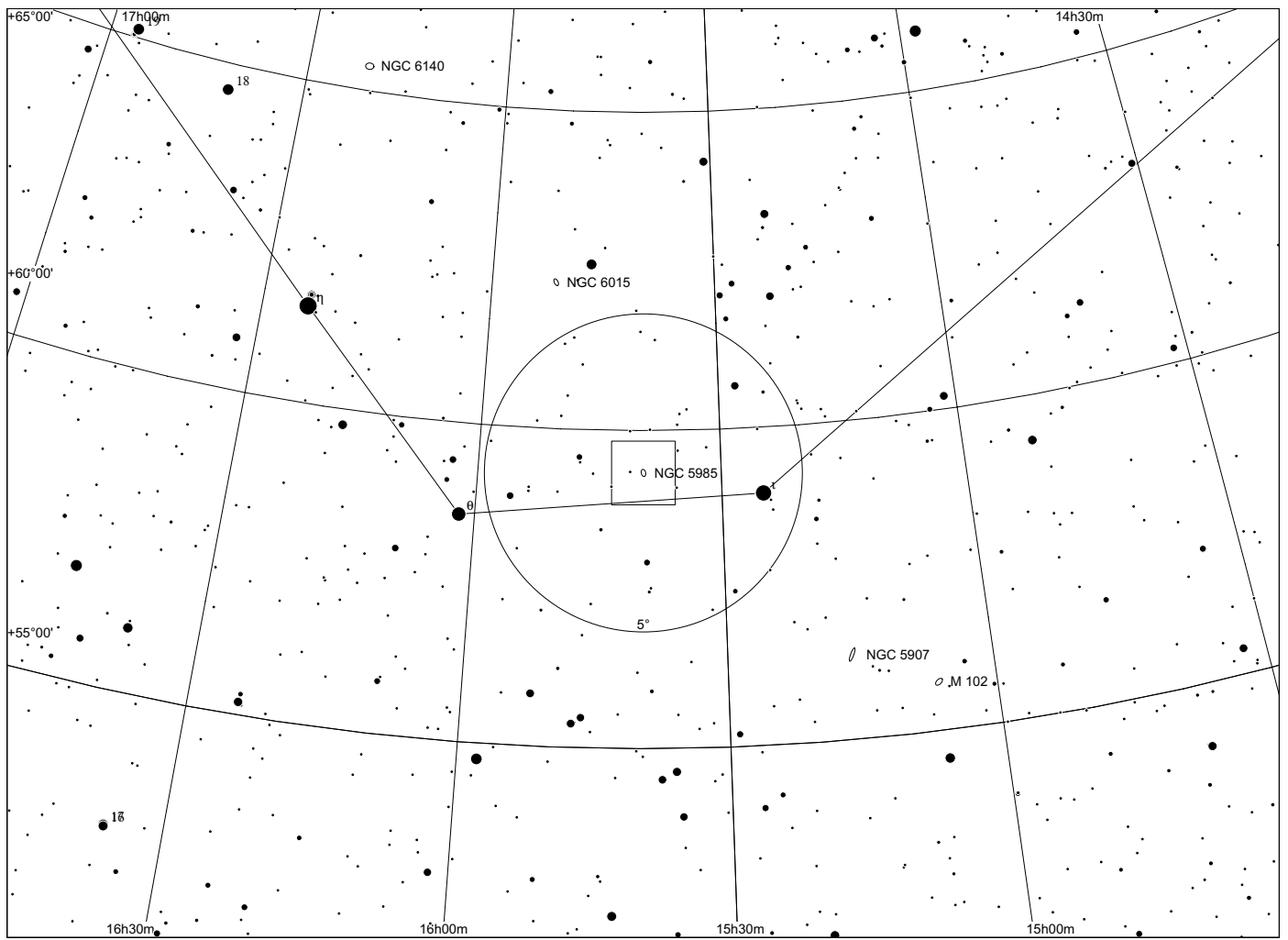


Draco Triplet in Draco

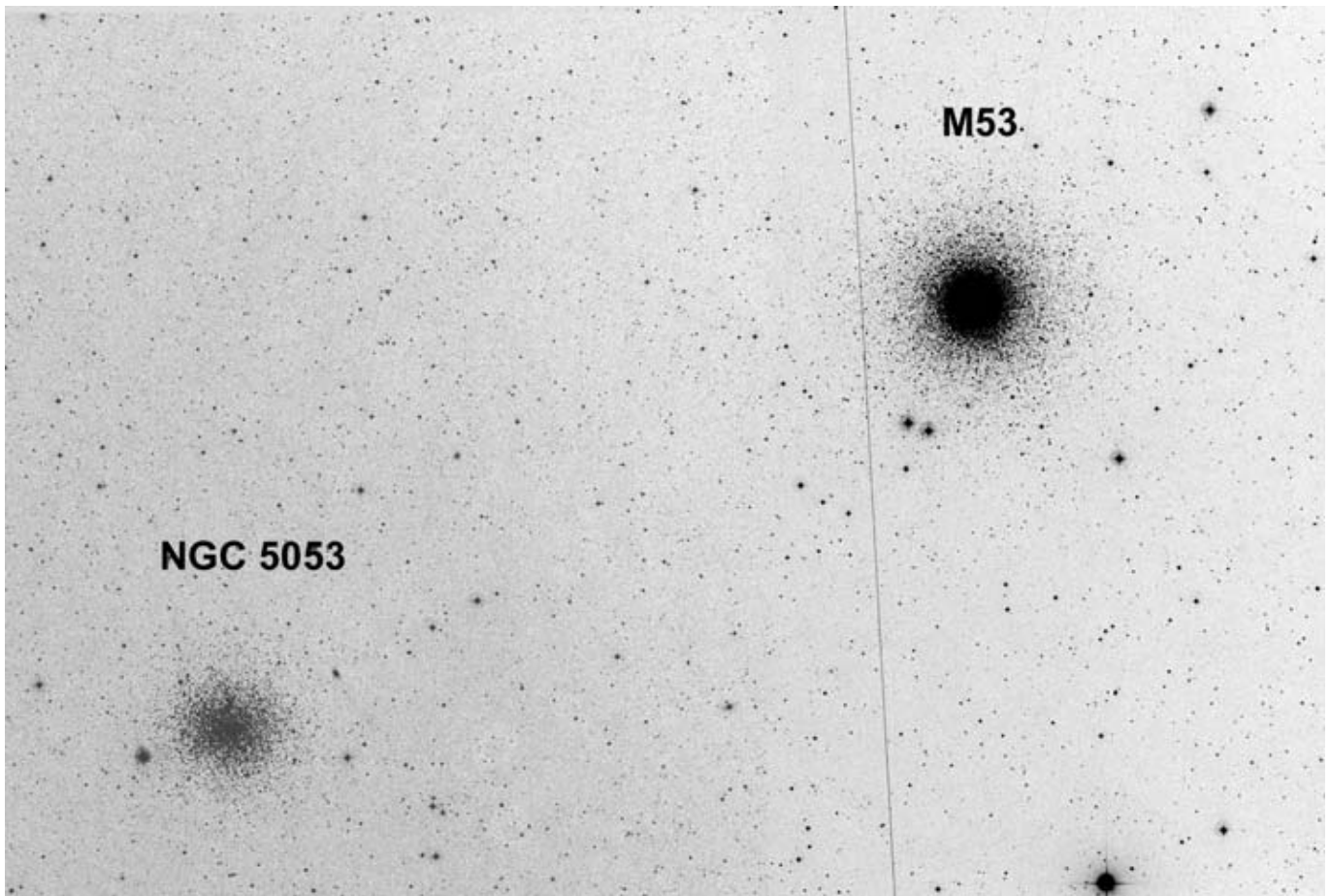


NGC 5985

13 08 12 +41 40 34



M53 / NGC5053 in Ophiuchus

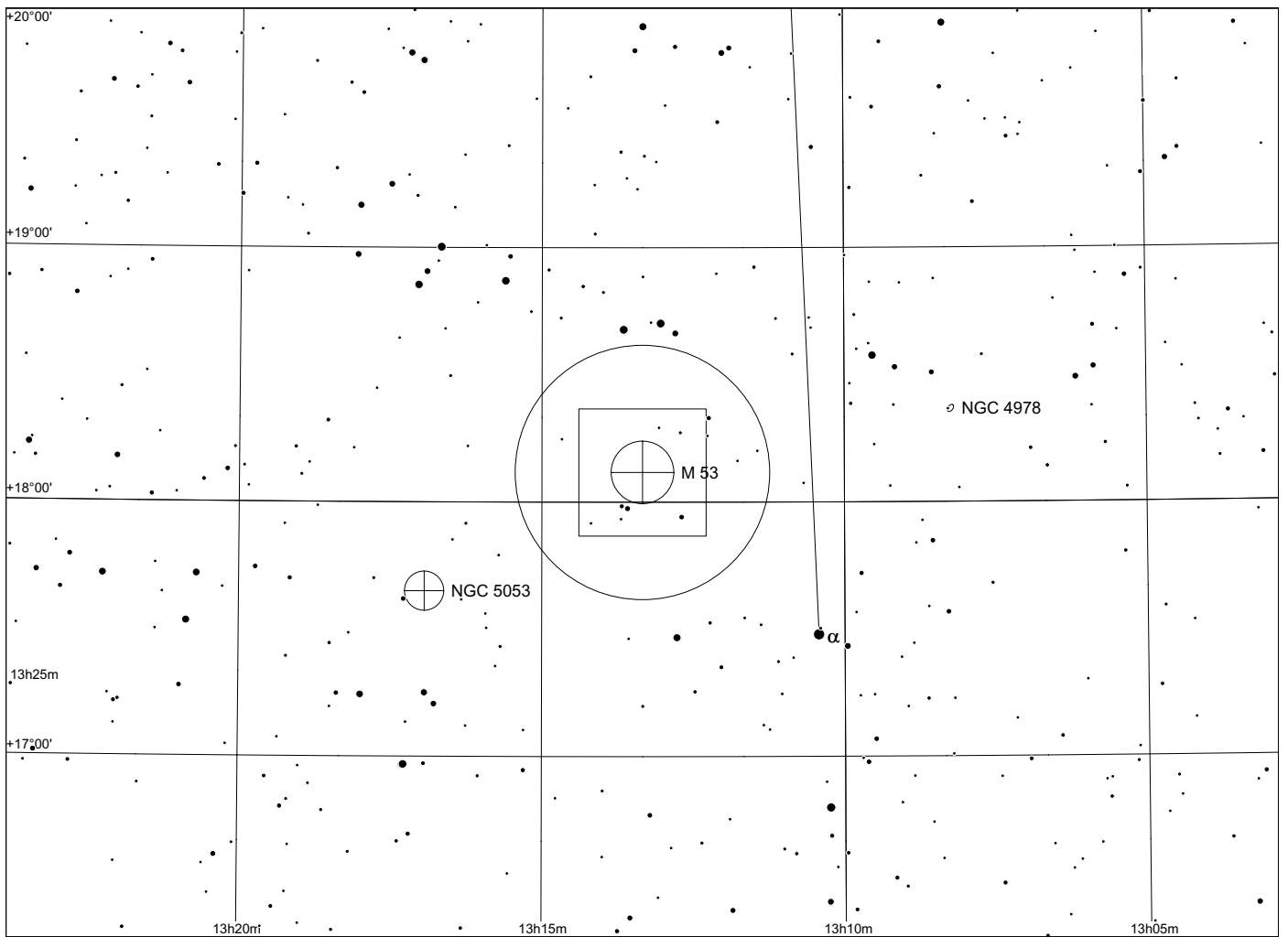
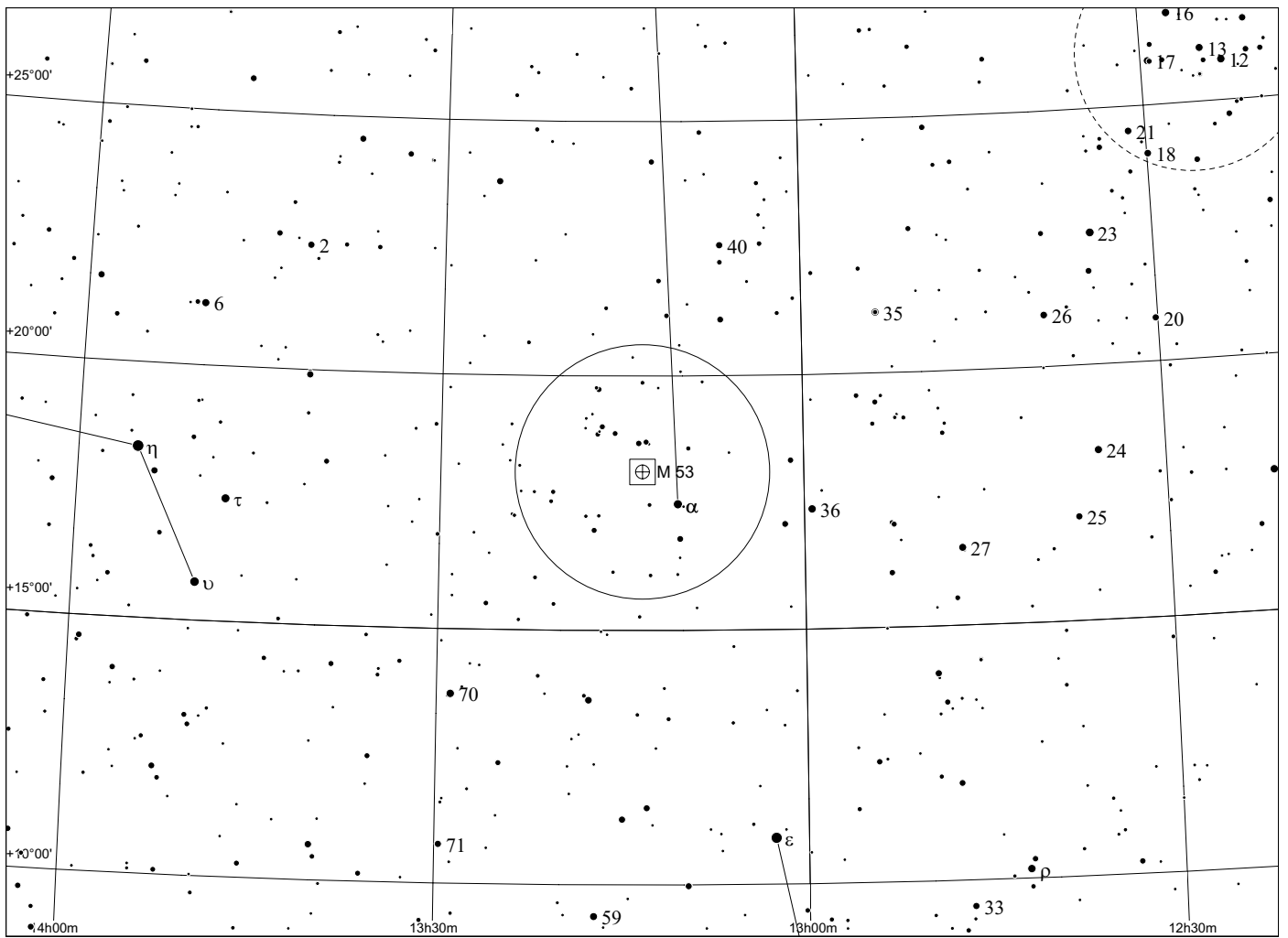


120x60 blue

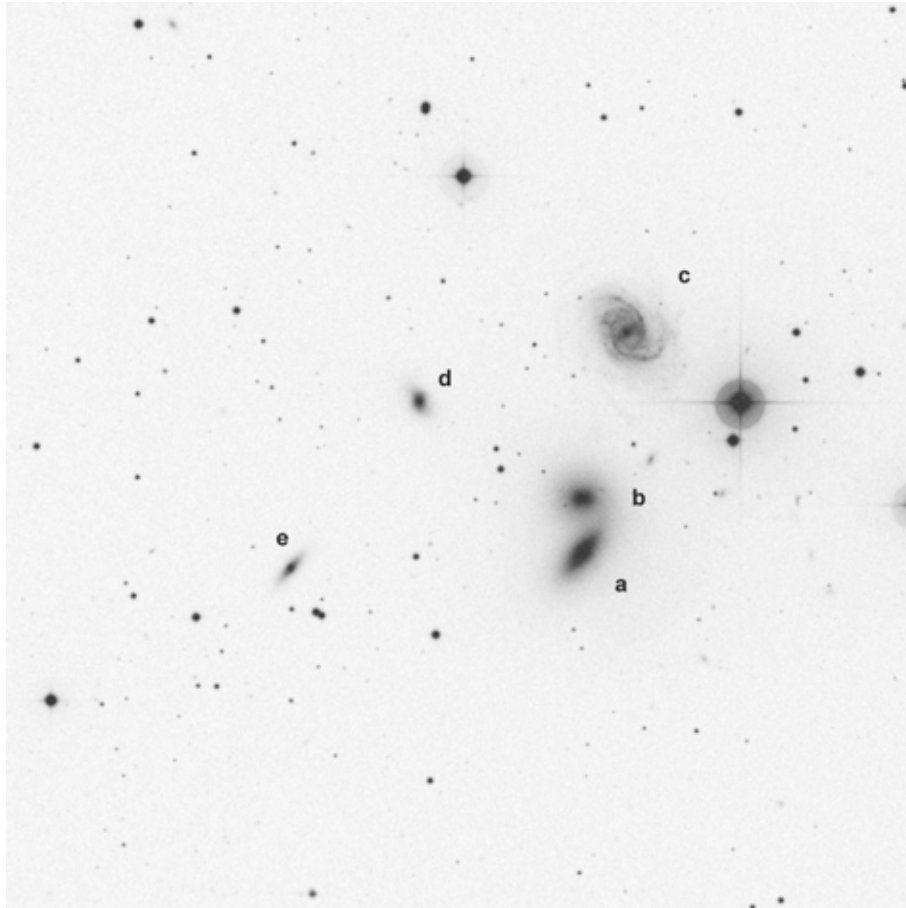
| | other | RA | Dek | comments |
|----------------|-------|--------|--------|----------|
| M53 | | 13h 13 | +18 10 | class V |
| NGC5053 | | | | class XI |

Zwei extrem unterschiedliche Kugelsternhaufen, die sehr eng beieinander stehen. Beide Kugelsternhaufen sind etwa 60 000 Lichtjahre entfernt, liegen also auch real nahe beieinander. Ihr unterschiedliches Erscheinungsbild beruht also auf ihrer unterschiedlichen Struktur und nicht auf unterschiedlicher Entfernung.

M53 ist ein schon recht stark konzentriert (Klasse V in der von I (stark konzentriert) bis XII (locker) reichenden Klassifizierung von Kugelsternhaufen), während 5053 nur Klasse XI erreicht. 5053 ist erheblich schwieriger als er auf der POSS Aufnahme erscheint! Er hat 9m8, besitzt etwa 3500 Sterne, von denen die hellsten 13m8 erreichen. "Normale" Kugelsternhaufen besitzen mehrere 100 000 Sterne.



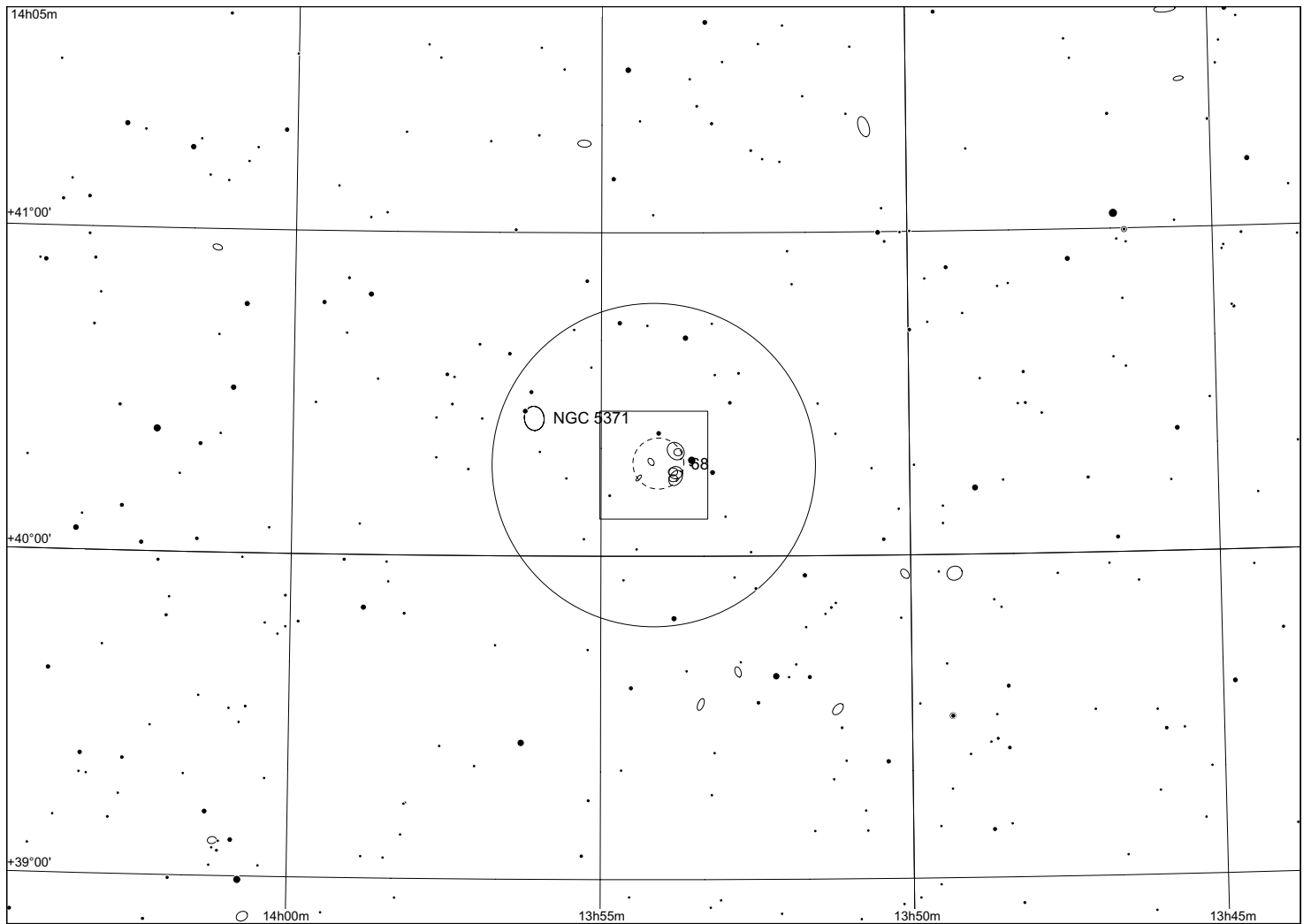
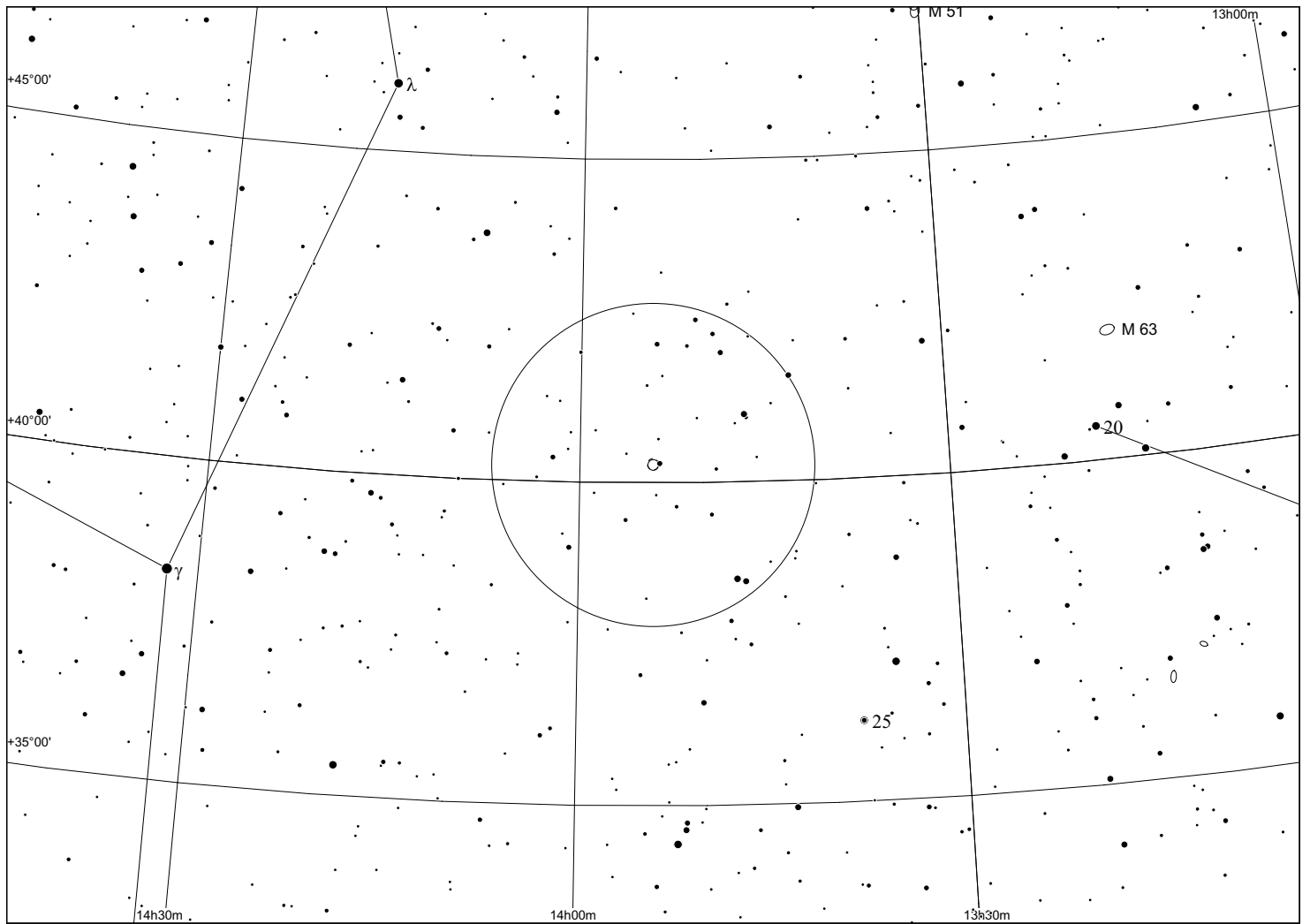
Hickson 68 in Canes Venatici



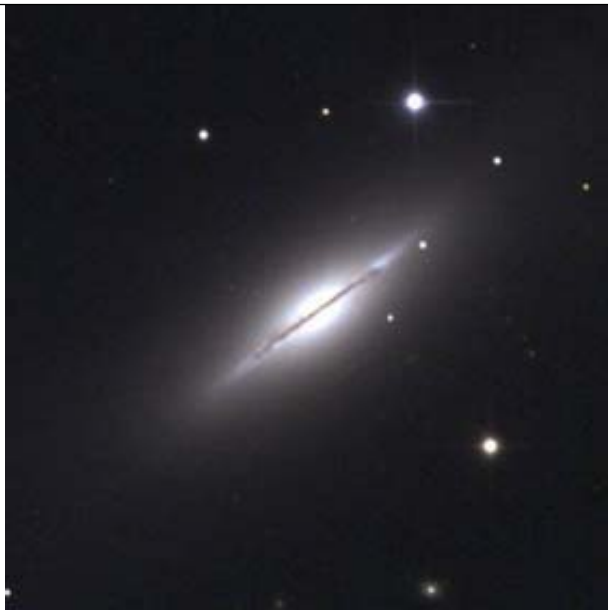
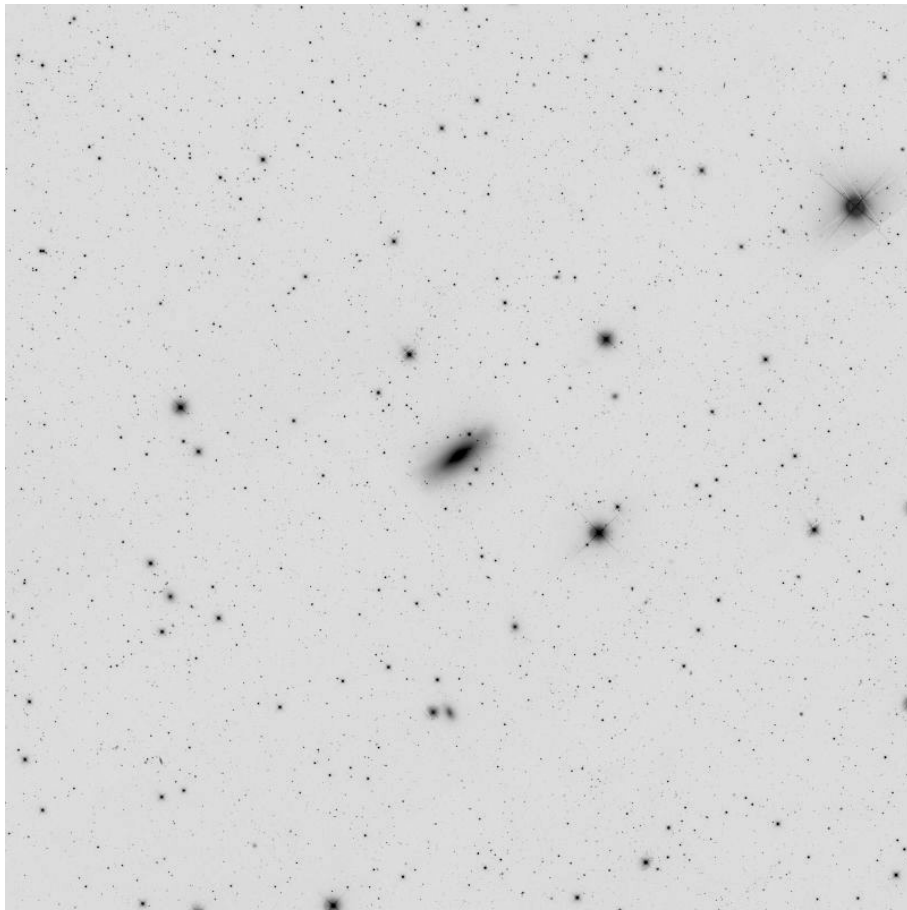
HCG Const. coordinates (2000) bright. memb. mag
 68 CVn 13h 53m 41s +40° 20' NGC 5353 11.8

| galaxy | ra (1950) | dec | a " | b " | type | T | B-I | C | D _B " | R-I | C | D _R " | B-R | B _T | B _{TC} | err | v _r km/s | err km/s | C | names | |
|---------------|-------------|-------------|--------|--------|------|---|-------|---|---------------------|-------|---|---------------------|------|----------------|-----------------|------|------------------------|-------------|---|--------|--|
| 68a | 13 51 19.59 | +40 31 42.5 | 77.40 | 59.90 | S0 | 1 | 12.04 | 1 | 112.30 | 10.19 | 1 | 197.30 | 1.63 | 12.08 | 11.84 | 0.08 | 2162 | 27 | 0 | N5353, | |
| U8813 | | | | | | | | | | | | | | | | | | | | | |
| 68b | 13 51 19.70 | +40 32 52.8 | 86.40 | 71.10 | E2 | 0 | 12.52 | 1 | 114.30 | 10.56 | 1 | 234.10 | 1.63 | 12.44 | 12.24 | 0.06 | 2635 | 23 | 0 | N5354, | |
| U8814 | | | | | | | | | | | | | | | | | | | | | |
| 68c | 13 51 14.81 | +40 36 32.0 | 76.70 | 61.90 | SBbc | 6 | 12.11 | 2 | 134.30 | 10.90 | 2 | 166.40 | 1.10 | 12.20 | 11.93 | 0.20 | 2313 | 38 | 0 | N5350, | |
| Mk1485, U8810 | | | | | | | | | | | | | | | | | | | | | |
| 68d | 13 51 38.79 | +40 35 00.5 | 31.10 | 21.80 | E3 | 0 | 14.27 | 0 | 52.80 | 12.97 | 0 | 54.40 | 1.30 | 13.93 | 13.73 | 0.10 | 2408 | 29 | 0 | N5355, | |
| U8819 | | | | | | | | | | | | | | | | | | | | | |
| 68e | 13 51 52.87 | +40 31 06.8 | 35.20 | 15.50 | S0 | 1 | 14.74 | 0 | 43.70 | 13.27 | 0 | 56.40 | 1.40 | 14.56 | 14.22 | 0.10 | 2401 | 27 | 0 | N5358, | |
| U8826 | | | | | | | | | | | | | | | | | | | | | |

Zusammen mit HCG 44 im Kopf des Löwen ist HCG 68 die hellste Hickson Gruppe mit e als schwierigster Einzelgalaxie. c besitzt ein Halo, das in großen Teleskopen strukturiert ist. NGC 5371 ist eine helle Spirale 30' ENE von HCG 68.

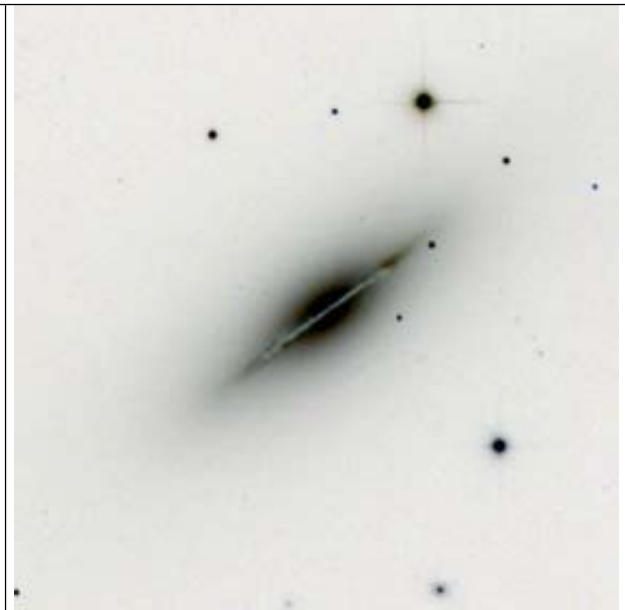


M102 in Draco

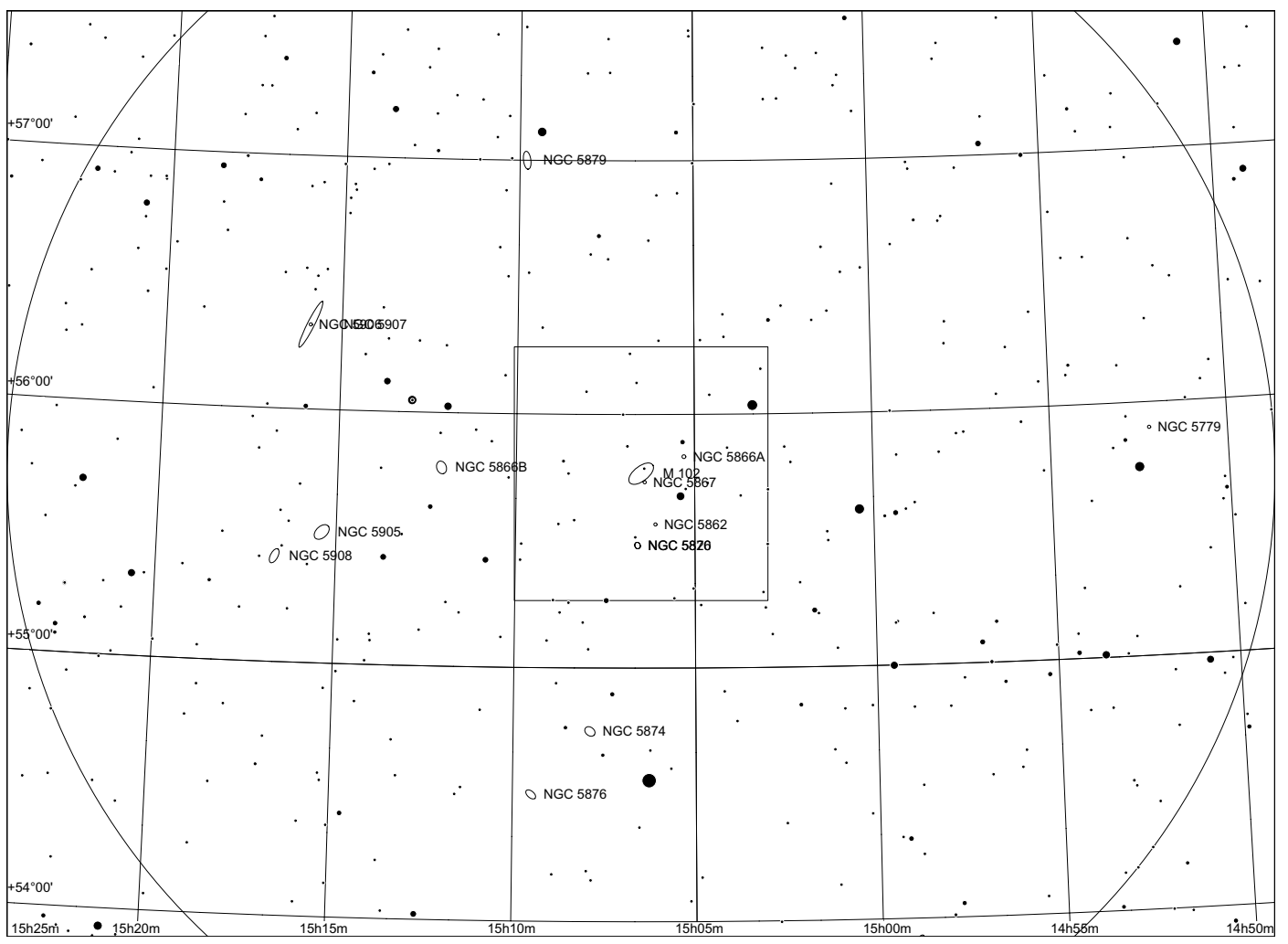
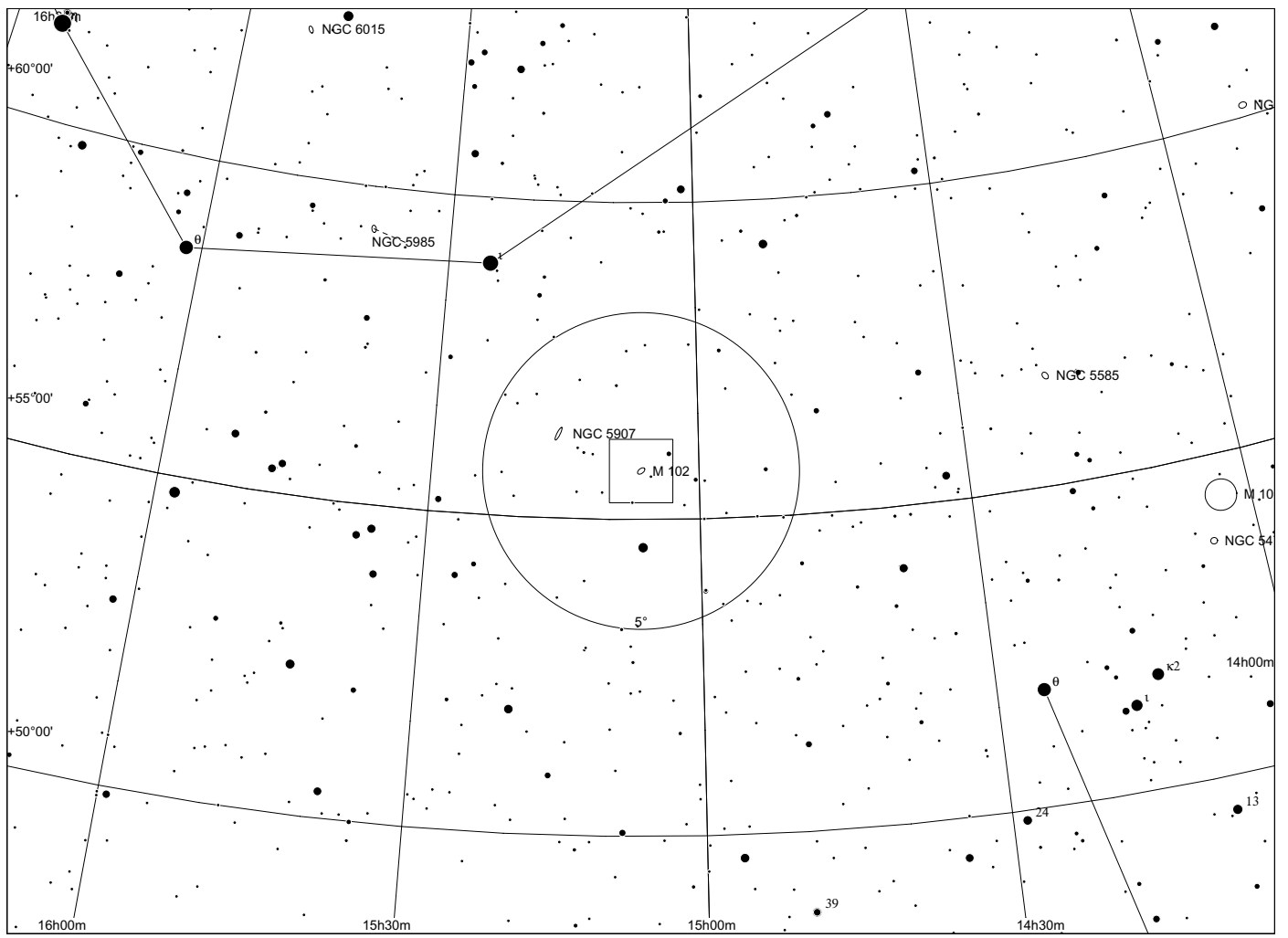


M102

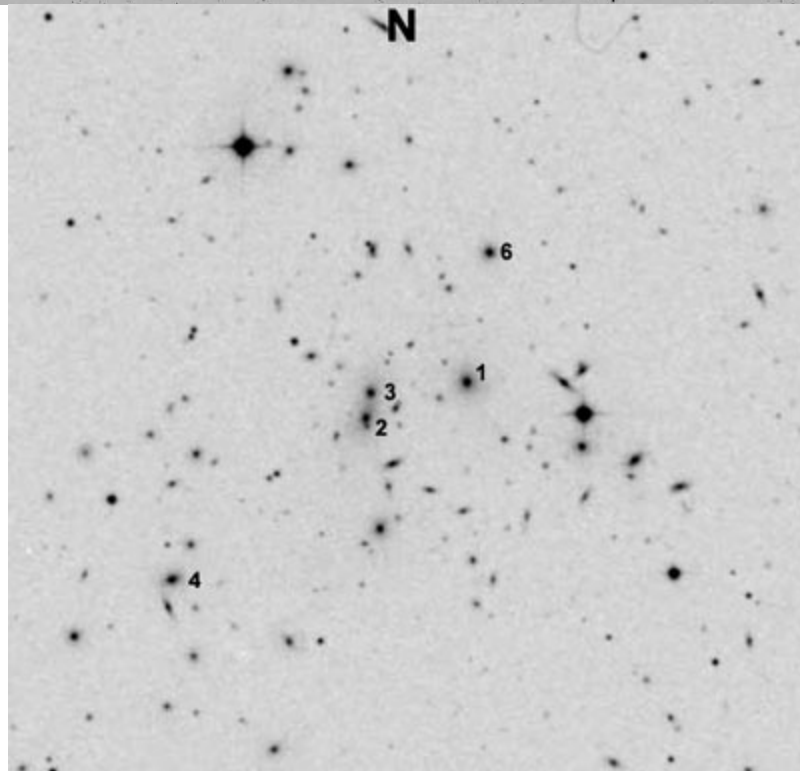
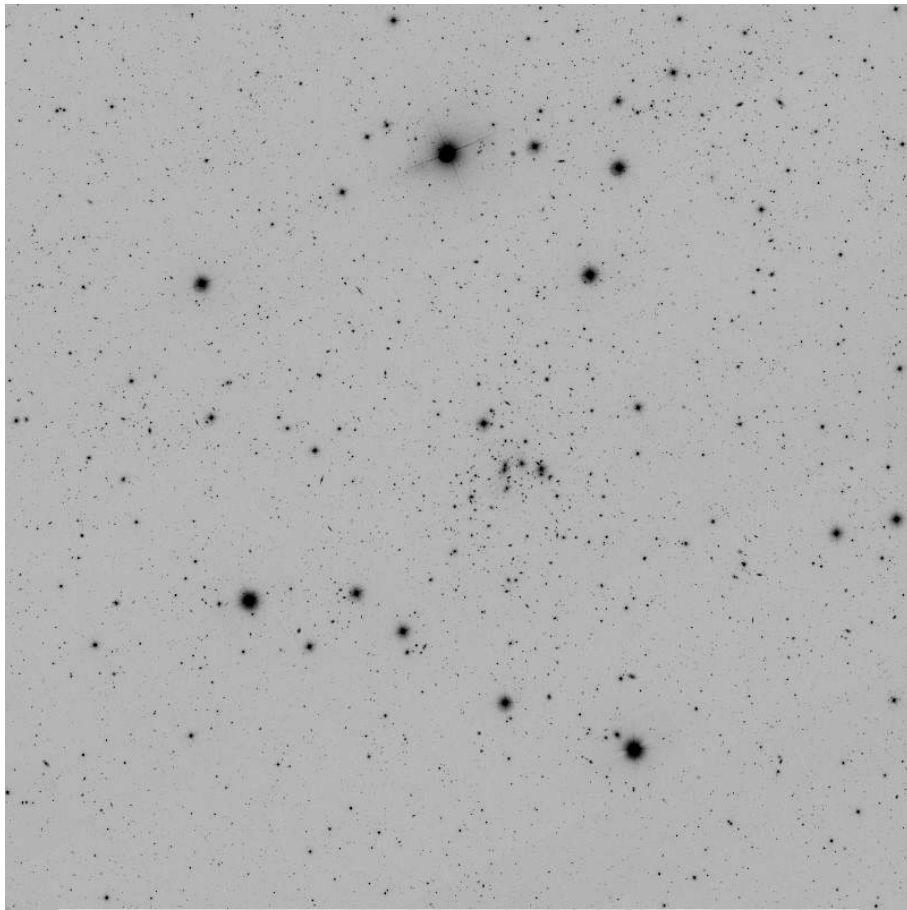
15 06 29 +55 45 47



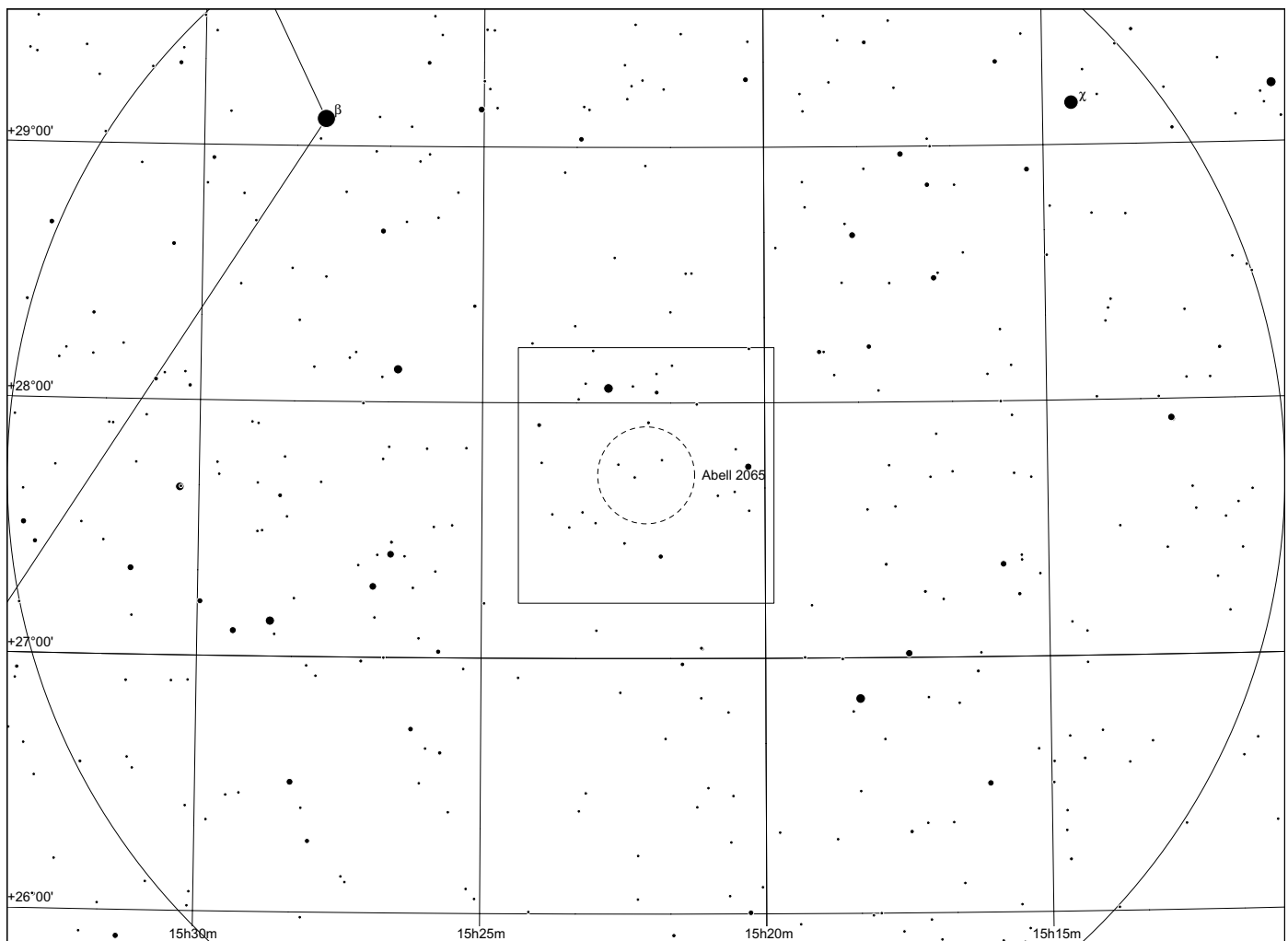
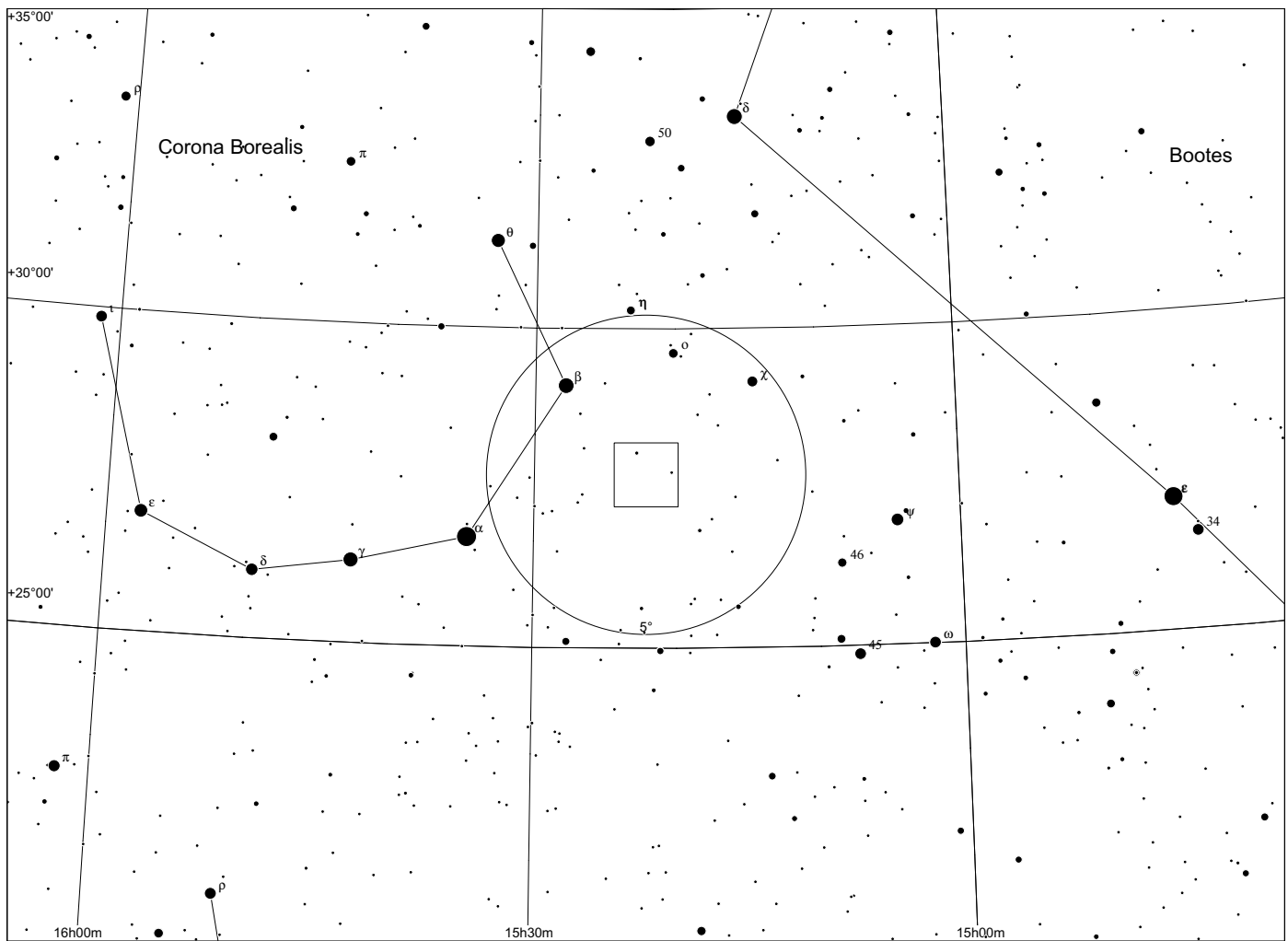
NGC 5866



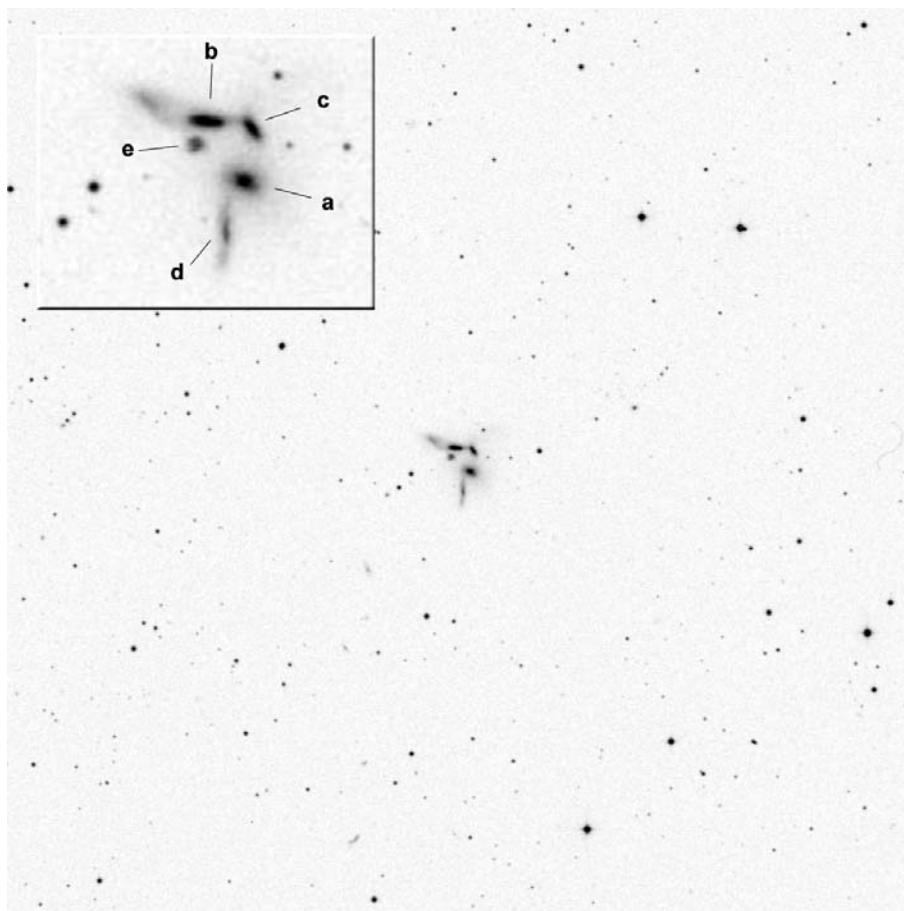
AGC 2065 in Corona Borealis



| | | |
|----------|--------------------|--|
| AGC 2065 | 15 22 42 +27 43 21 | |
|----------|--------------------|--|



Hickson 79 in Serpens



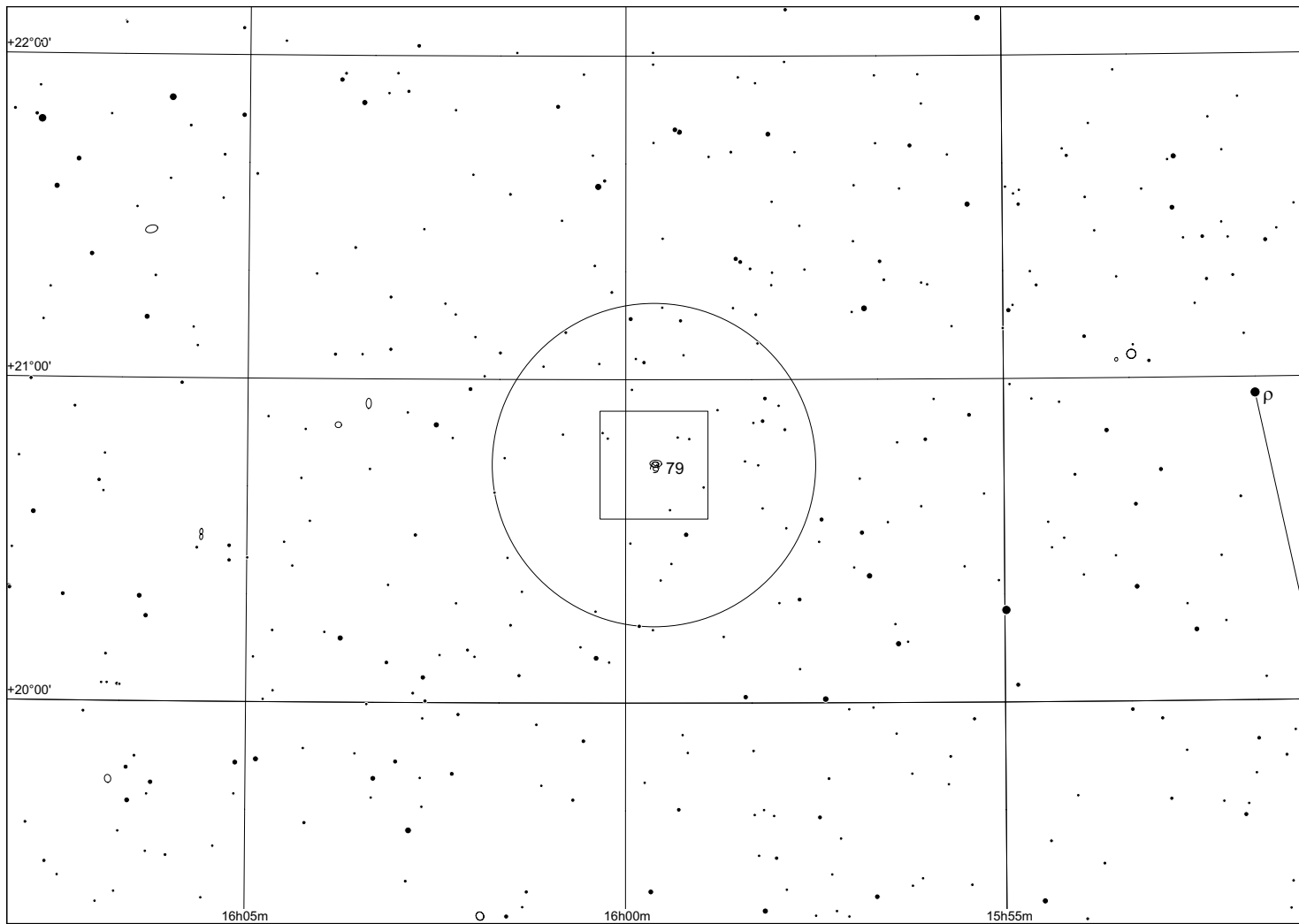
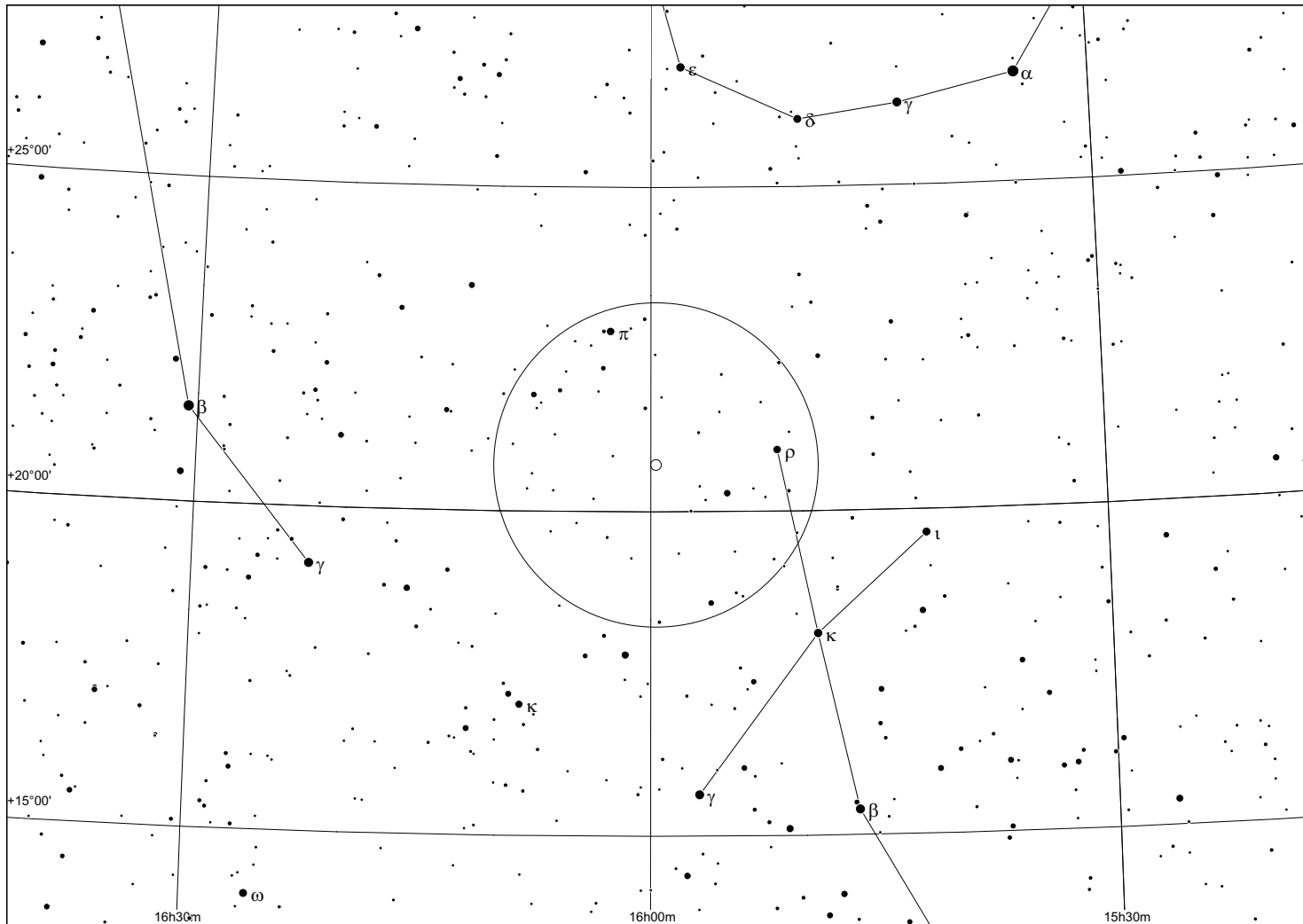
HCG Const. coordinates (2000) bright. memb. mag
 79 Ser 15h 59m 13s +20° 45' NGC 6027 13.8 Seyfert's
 Sextet

| galaxy | ra (1950) | dec | a | b | type | T | B_I | C | $\frac{D_B}{a}$ | R_I | C | $\frac{D_R}{a}$ | B-R | B_T | B_TC | err | $\frac{v_r}{km/s}$ | err | C | names |
|--------|-------------|-------------|-------|-------|------|----|-------|---|-----------------|-------|---|-----------------|------|-------|-------|------|--------------------|-----|---|--------|
| 79a | 15 56 59.59 | +20 53 43.2 | 50.20 | 48.60 | E0 | 0 | 15.12 | 1 | 44.70 | 13.46 | 1 | 50.50 | 1.60 | 14.70 | 14.35 | 0.20 | 4292 | 35 | 0 | N6027, |
| U10116 | | | | | | | | | | | | | | | | | | | | |
| 79b | 15 57 00.80 | +20 54 15.4 | 60.50 | 44.10 | S0 | 1 | 14.55 | 1 | 43.00 | 13.07 | 1 | 46.90 | 1.44 | 14.19 | 13.78 | 0.20 | 4446 | 25 | 0 | N6027, |
| U10116 | | | | | | | | | | | | | | | | | | | | |
| 79c | 15 56 59.14 | +20 54 09.8 | 40.30 | 26.10 | S0 | 1 | 15.48 | 1 | 33.80 | 14.21 | 1 | 35.70 | 1.27 | 15.15 | 14.72 | 0.20 | 4146 | 50 | 0 | N6027, |
| U10116 | | | | | | | | | | | | | | | | | | | | |
| 79d | 15 57 00.18 | +20 53 15.5 | 28.10 | 12.30 | Sdm | 10 | 16.89 | 1 | 23.50 | 16.74 | 1 | 16.10 | 0.85 | 16.51 | 15.87 | 0.20 | 4503 | 43 | 0 | N6027, |
| U10116 | | | | | | | | | | | | | | | | | | | | |
| 79e | 15 57 01.31 | +20 54 01.5 | 11.10 | 8.60 | Scd | 8 | 16.61 | 1 | 25.10 | 15.31 | 1 | 26.50 | 1.32 | 16.31 | 15.87 | 0.20 | 19809 | 50 | 0 | N6027, |
| U10116 | | | | | | | | | | | | | | | | | | | | |

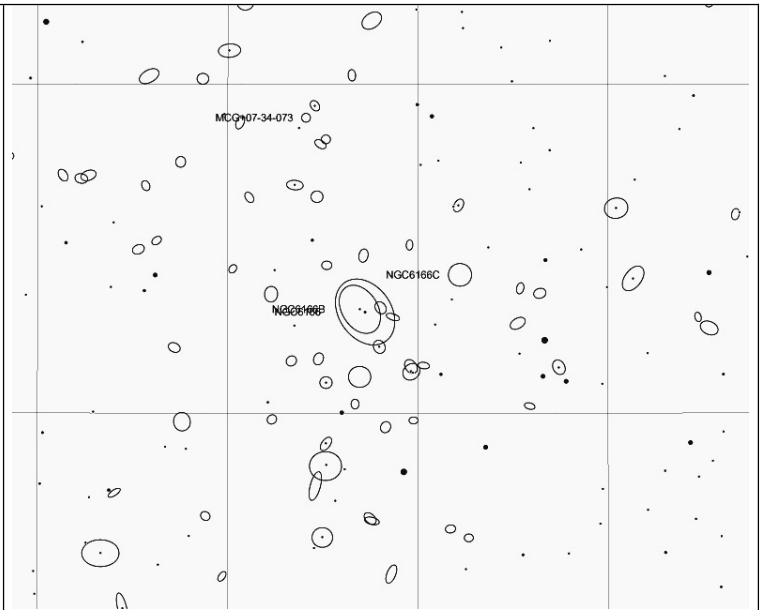
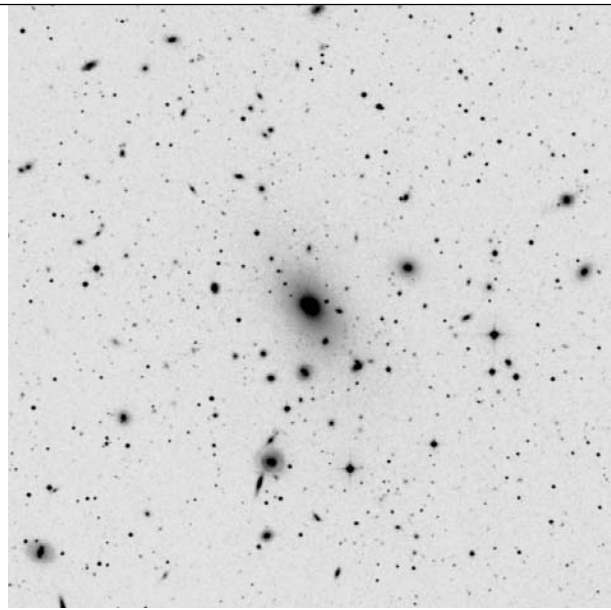
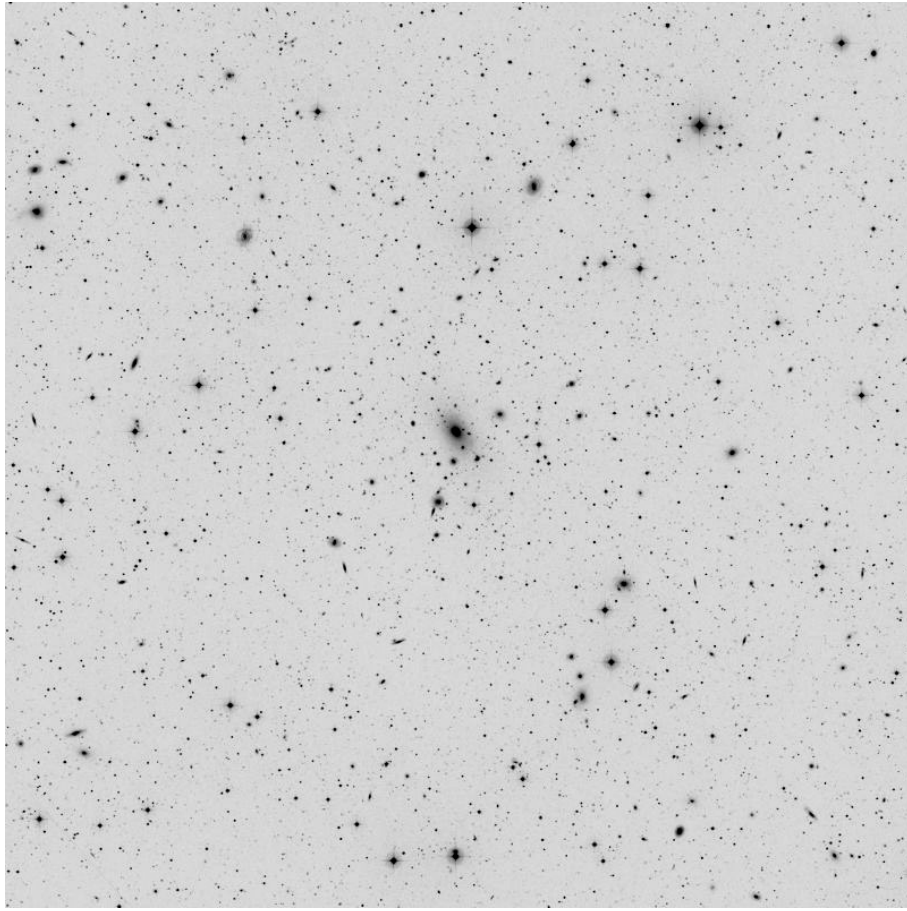
Notes:

22" f/4: Famous Seyfert's sextet, being actually a quintet with the sixth member being probably a tidal plume of b. This is an extremely challenging group requiring aperture and high magnification. It is the prototype of the extremely tight members of Hickson's catalog.

HCG 79 appears as a horseshoe-shaped glow of about 2' diameter. The group can be separated intermittently into three individual knots (a, c, and b) using 360x, still it is difficult to pin down their precise location permanently.

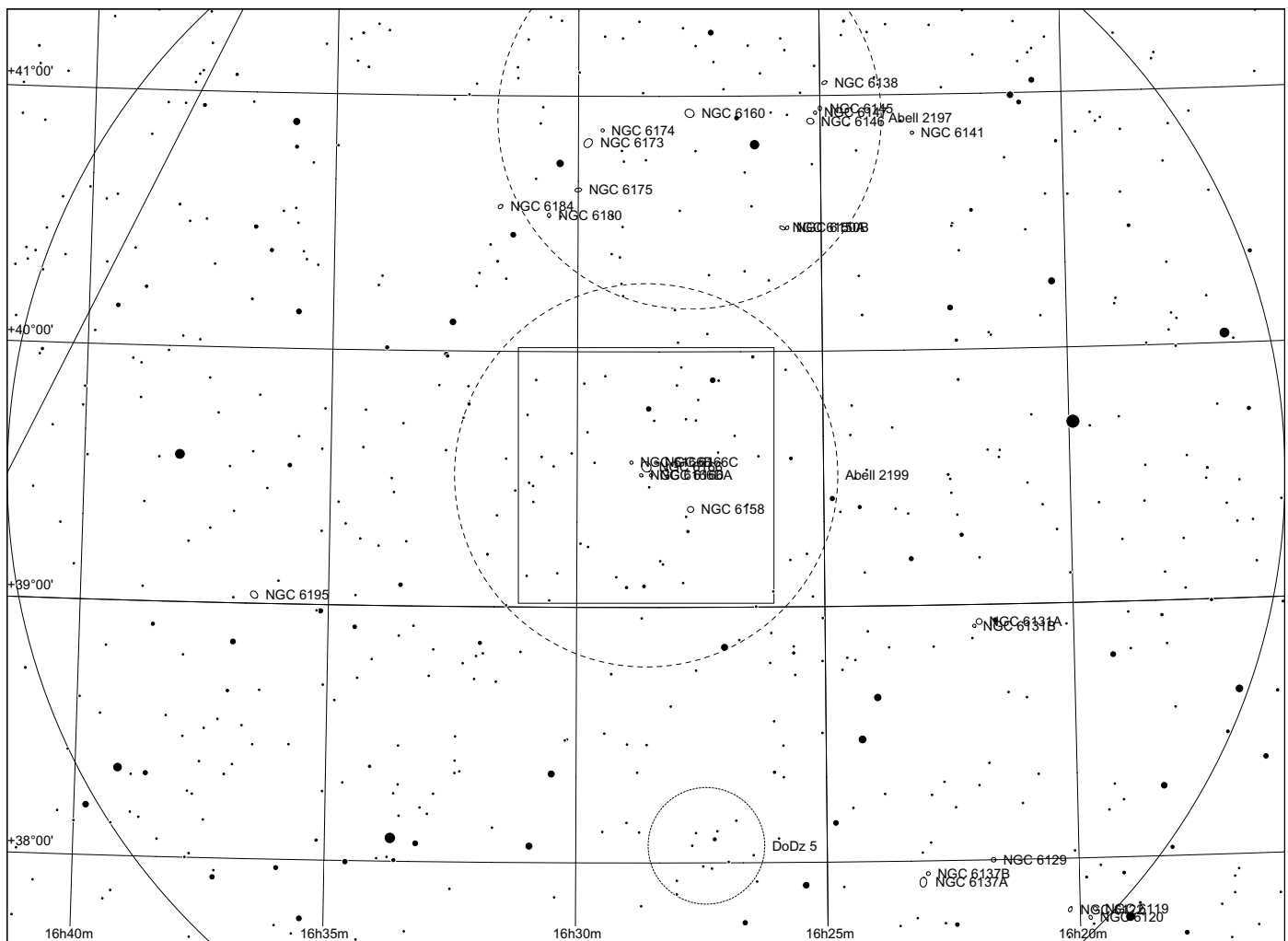
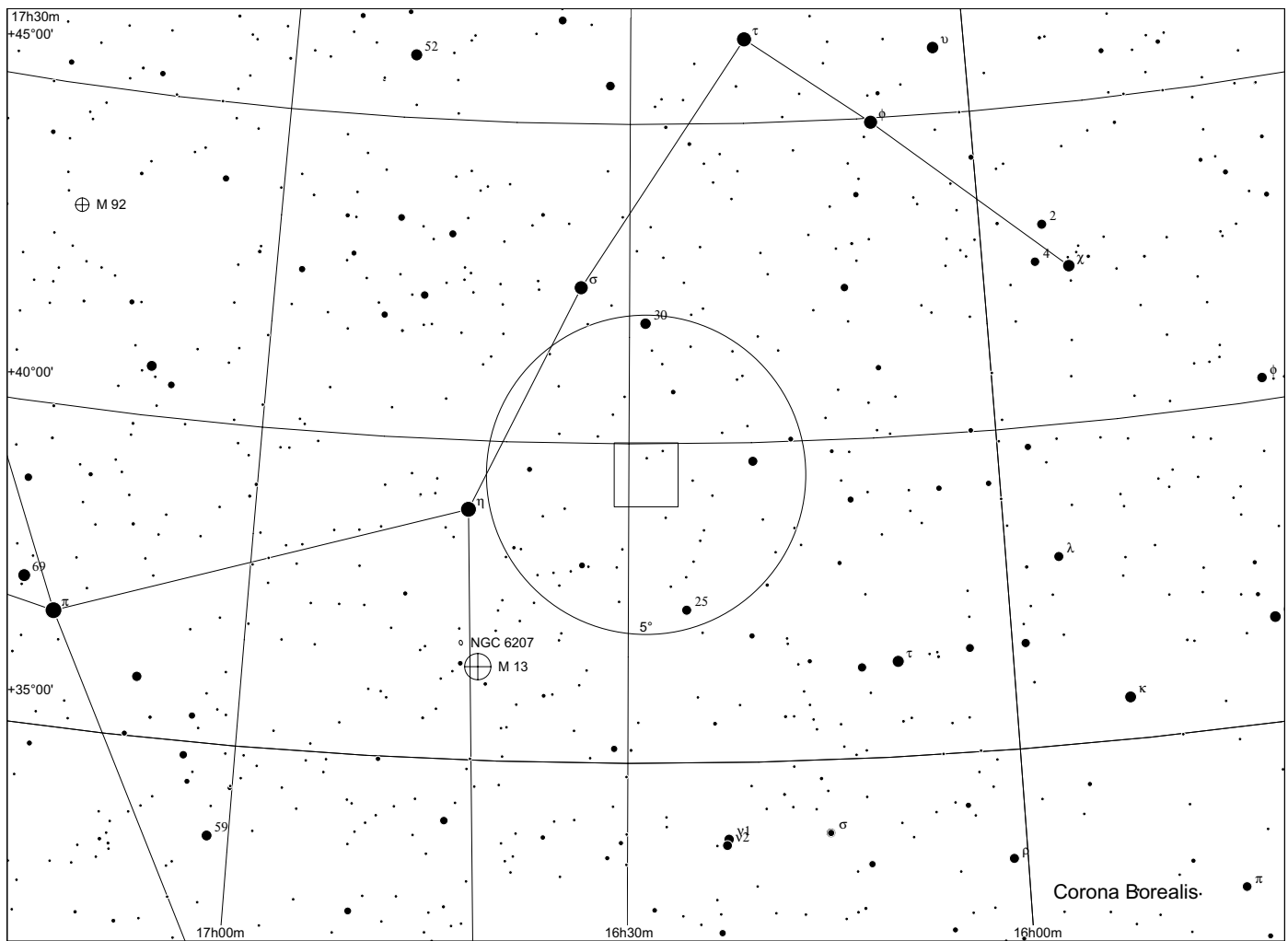


AGC 2199 in Hercules

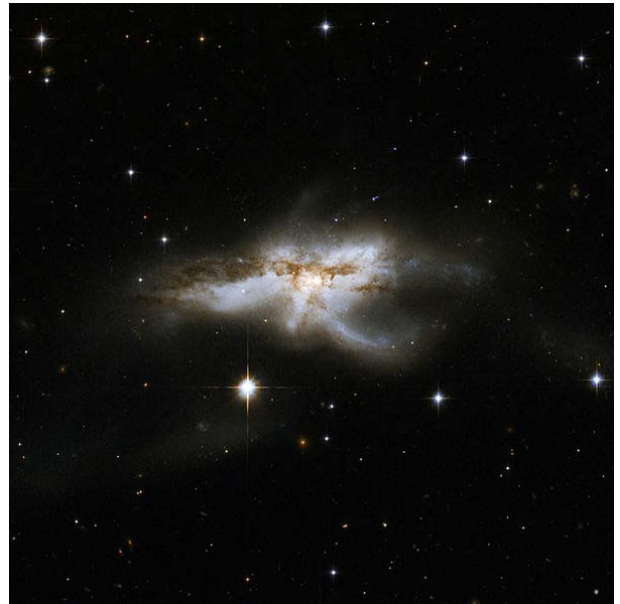
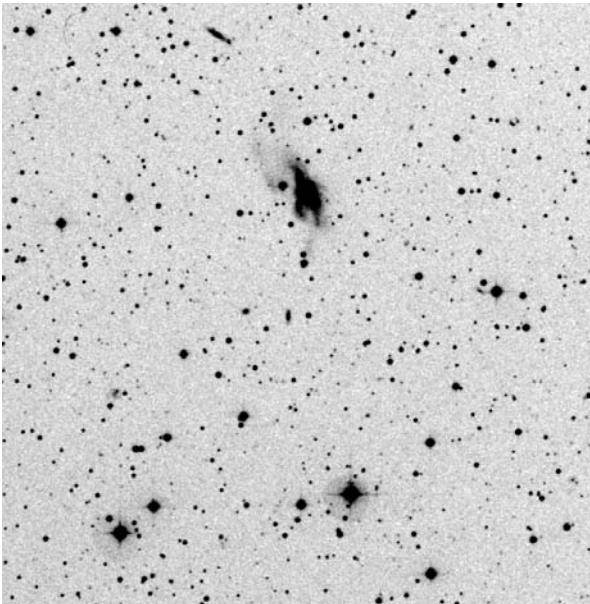
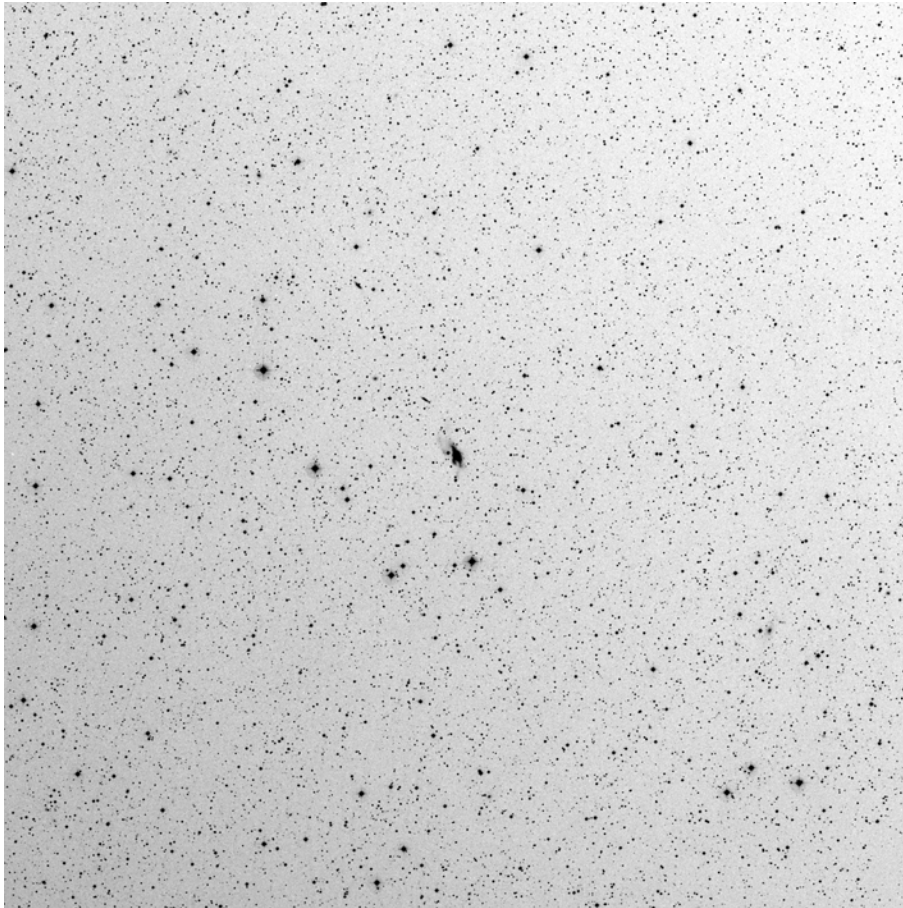


NGC 6166

16 28 38 +39 33 05

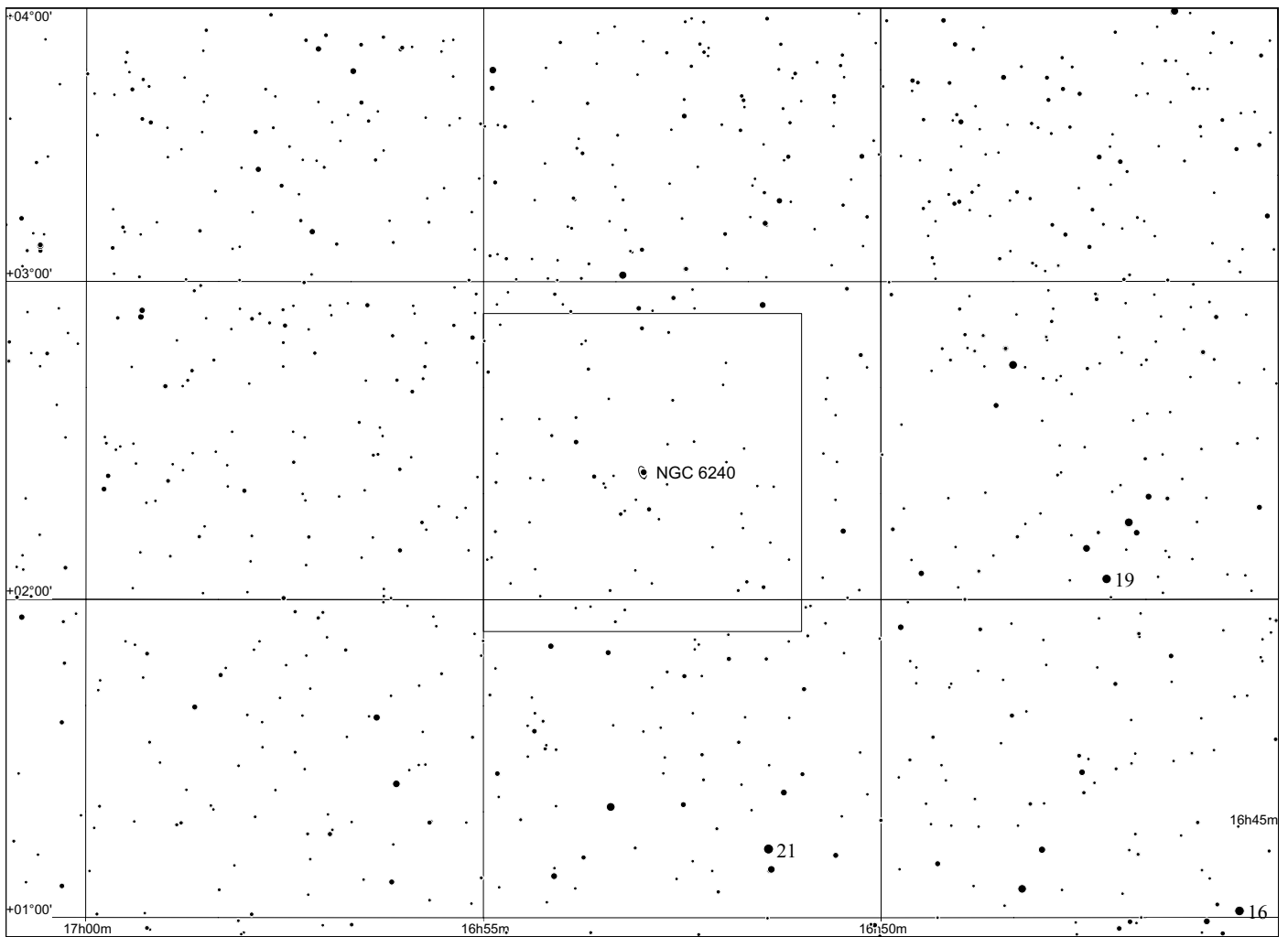
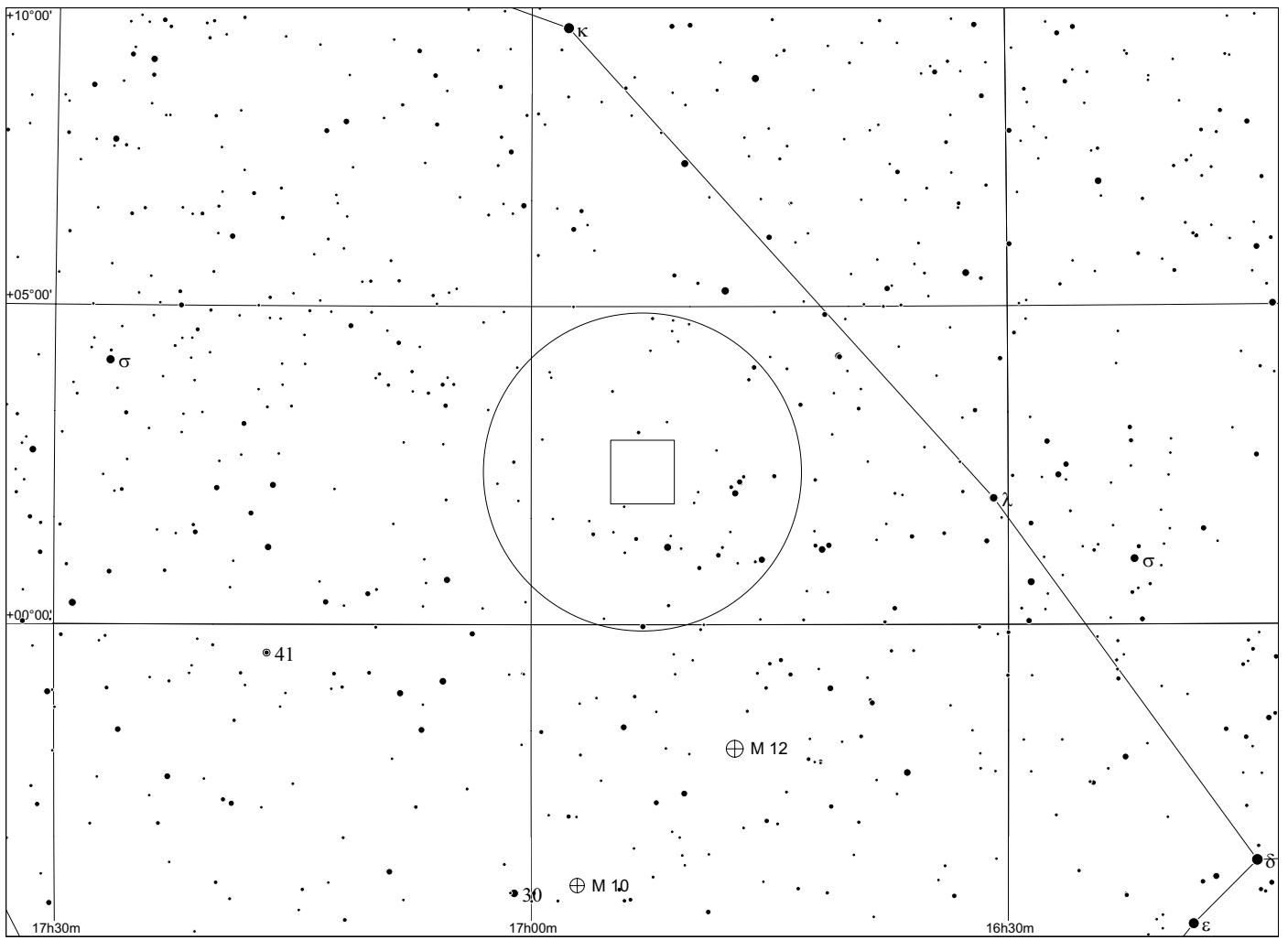


NGC 6240 in Ophiuchus

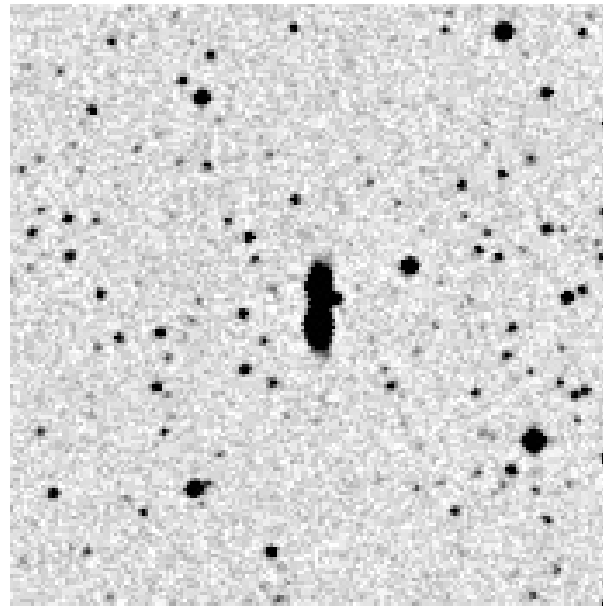
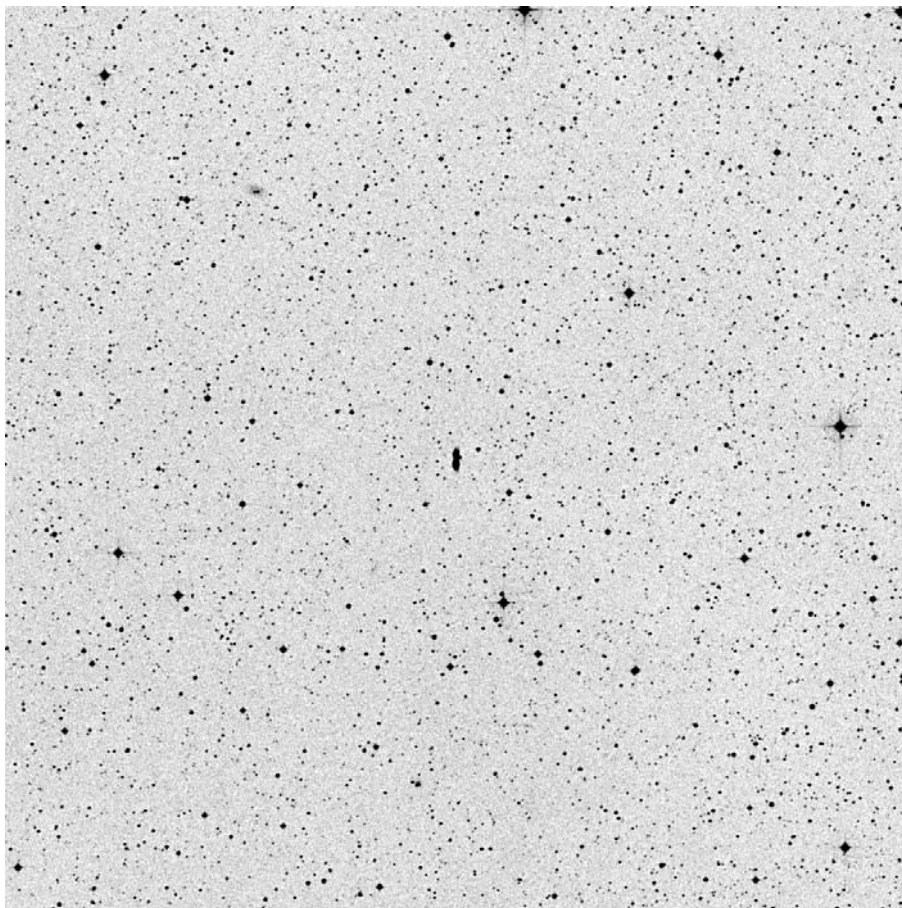


| | other | RA | Dek | comments |
|----------|------------------|-----------|------------|-----------------|
| NGC 6240 | Rumpled Starfish | 16 52 58 | +02 24 03 | |

Observing notes:

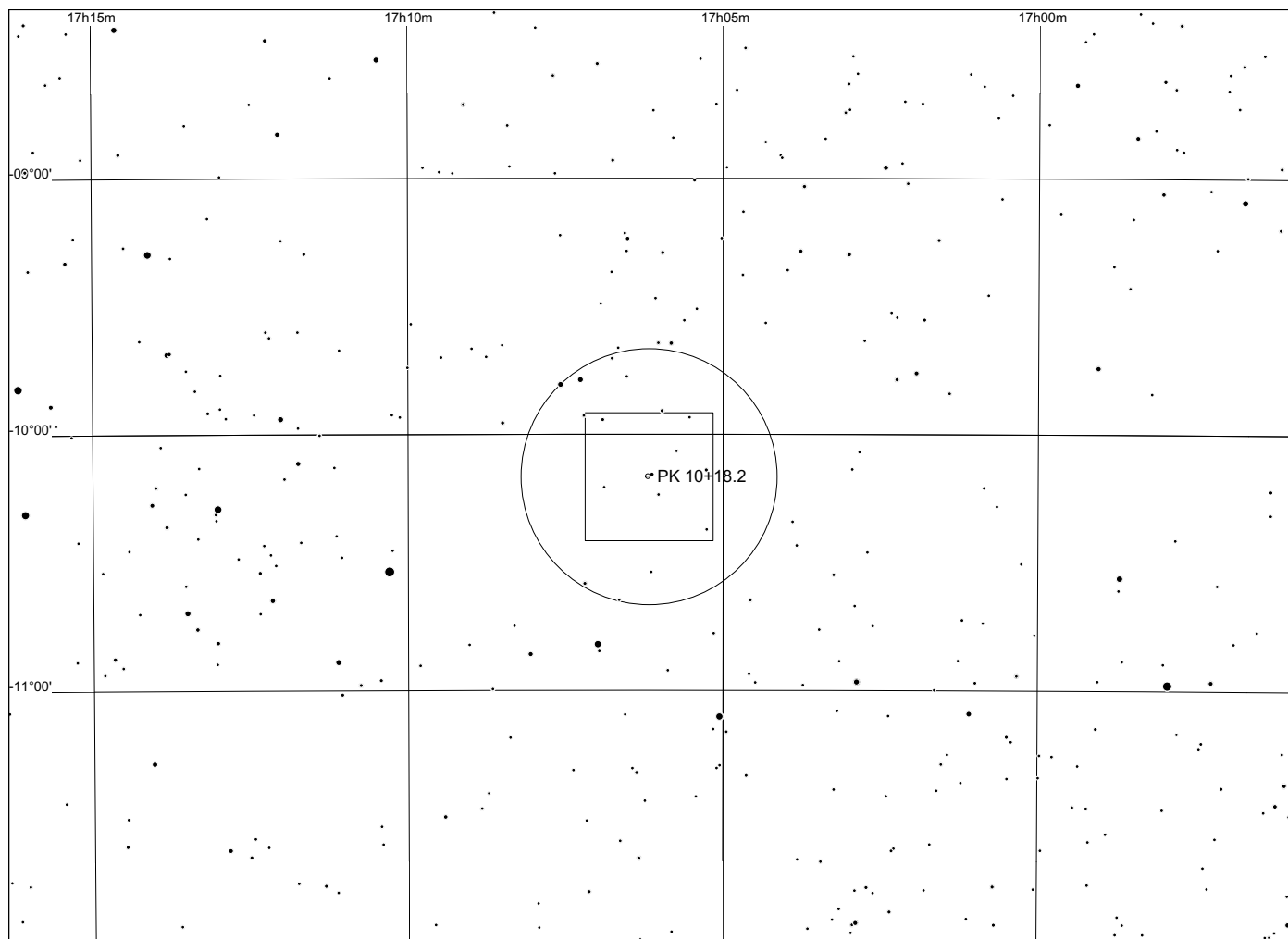
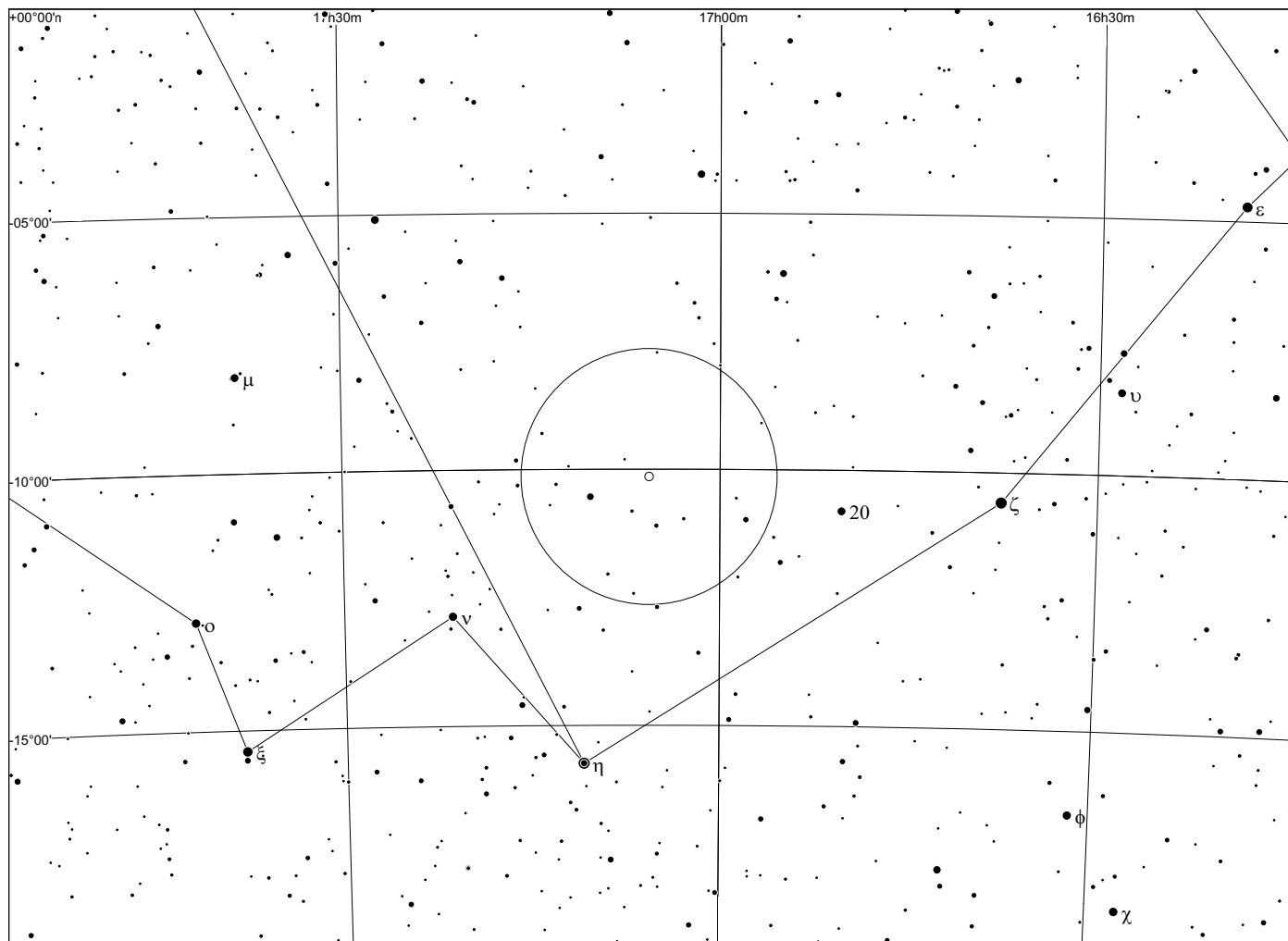


Butterfly Nebula in Ophiuchus

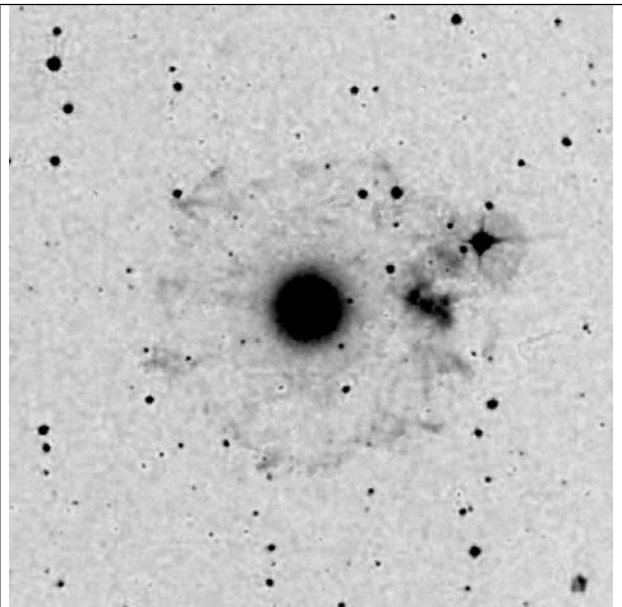
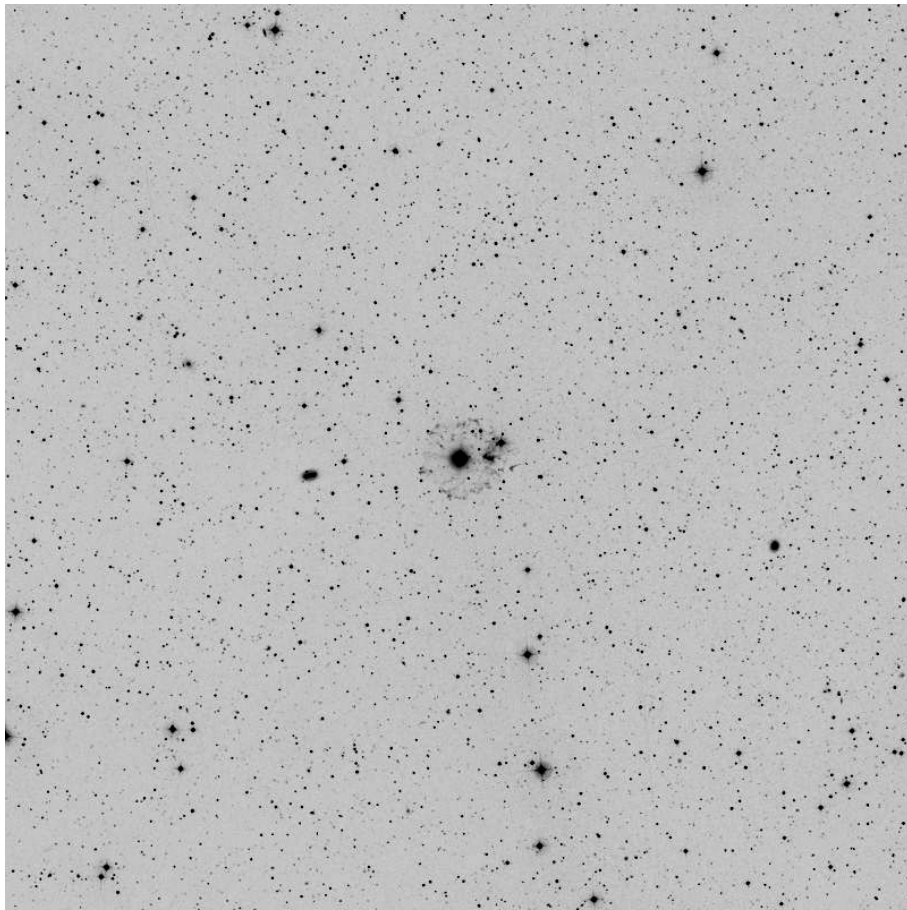


| | | RA | Dek | other names |
|--------------|------------------|---------------|--------------|-------------|
| M 2-9 | Butterfly Nebula | 17h 05m 38.1s | -10° 08' 33" | PK 10+18 2 |

Observing notes:

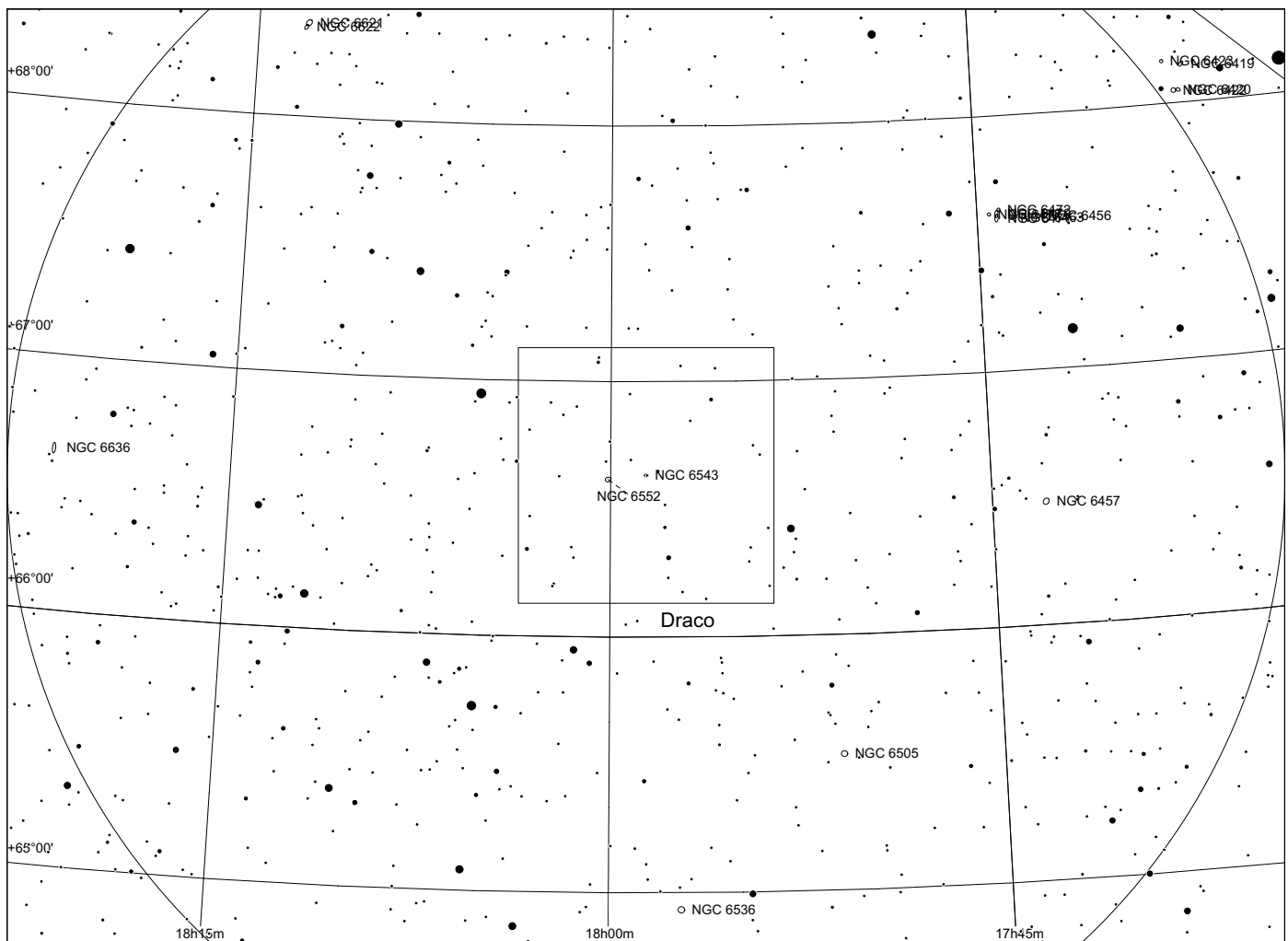
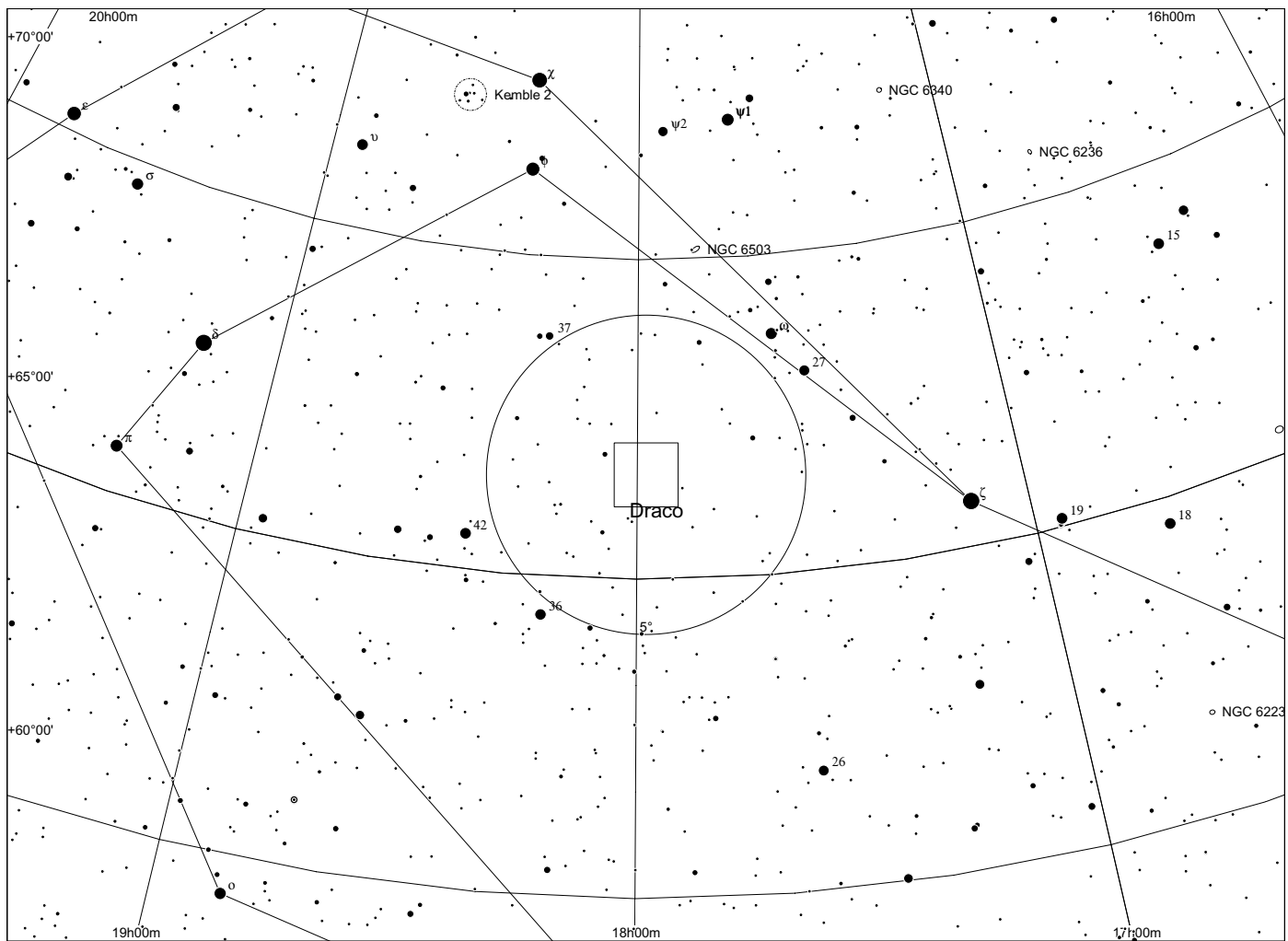


Cat's Eye Nebula in Draco

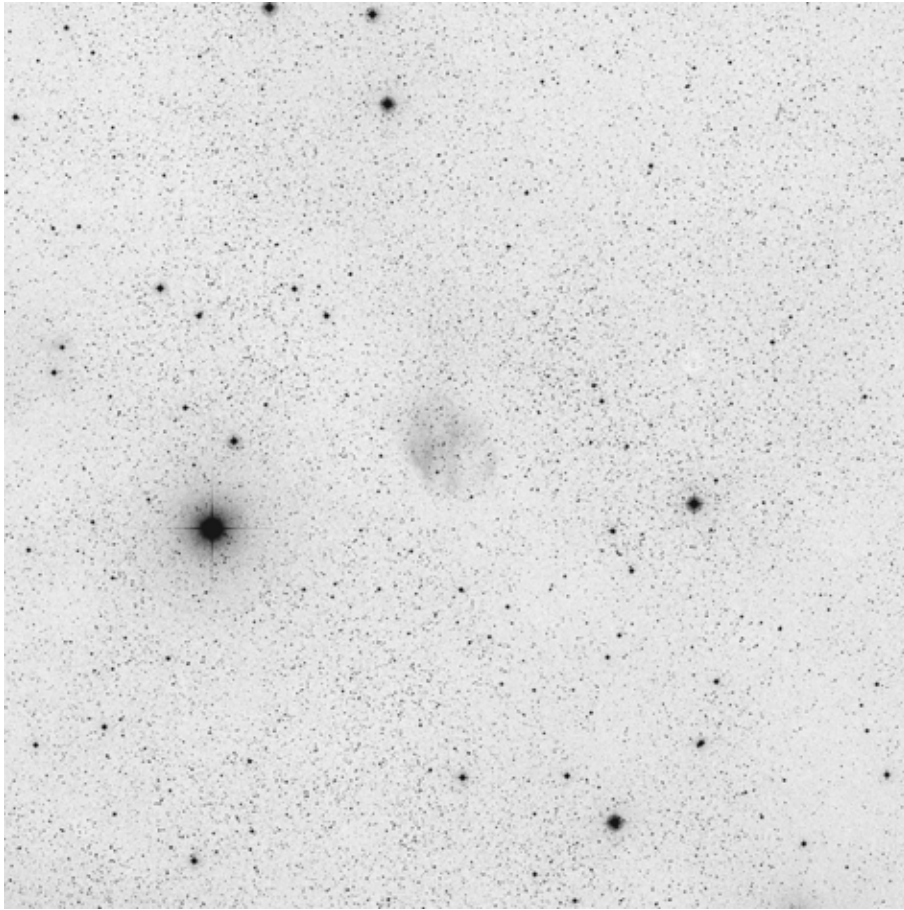


NGC 6543

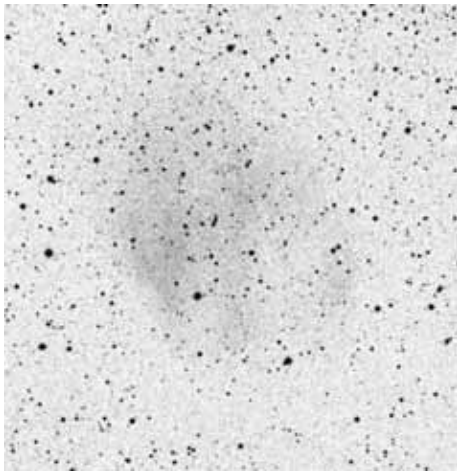
17 58 33 +66 37 59



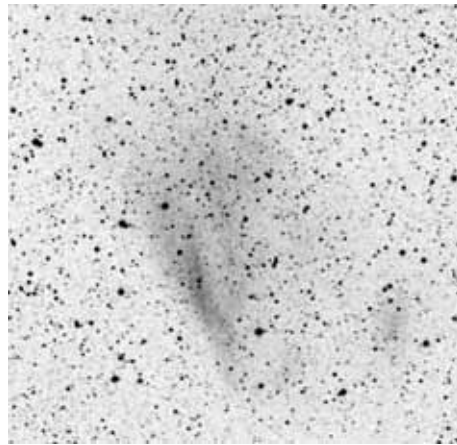
Sh 2 - 68 in Serpens



60x60, blue



POSS blue



POSS red



composite

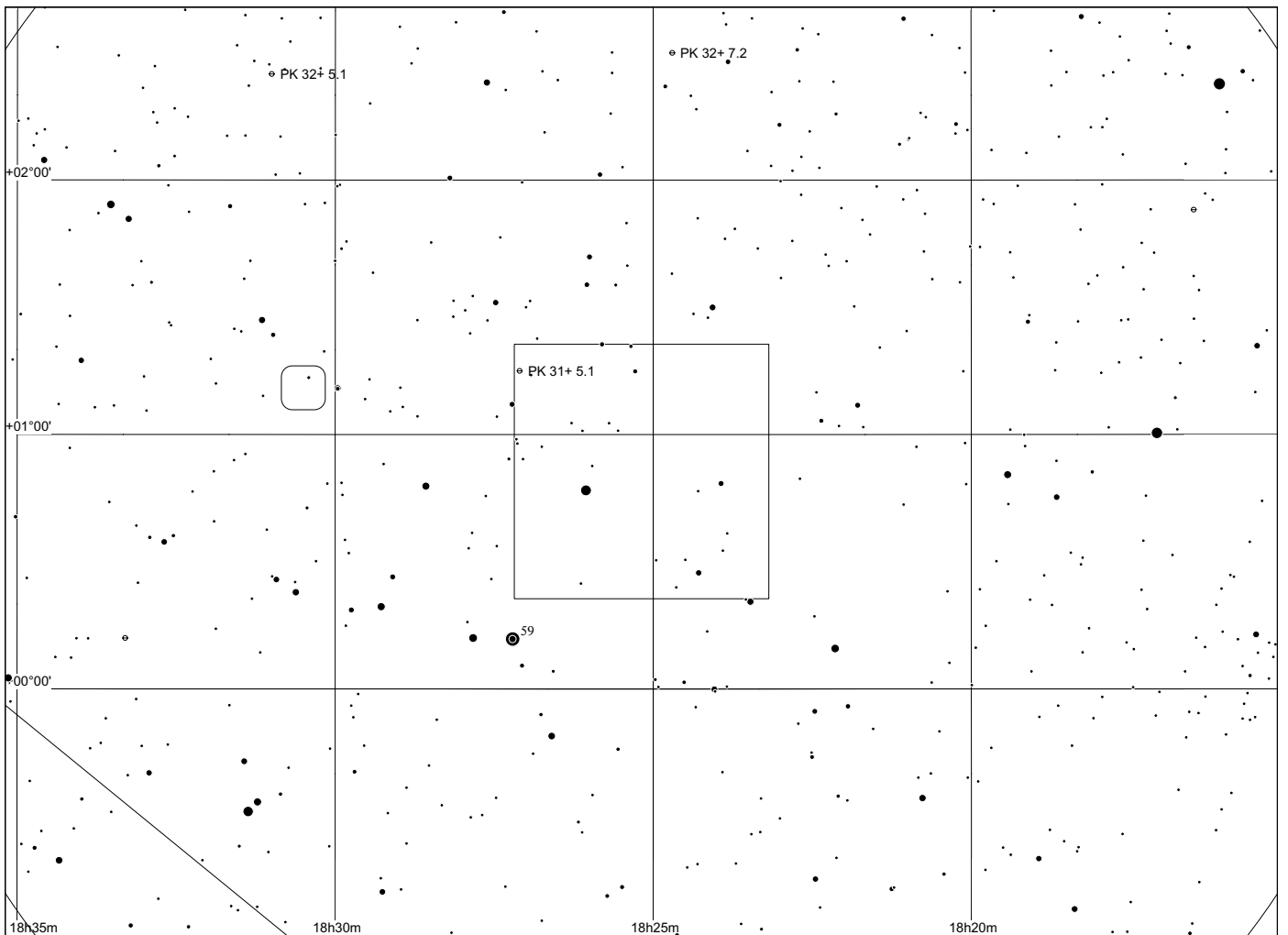
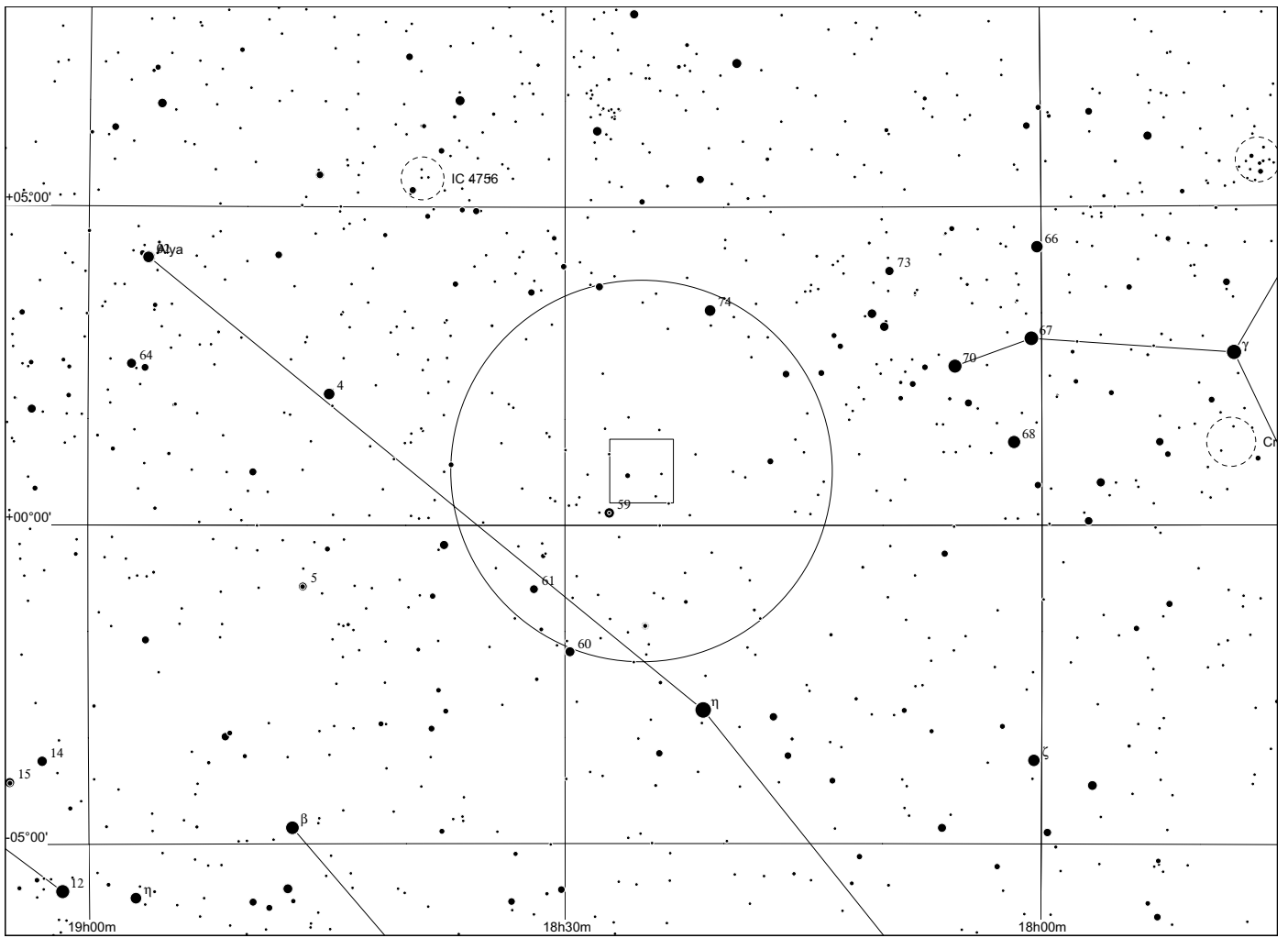
| | other name | RA | dec | dia. ' | F | S | B |
|----------|------------|------------|-----------|--------|---|---|---|
| Sh 2-068 | PN | 18 25 10.8 | +00 51 17 | 8 | 3 | 2 | 2 |

The expansion of this planetary nebula has been halted by the surrounding local gas but the central star has continued to move so as a result the star is no longer at the centre of the nebula.

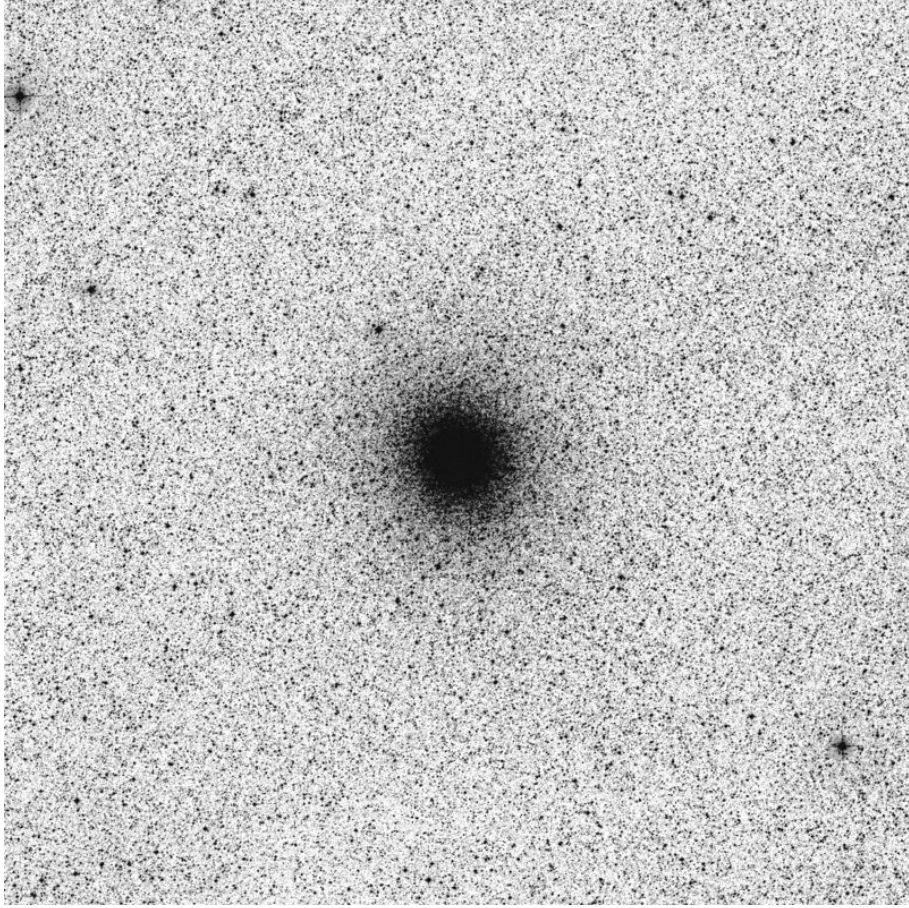
Observing notes:

22" f/4.5

08/2008: at 100x with OIII, this PN is relatively easily visible as a faint glow with even surface brightness and diffuse boundaries.

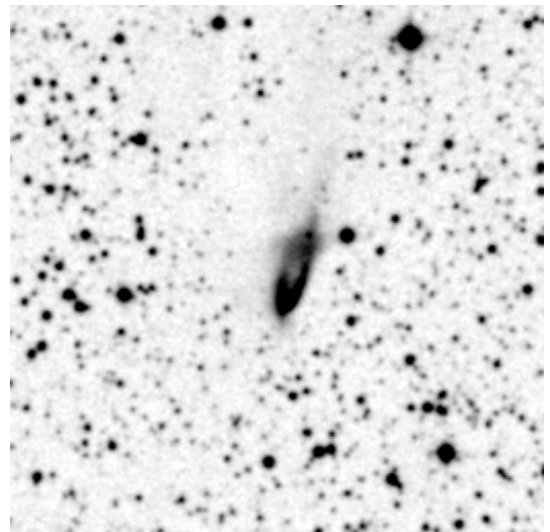
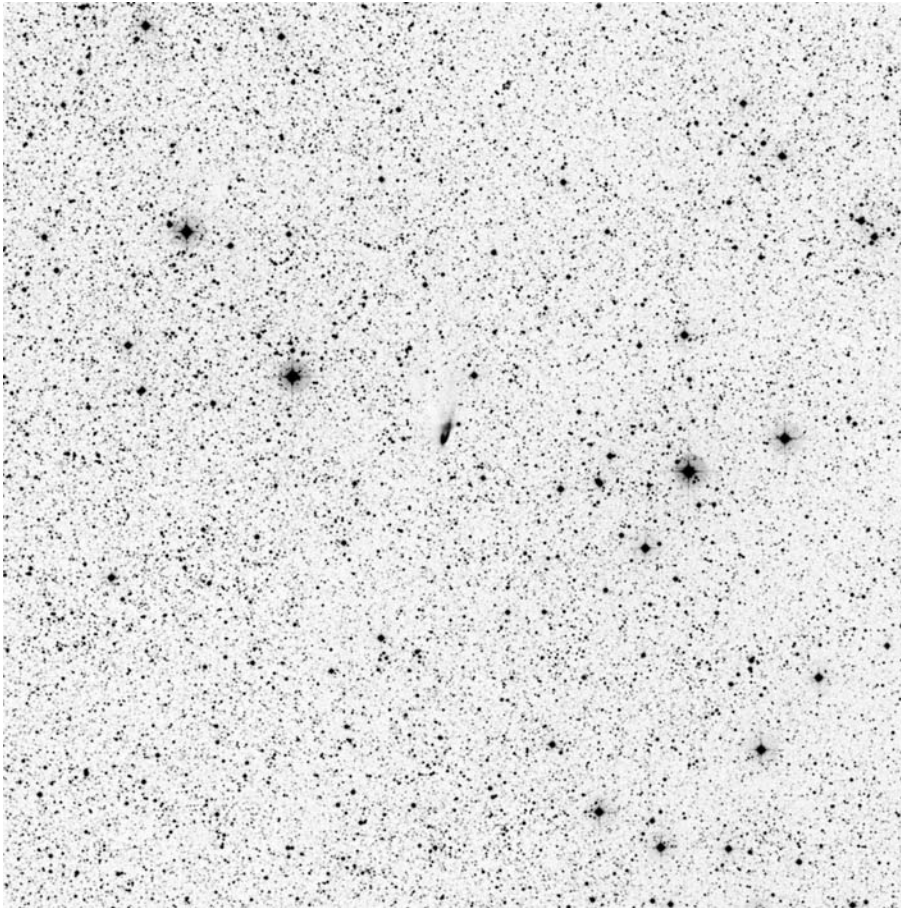


M22 in Sagittarius



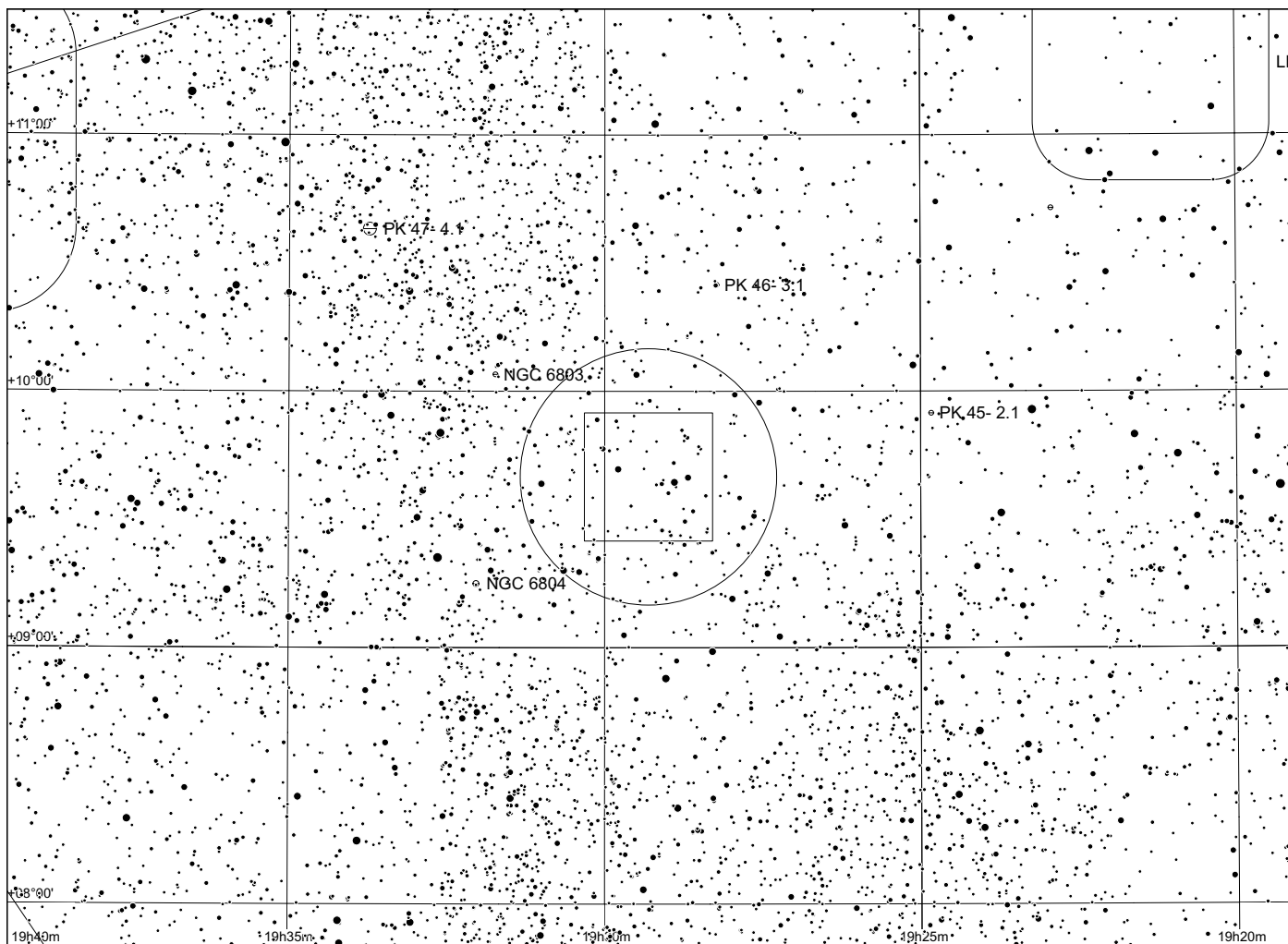
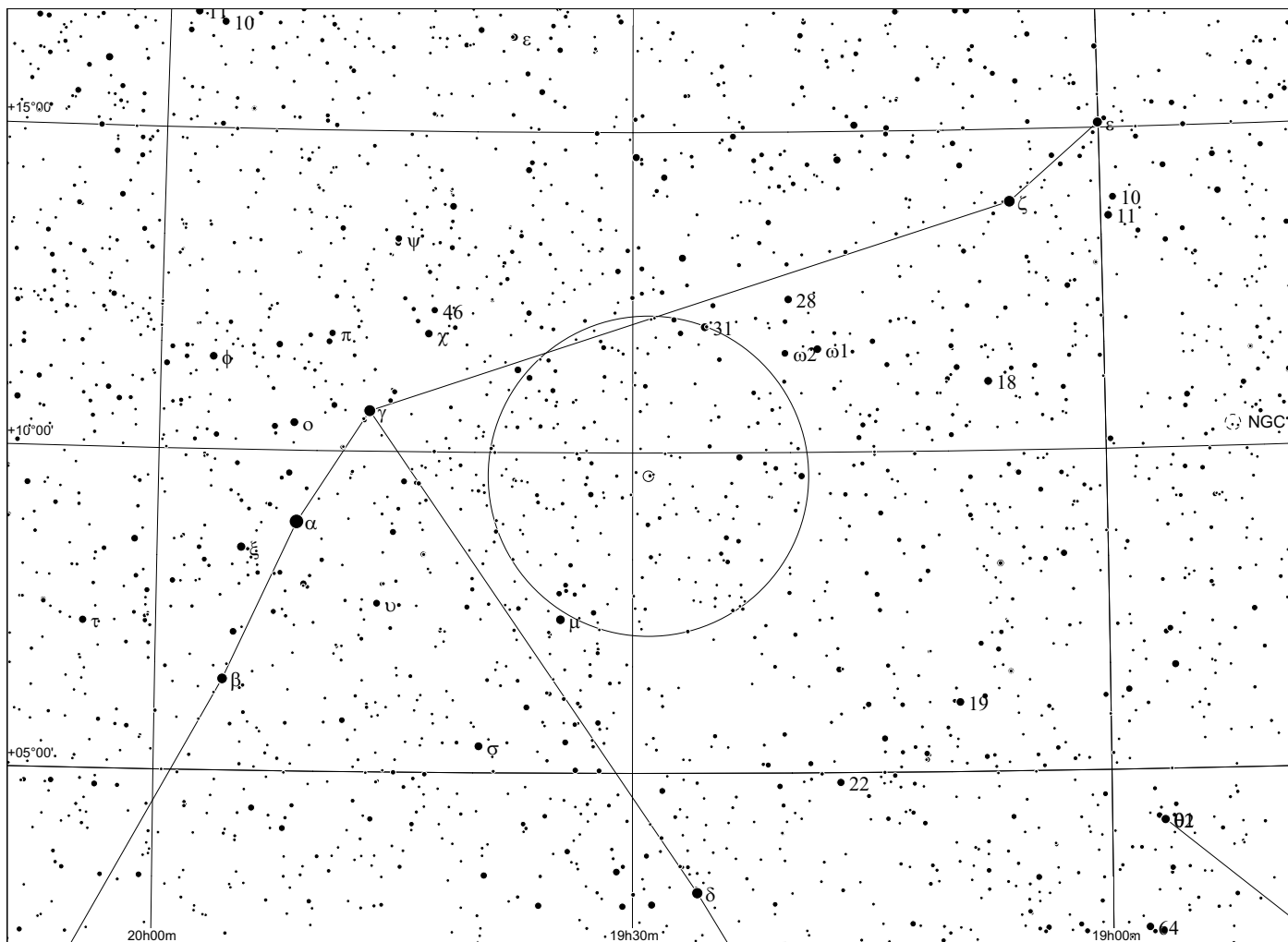
| | | |
|-----|--------------------|--|
| | | |
| M22 | 18 36 23 -23 54 17 | |

Parsamian 21 in Aquila

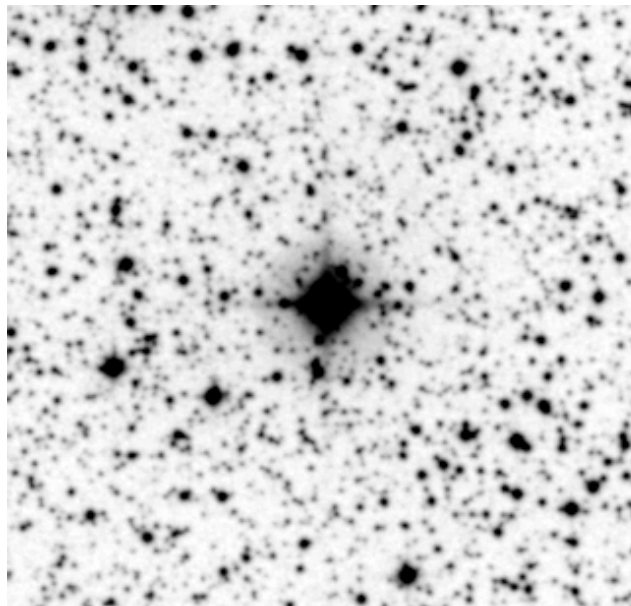
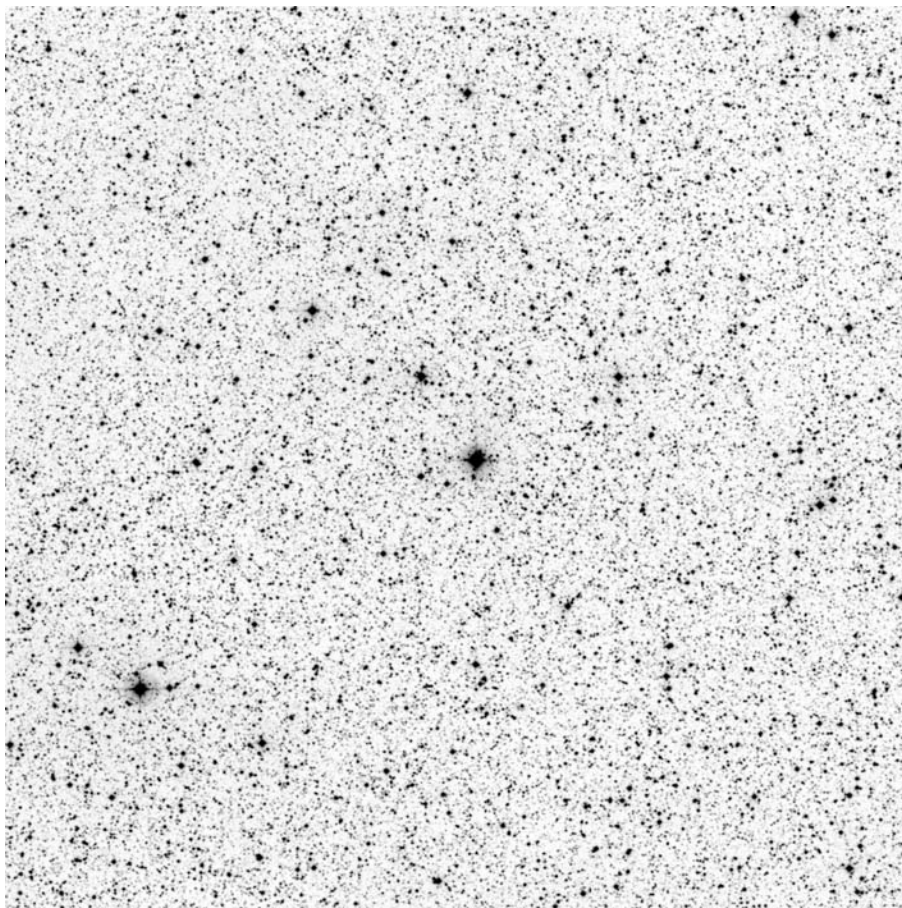


| | other | RA | Dek | comments |
|---------------------|-------|----------|-----------|----------|
| Parsamian 21 | | 19 28 59 | +09 38 15 | |

Observing notes:

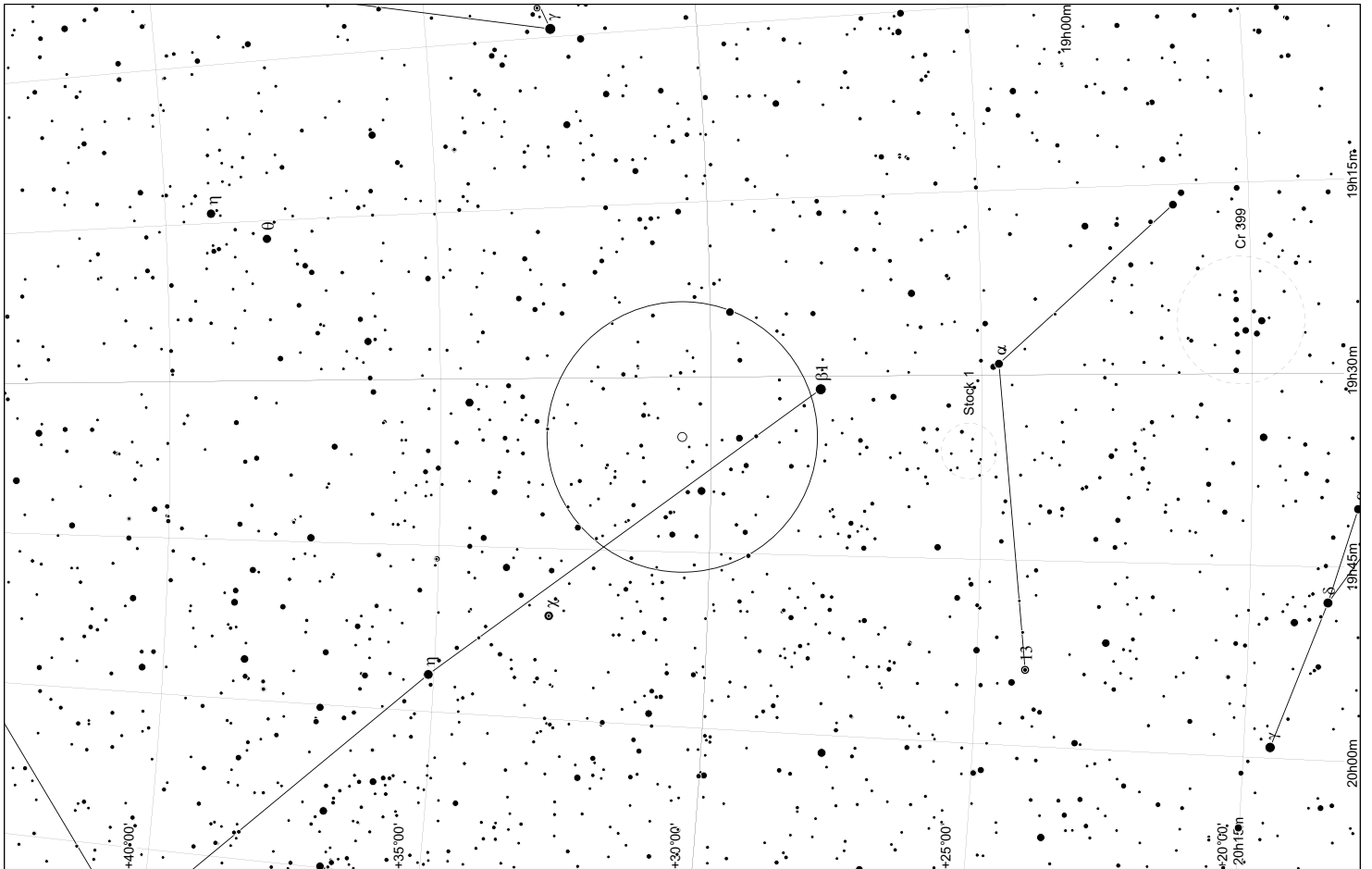
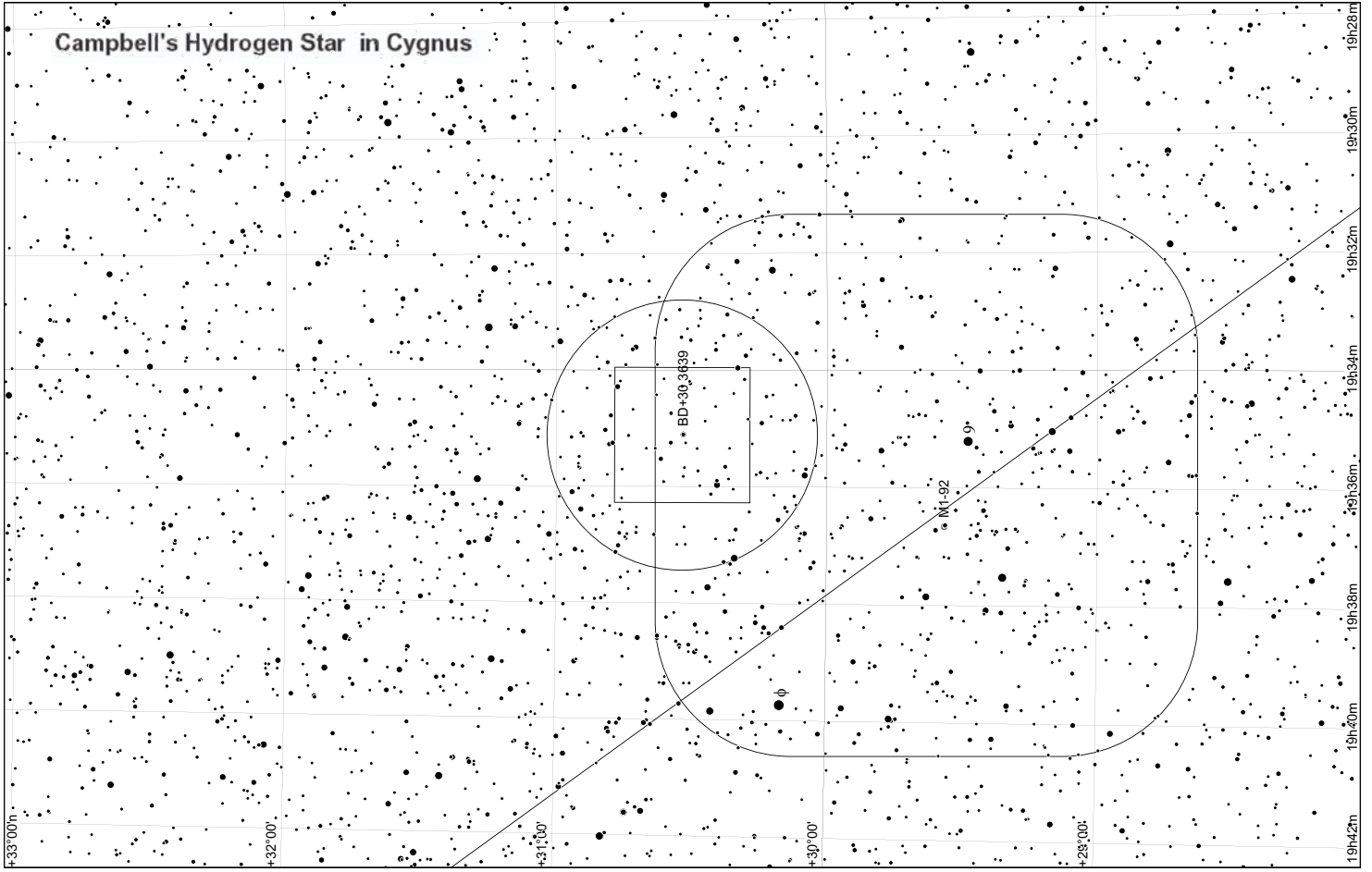


Campbell's Hydrogen Star in Cygnus

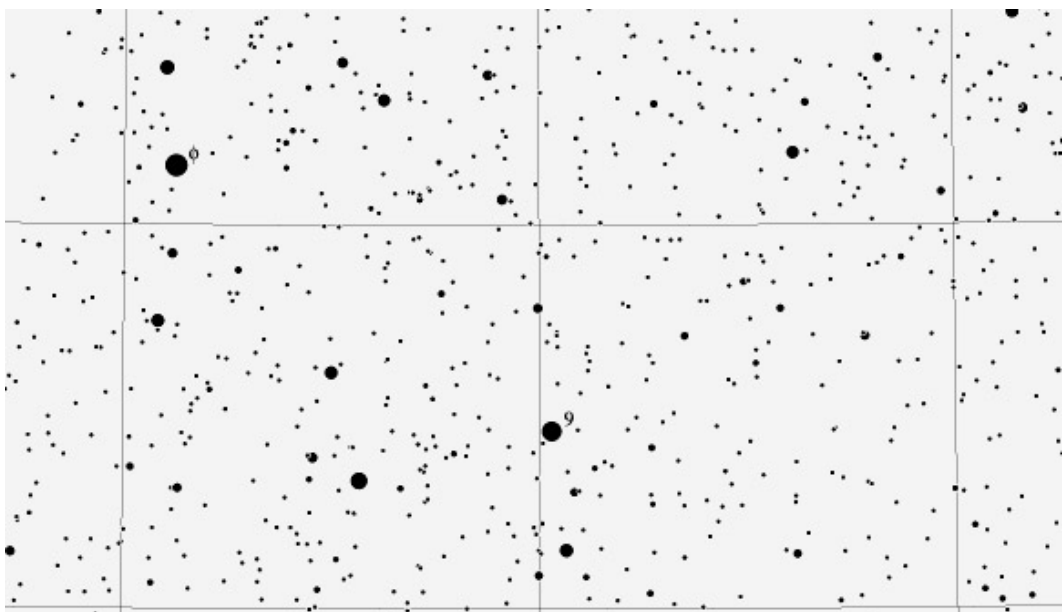


| | | RA | Dek | other names |
|----------|--------------------------|----------|---------|-------------|
| PK64+5.1 | Campbell's Hydrogen star | 19h 34.8 | +30°31' | |

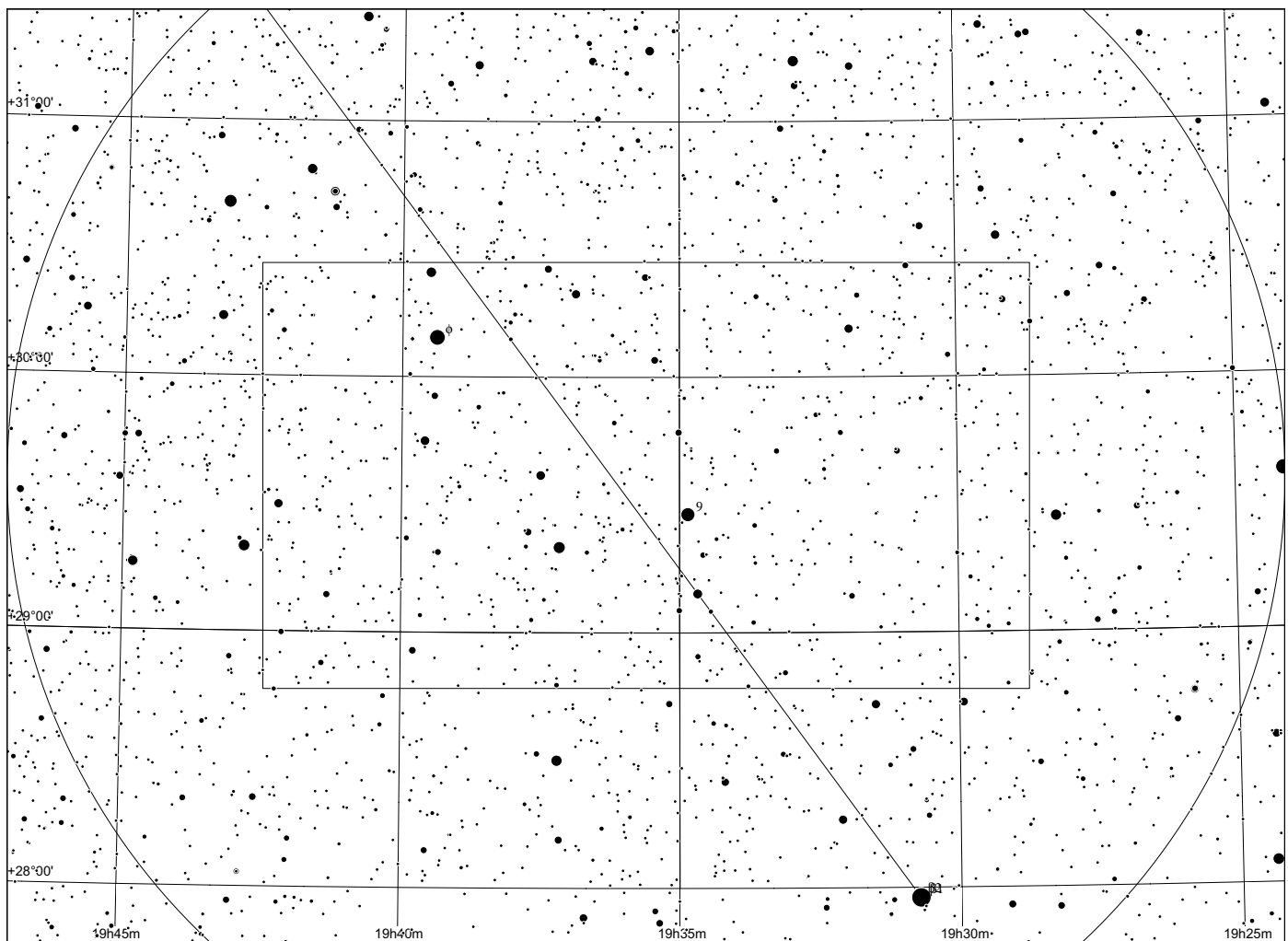
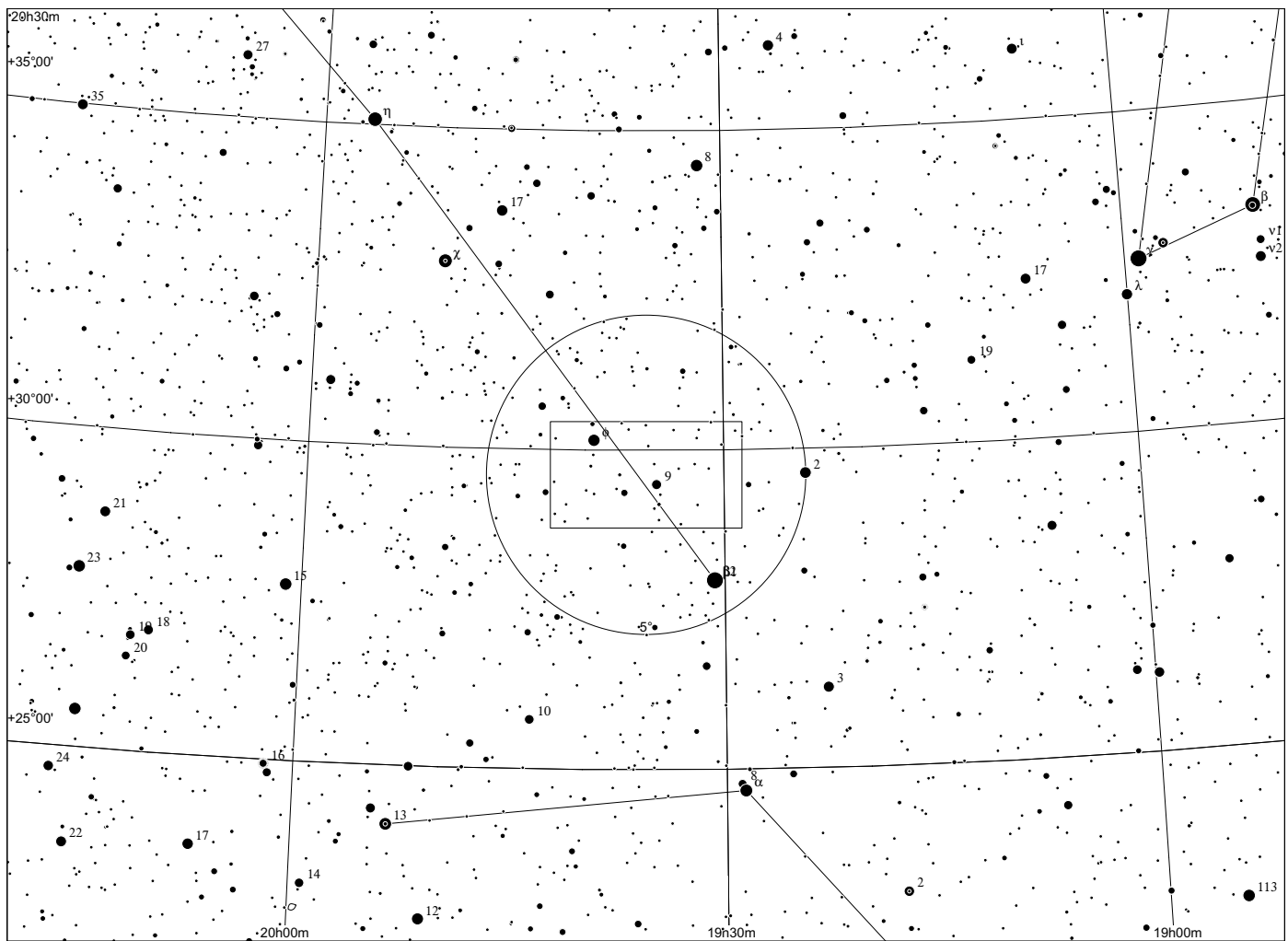
Observing notes:



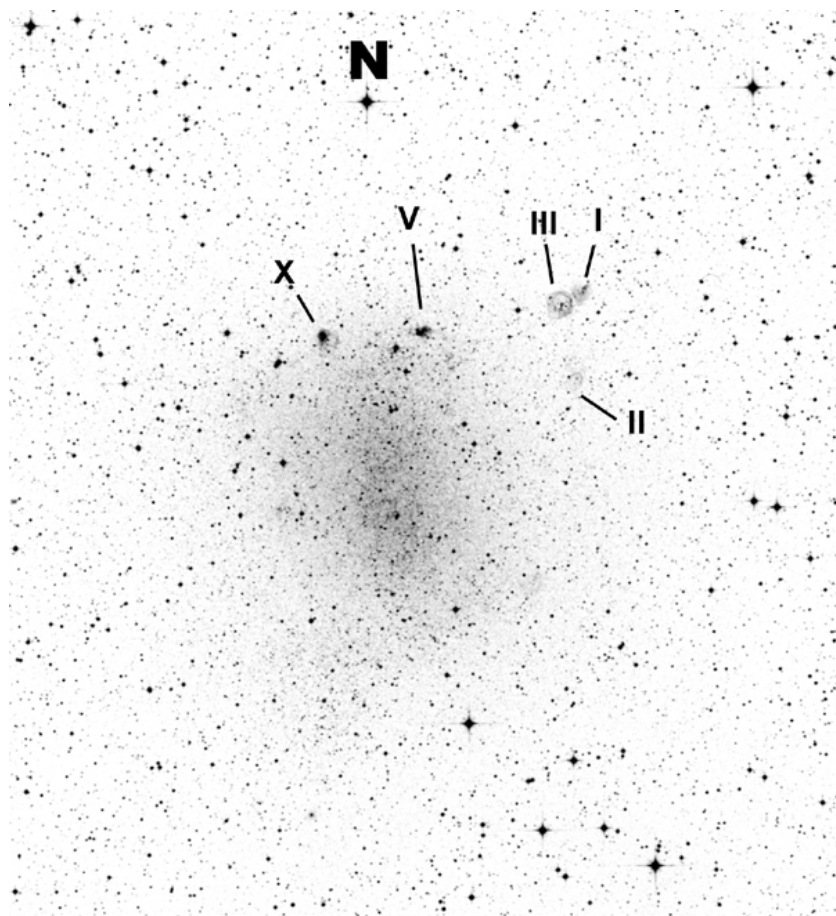
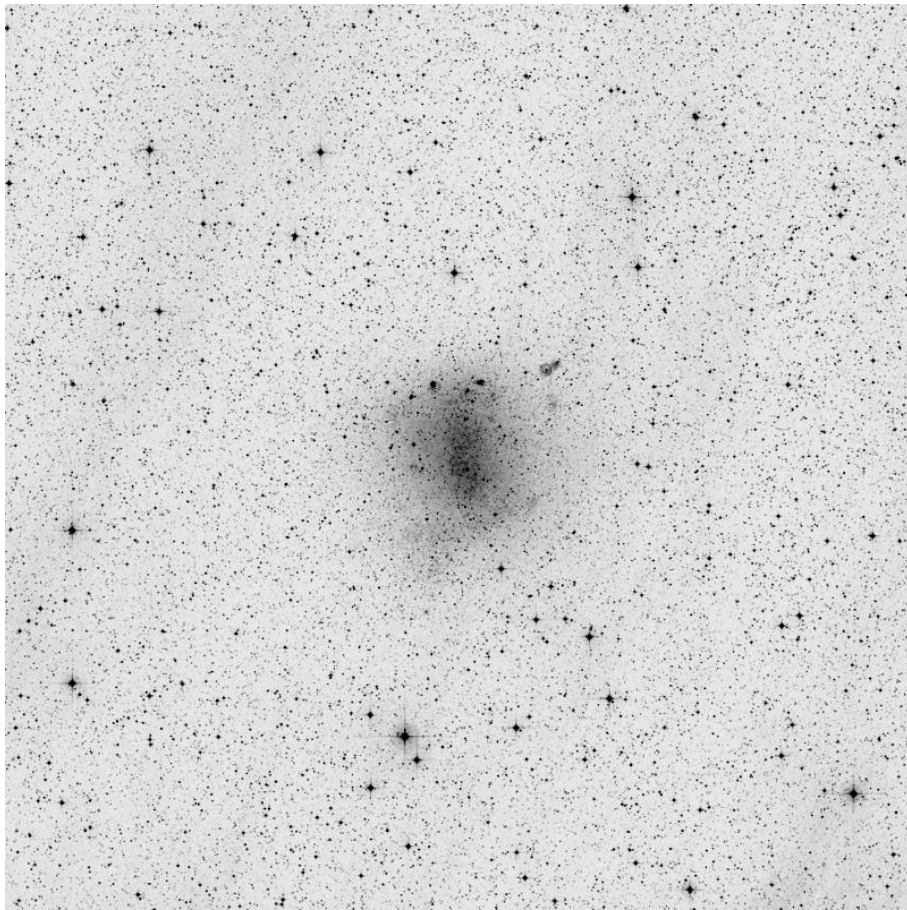
Sharpless 91 in Cygnus



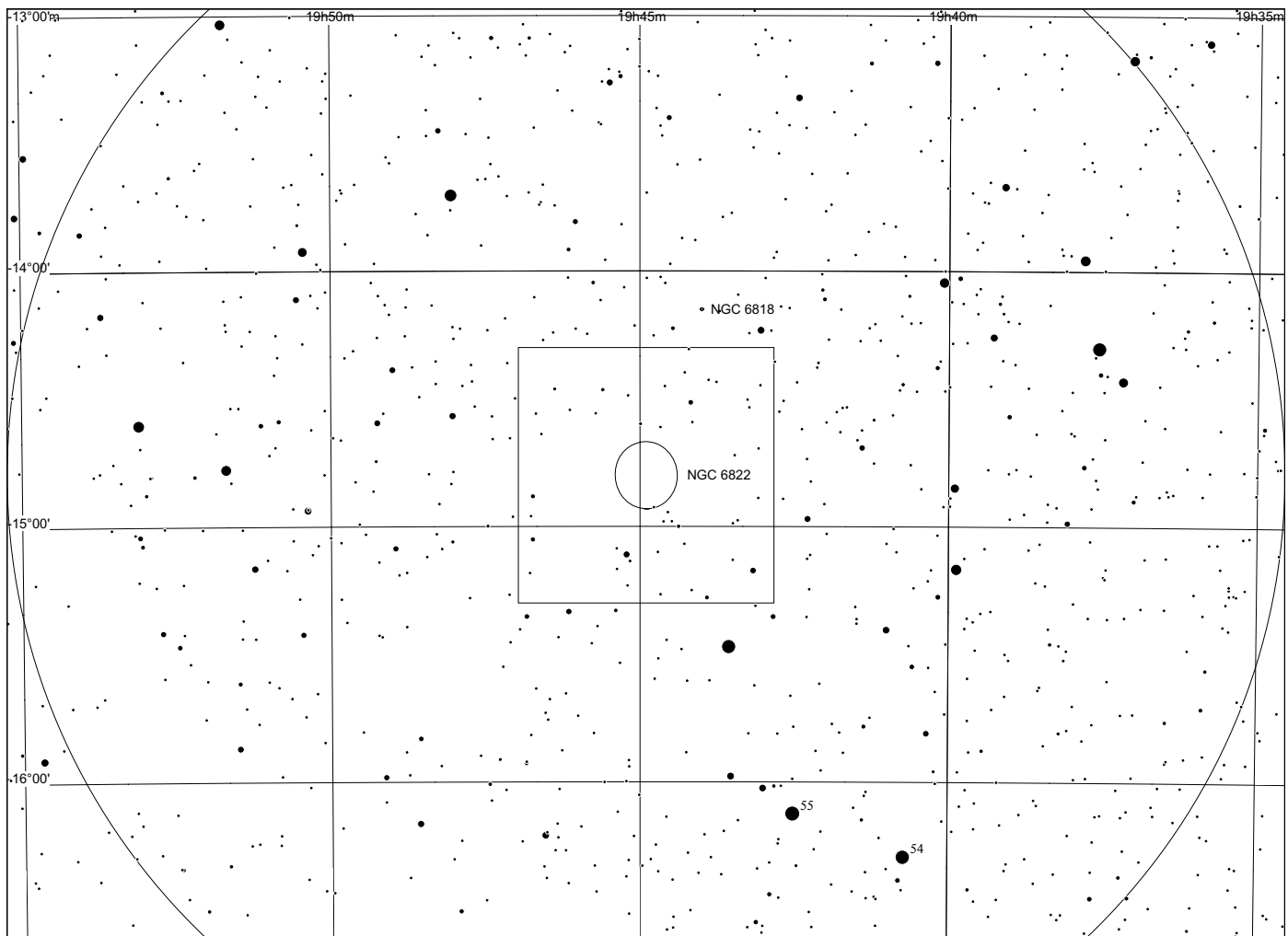
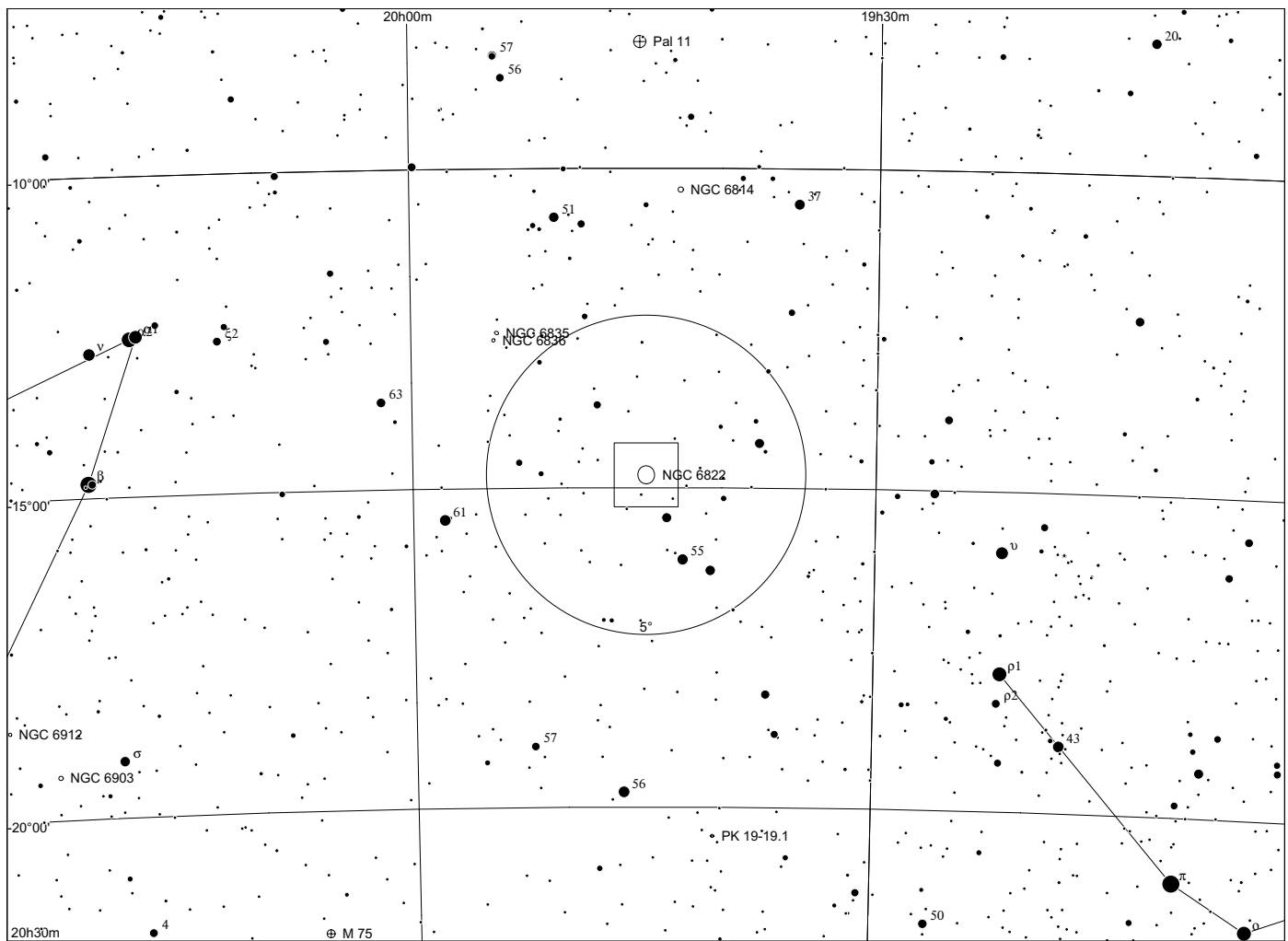
| | | |
|--------|--------------|--|
| Sh2-91 | 19 39 +29 57 | |
|--------|--------------|--|



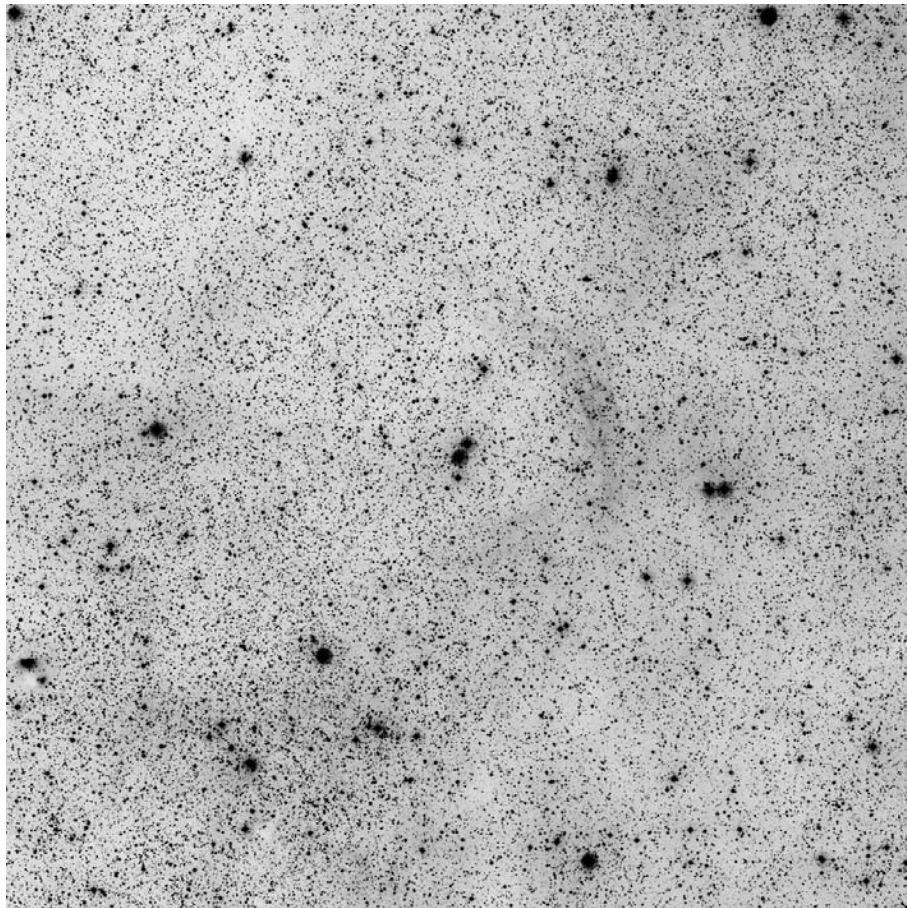
Barnard's Galaxy in Sagittarius



| | | |
|----------|--------------------|--|
| NGC 6822 | 19 44 57 -14 48 11 | |
|----------|--------------------|--|

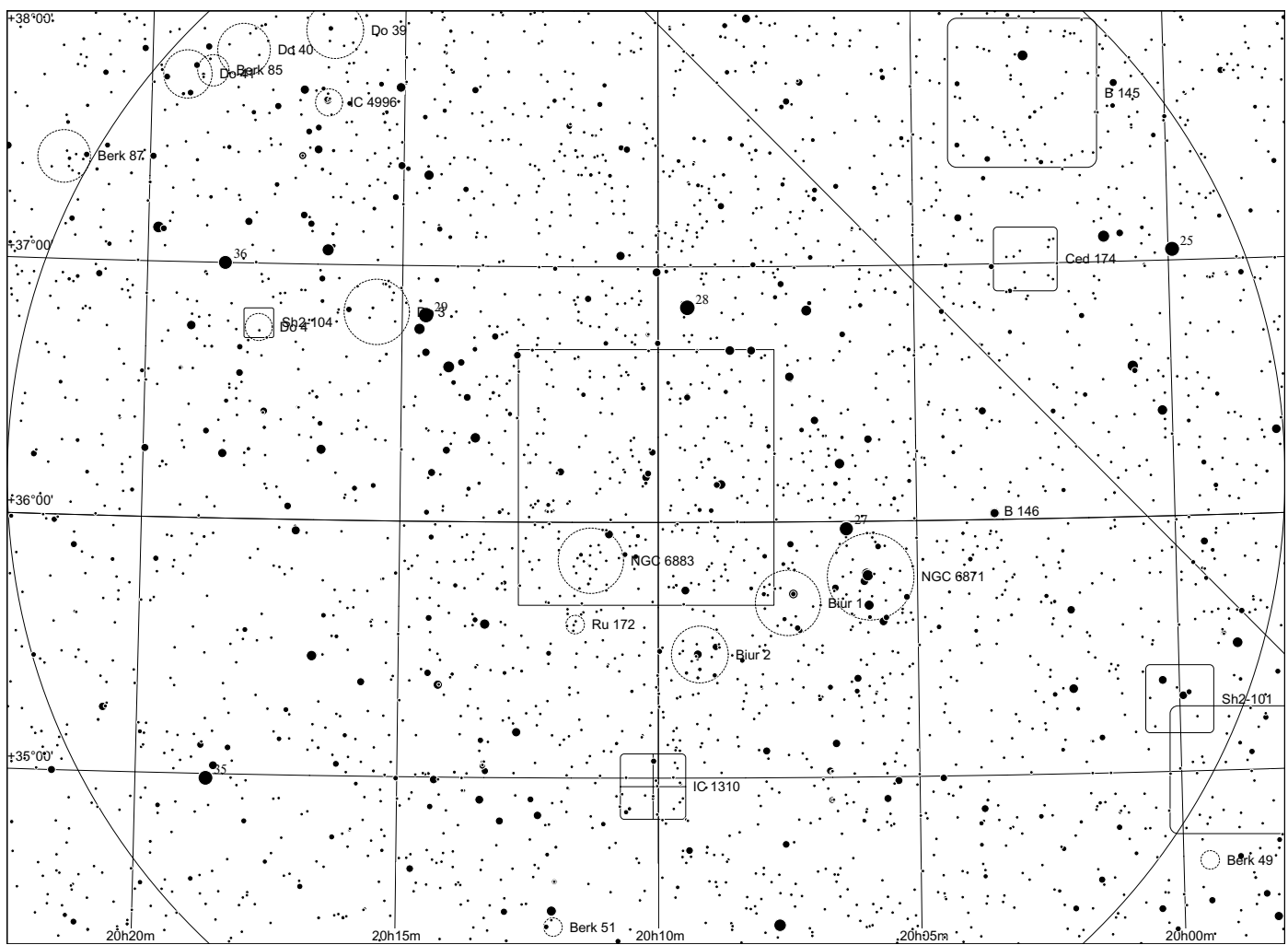
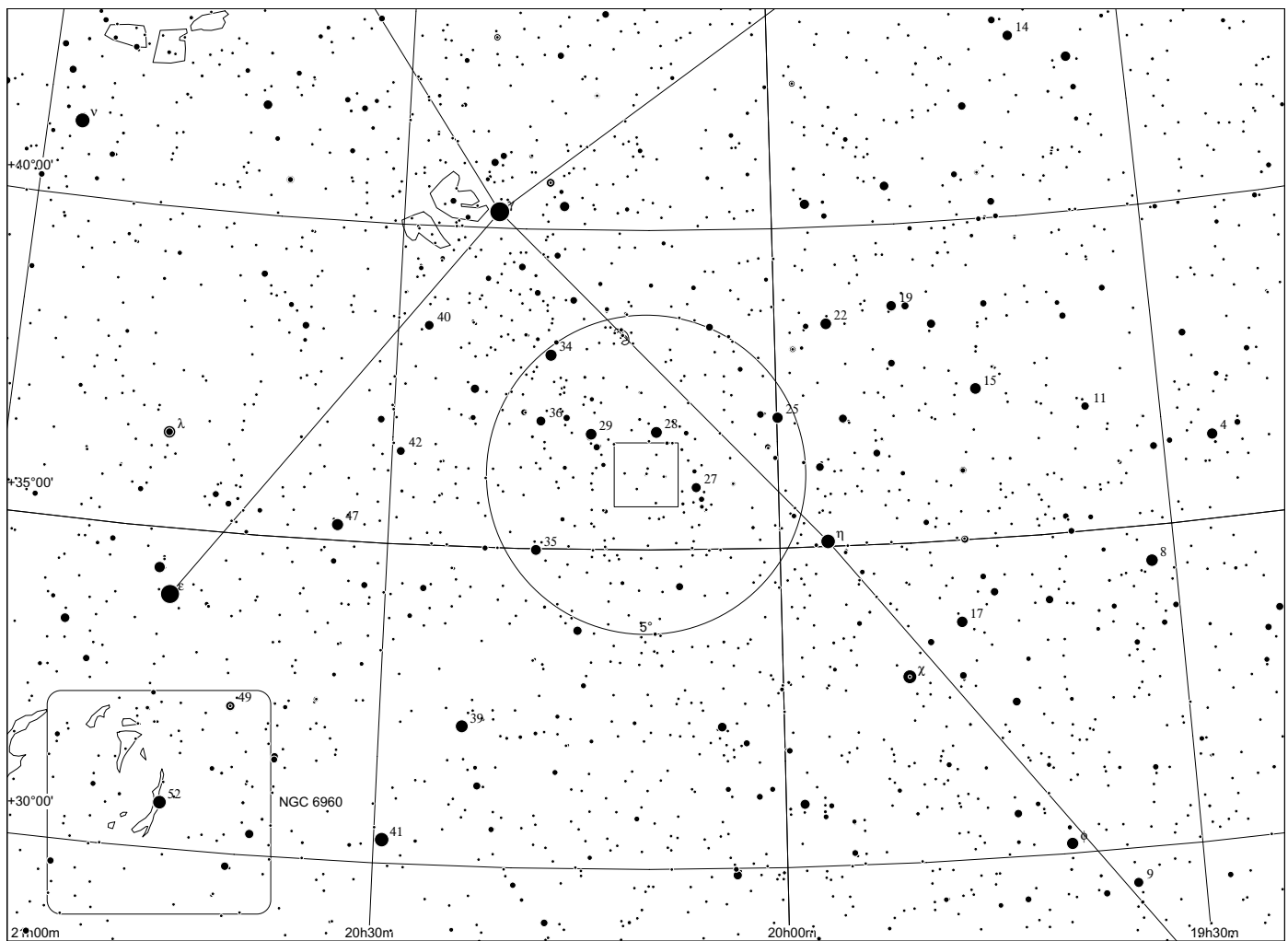


WR Shell bei WR 134 in Cygnus

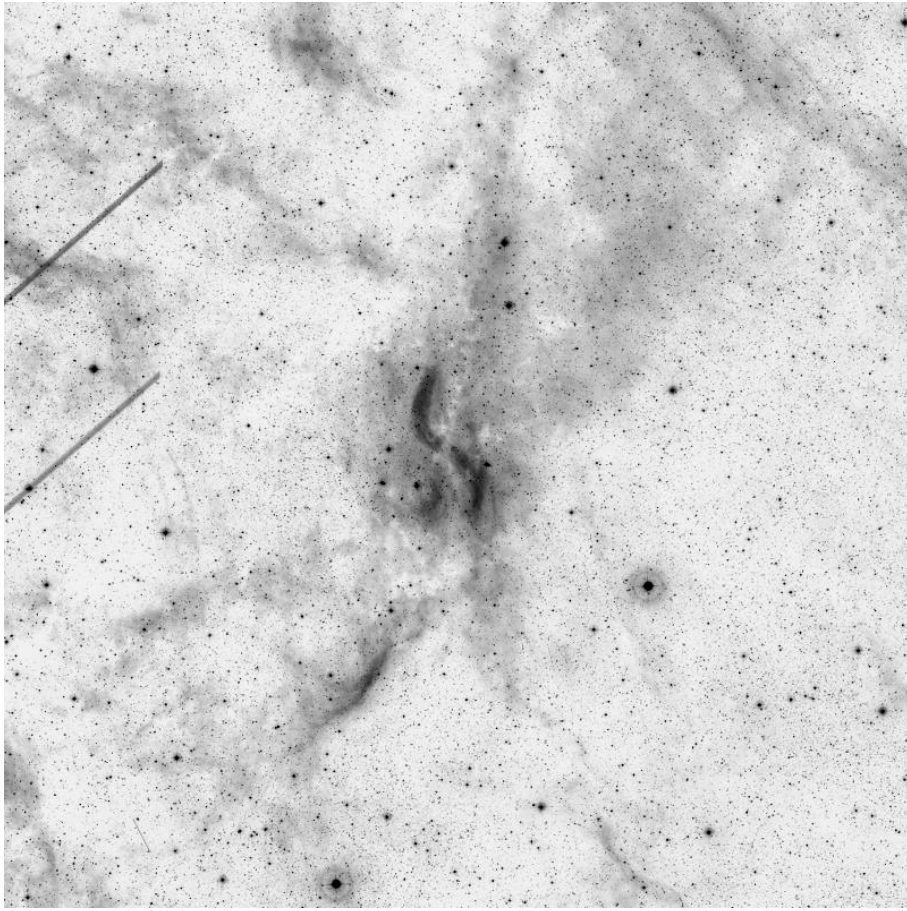


WR 134

20 10 14.19 +36 10 35.1



DWB 111 in Cygnus

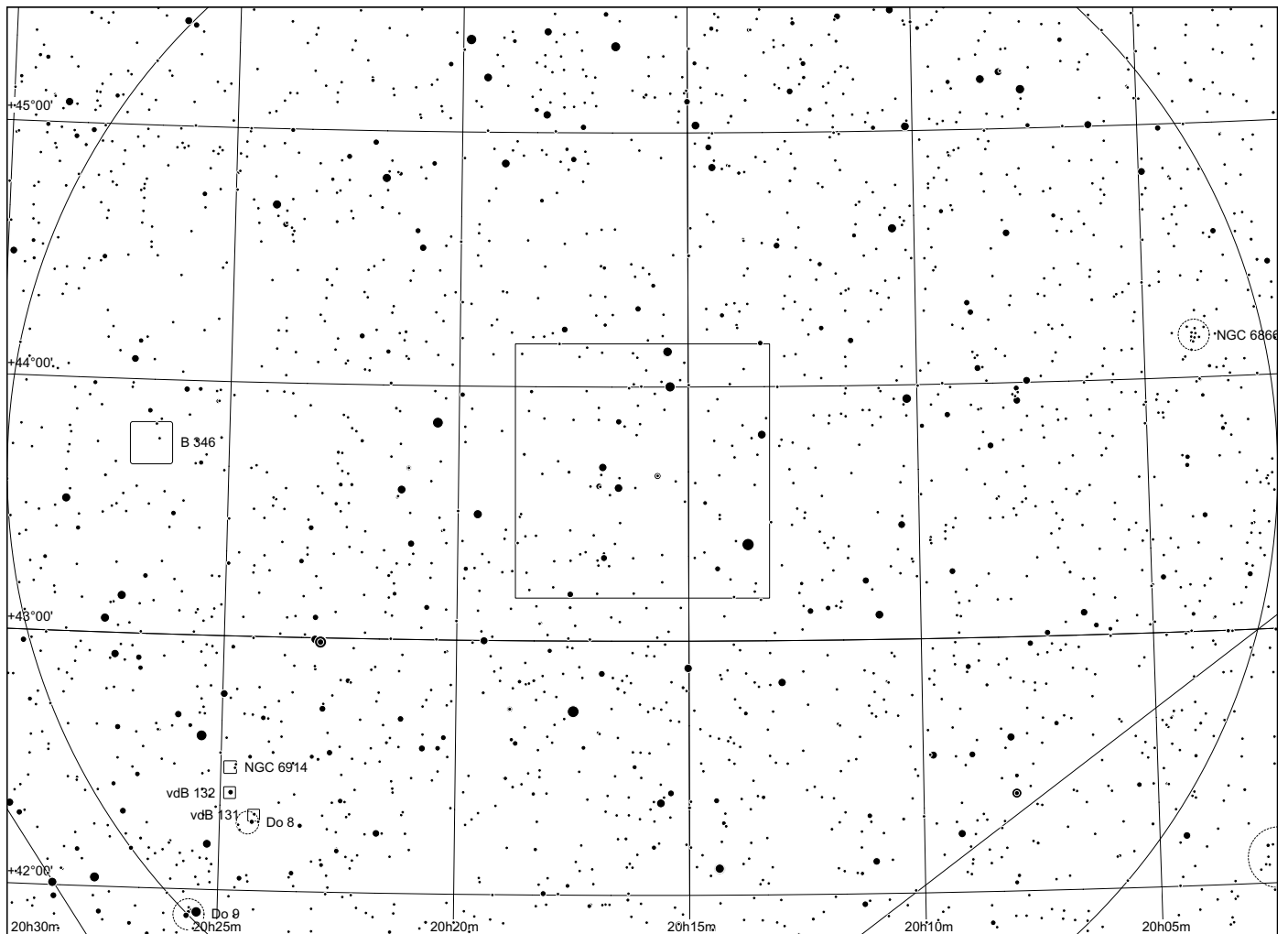
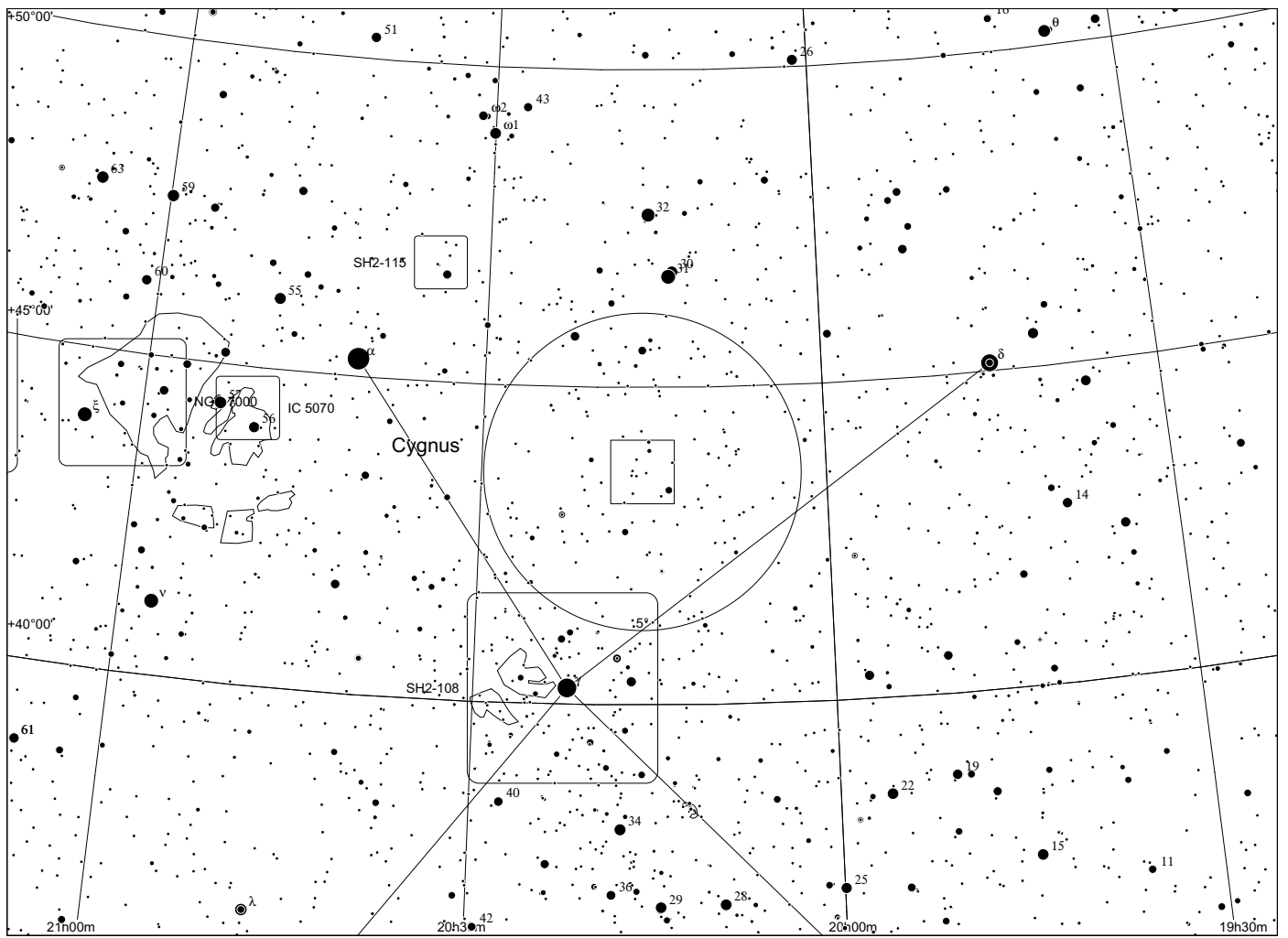


2°x2°

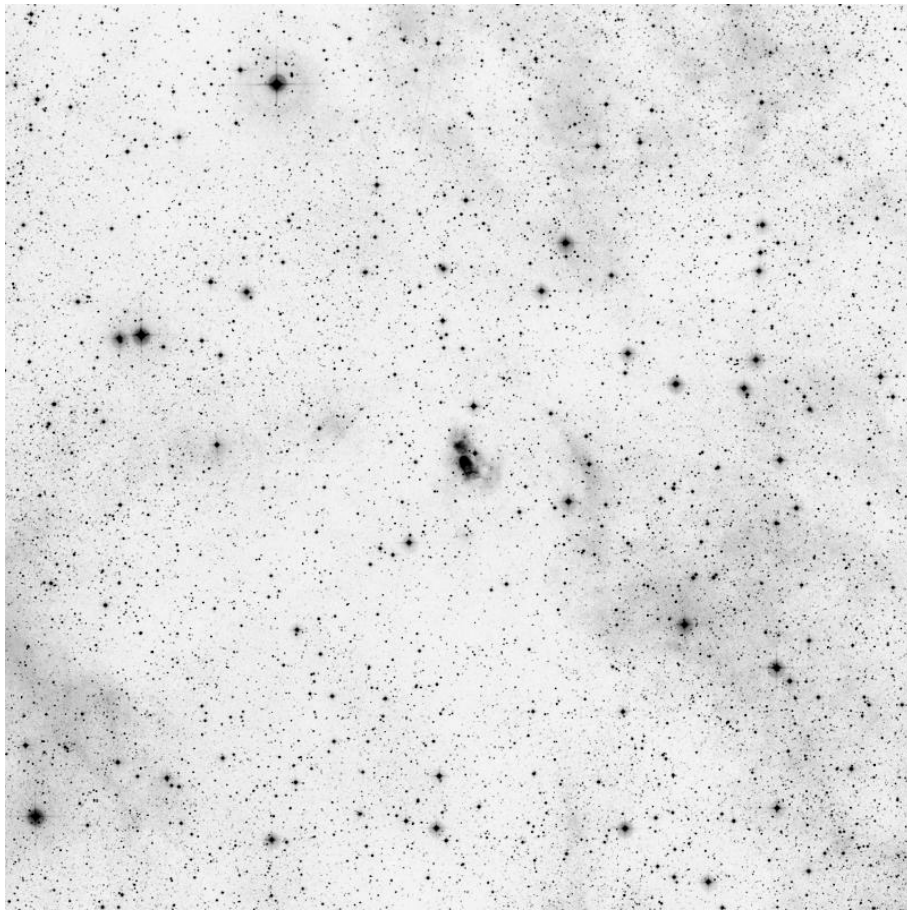


DWB 111

20 16 00.00 +43 40 12.0

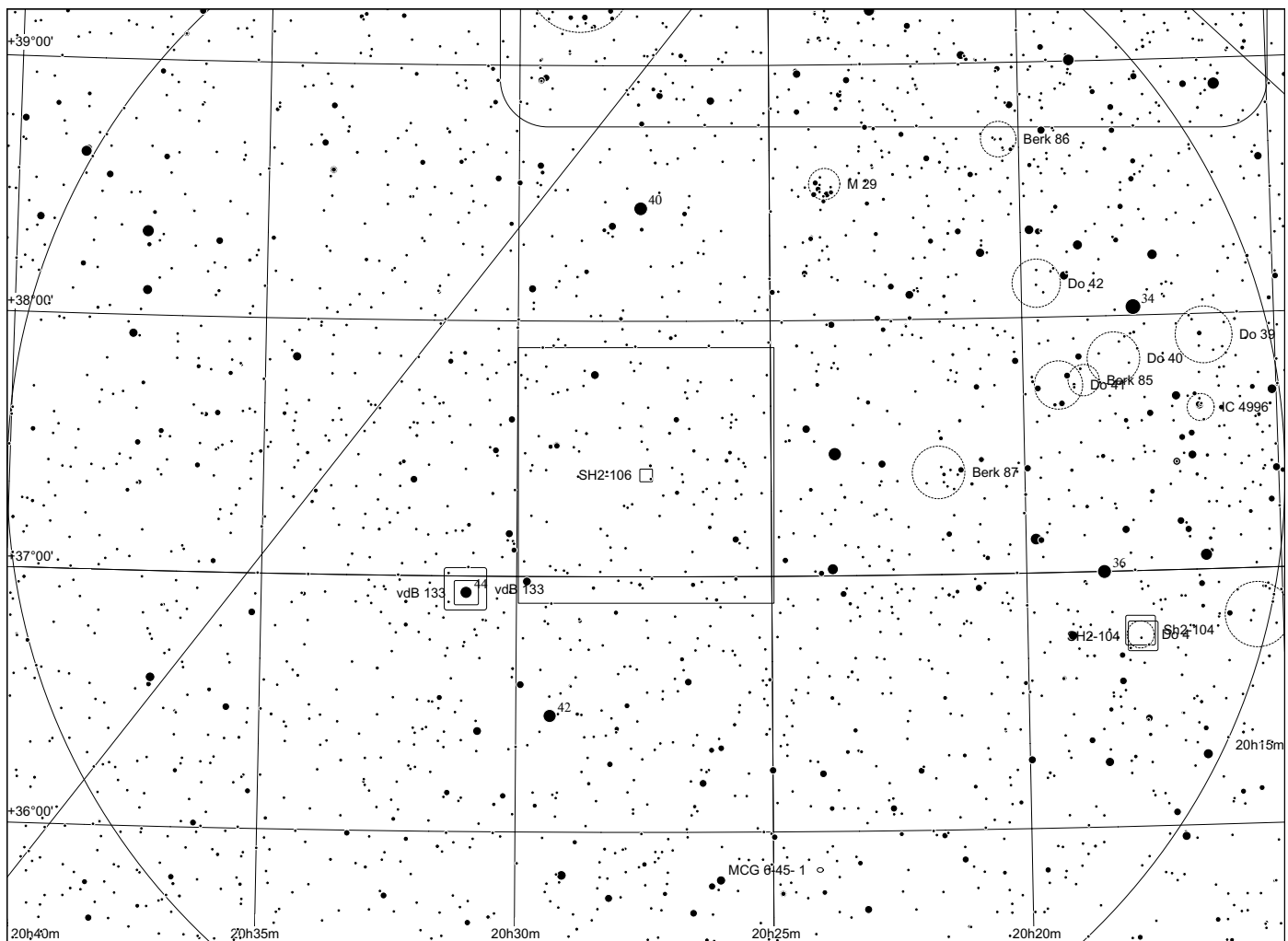
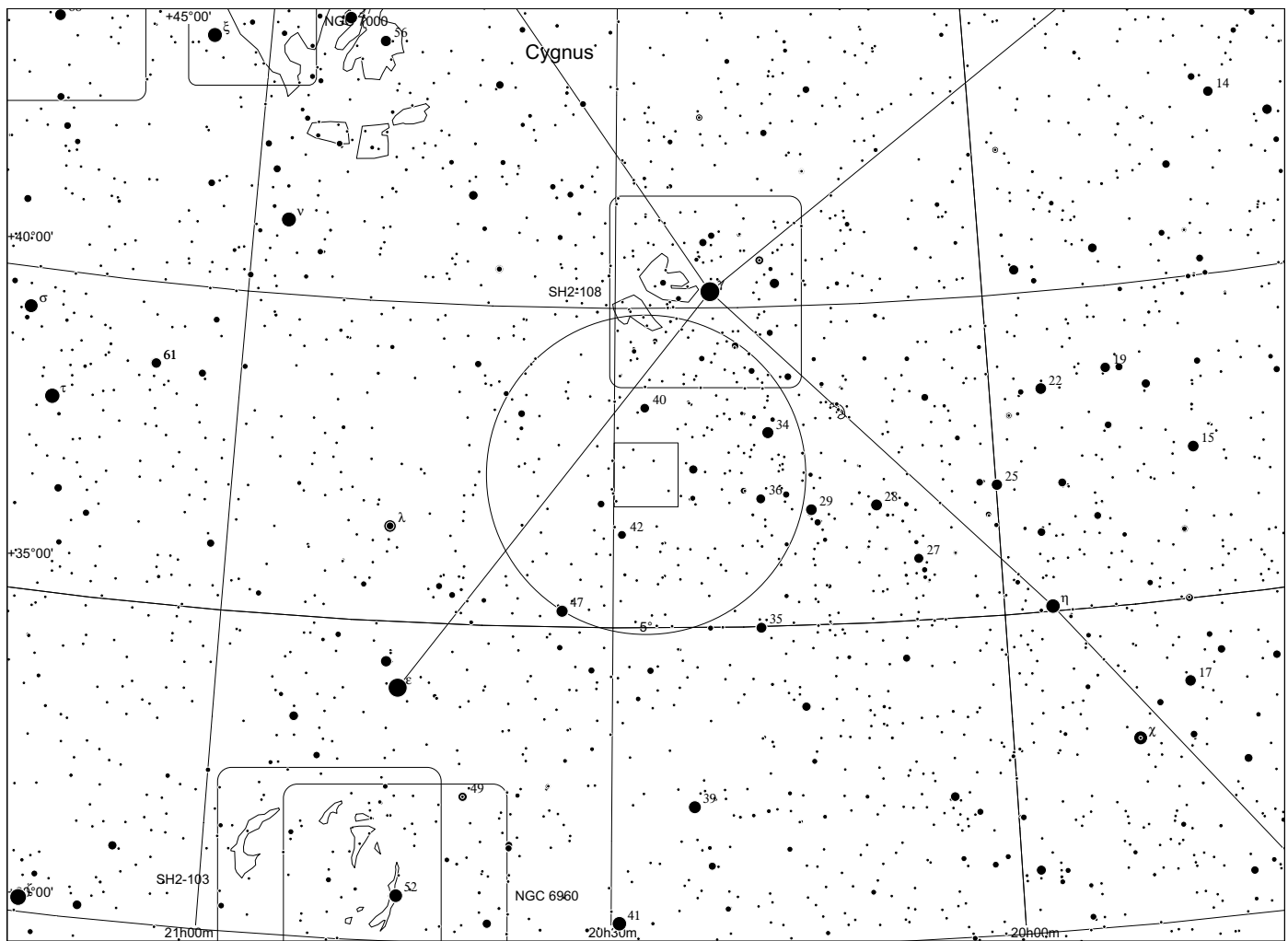


Sharpless 106 in Cygnus

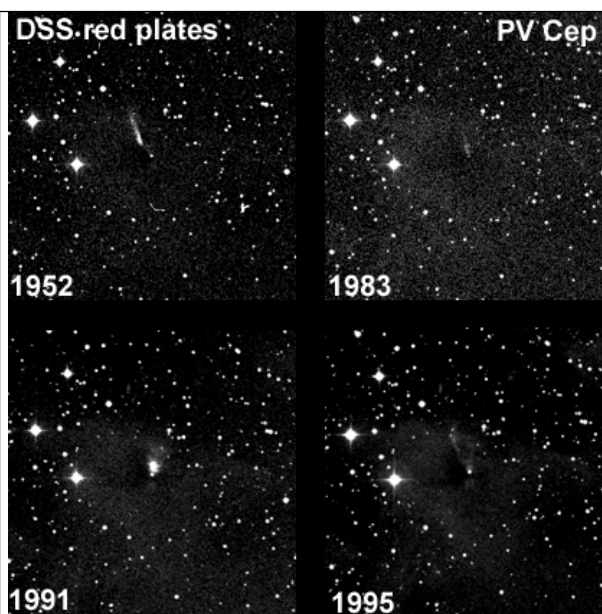
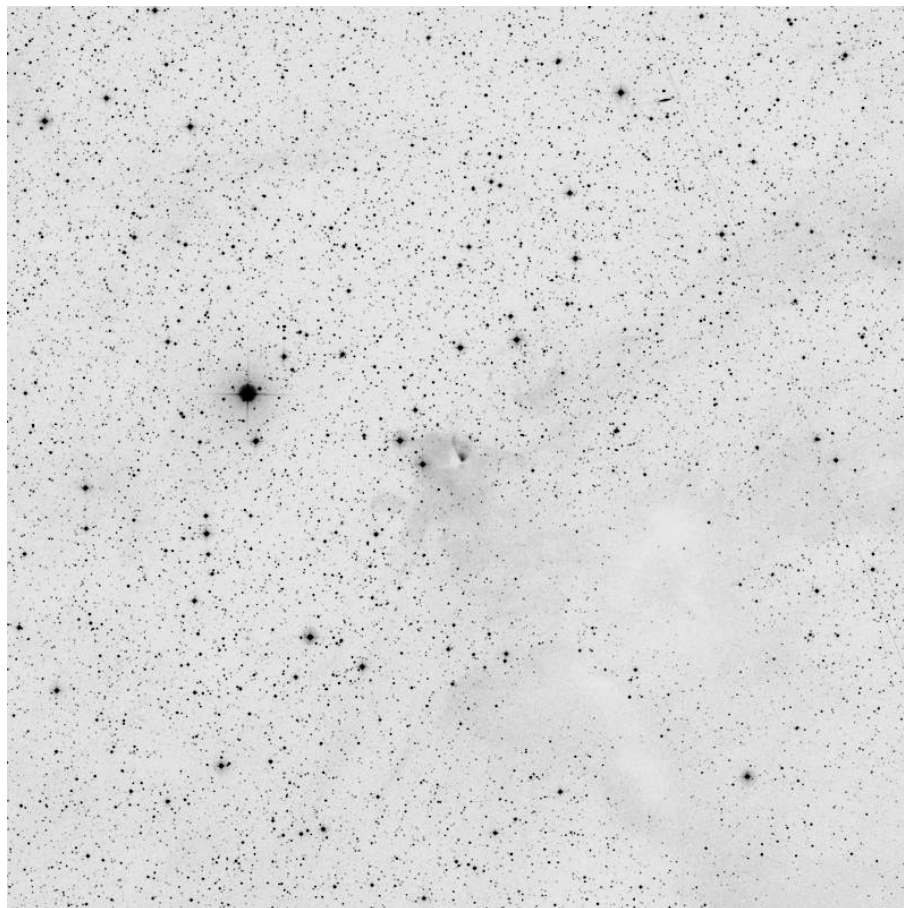


Sh2-106

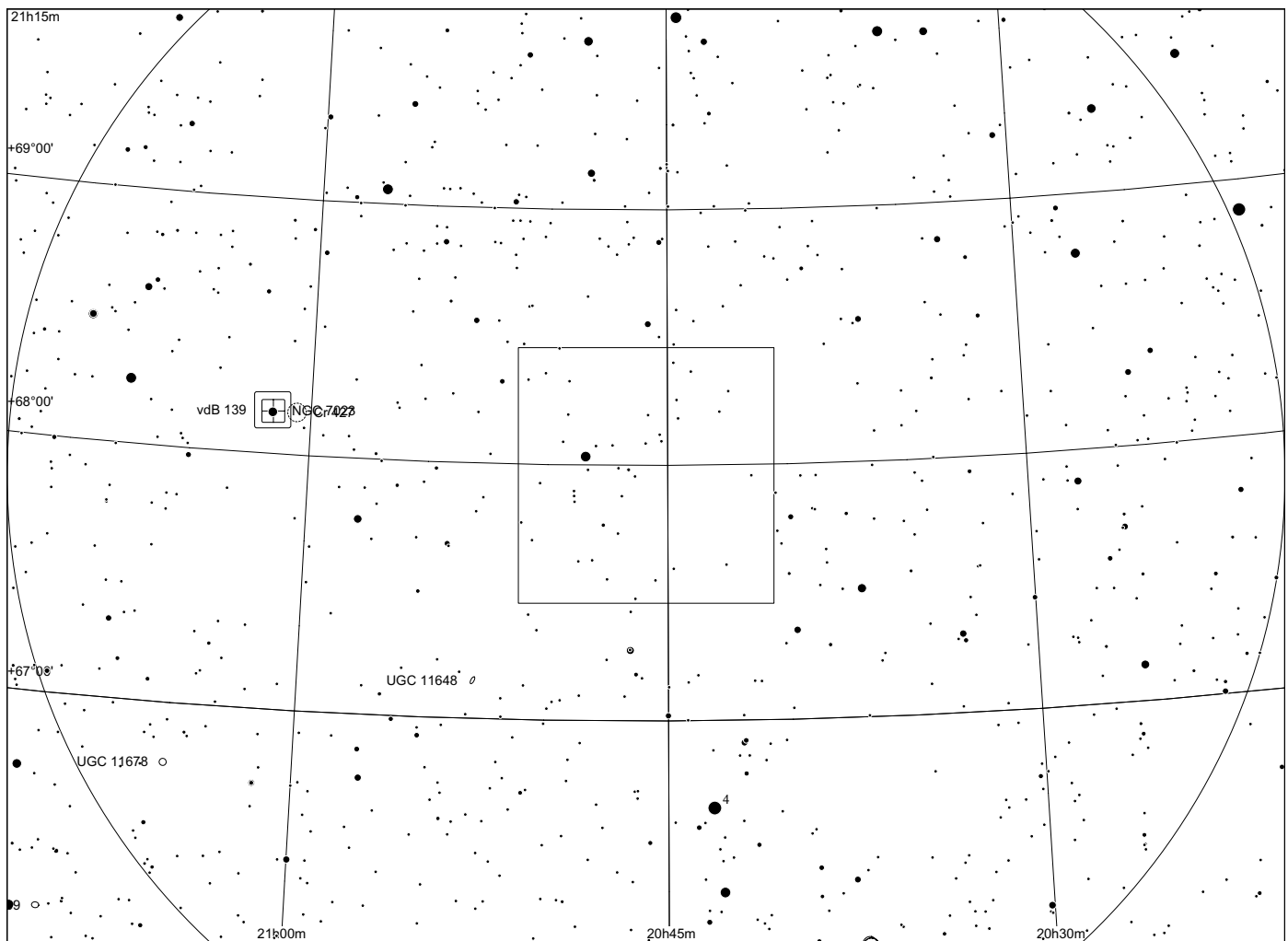
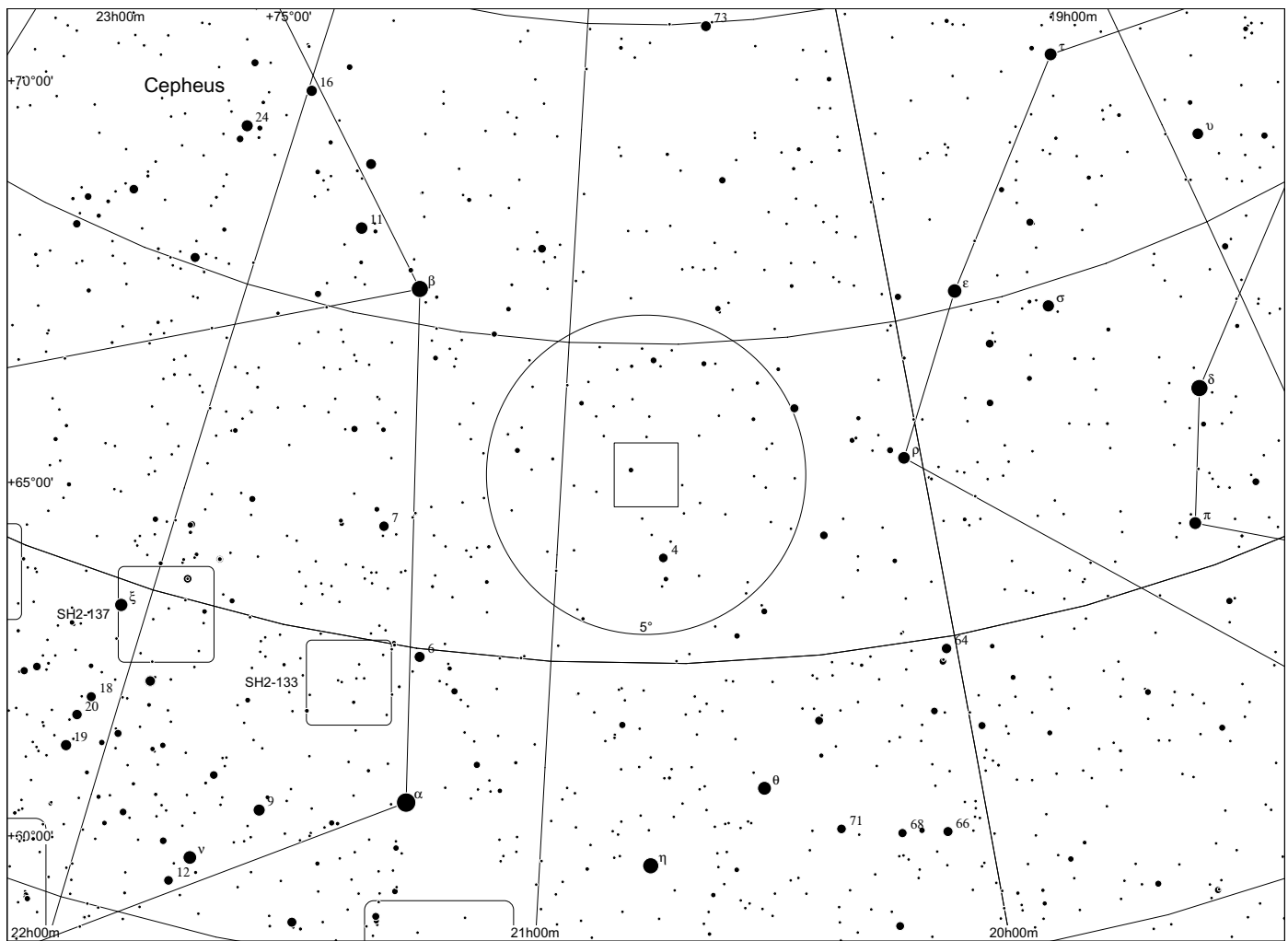
20 27 27.10 +37 22 39.0



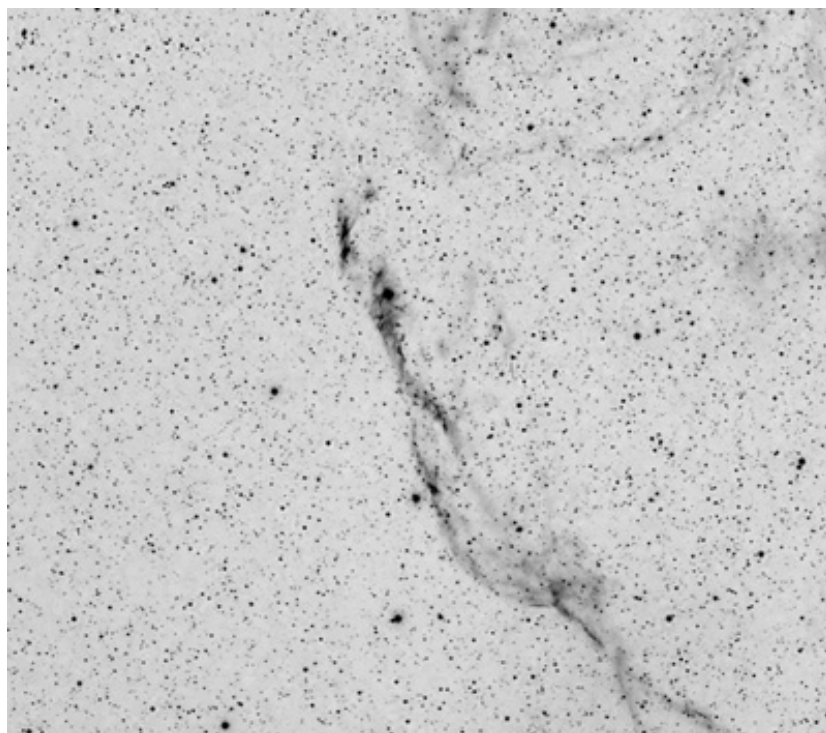
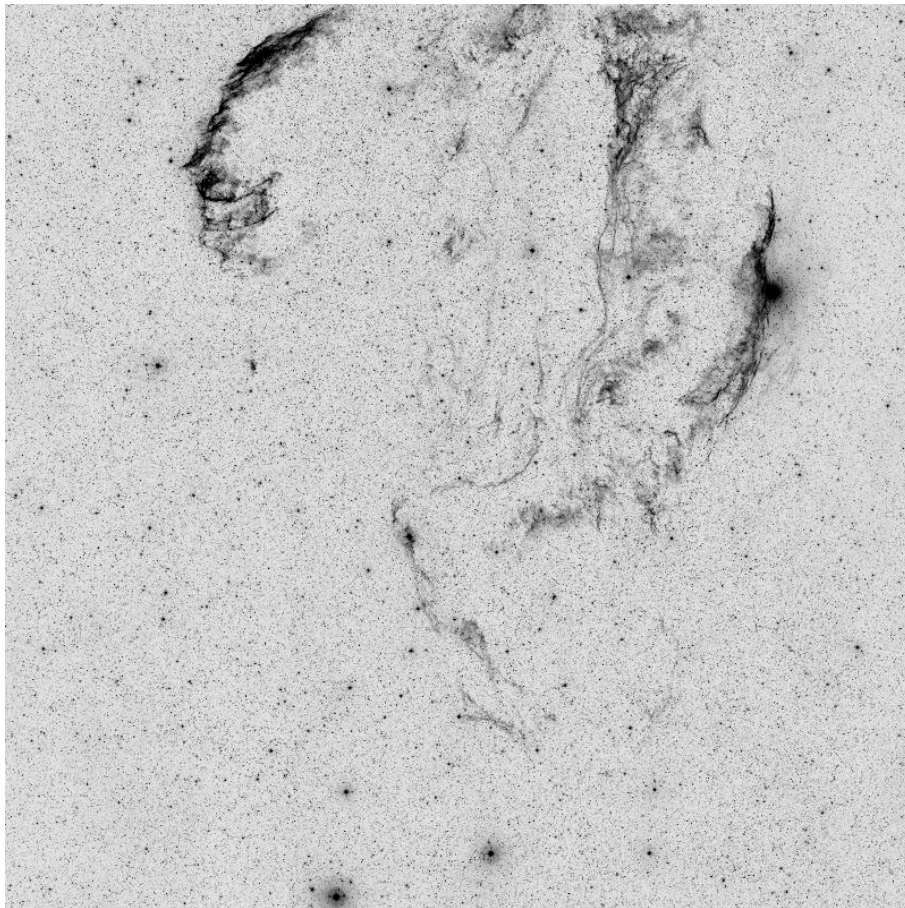
PV Cephei (Gyulbudaghian's Nebula) in Cepheus



| | | |
|-----------|-------------------------|--|
| PV Cephei | 20 45 53.94 +67 57 38.7 | |
|-----------|-------------------------|--|

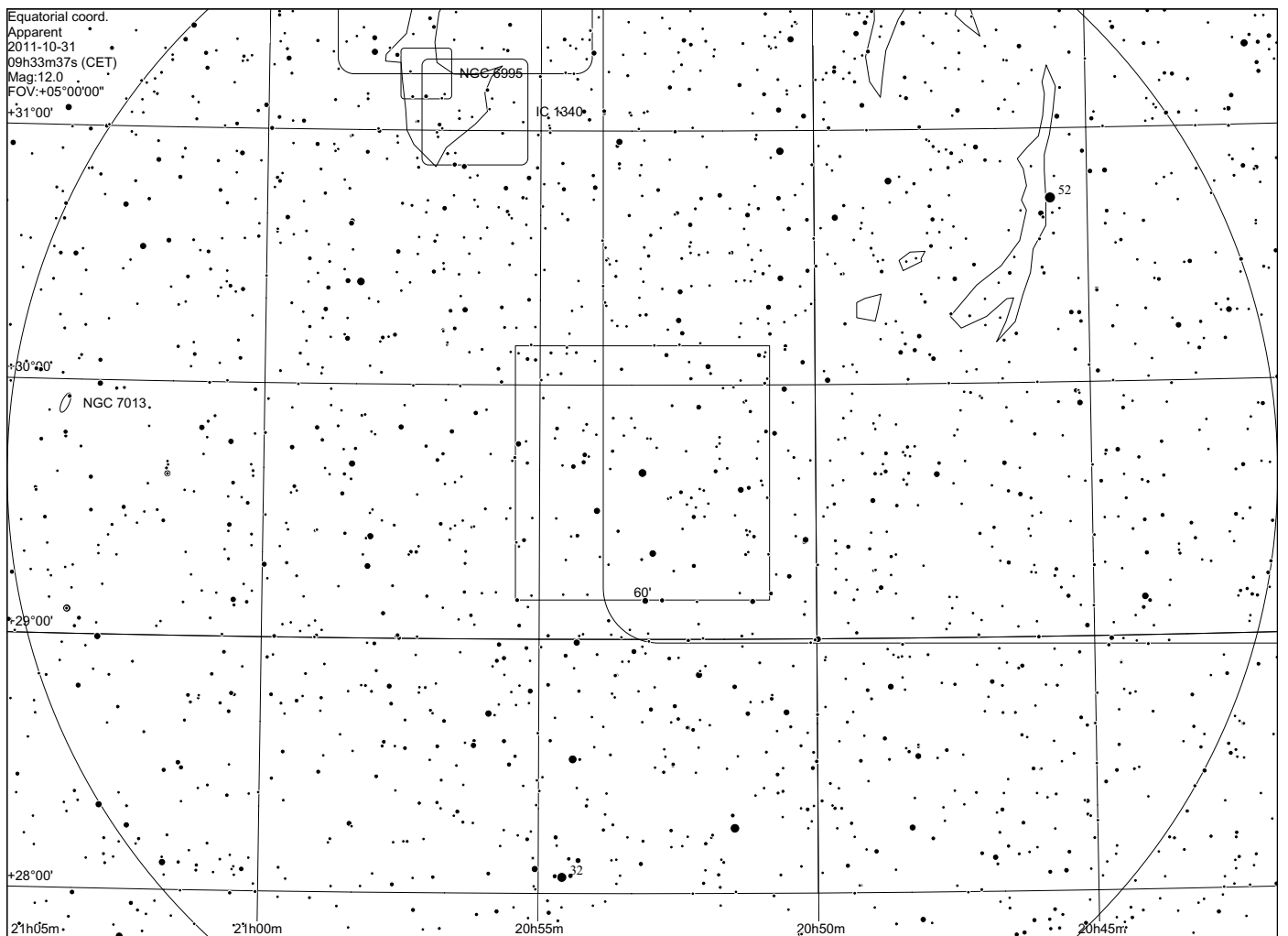
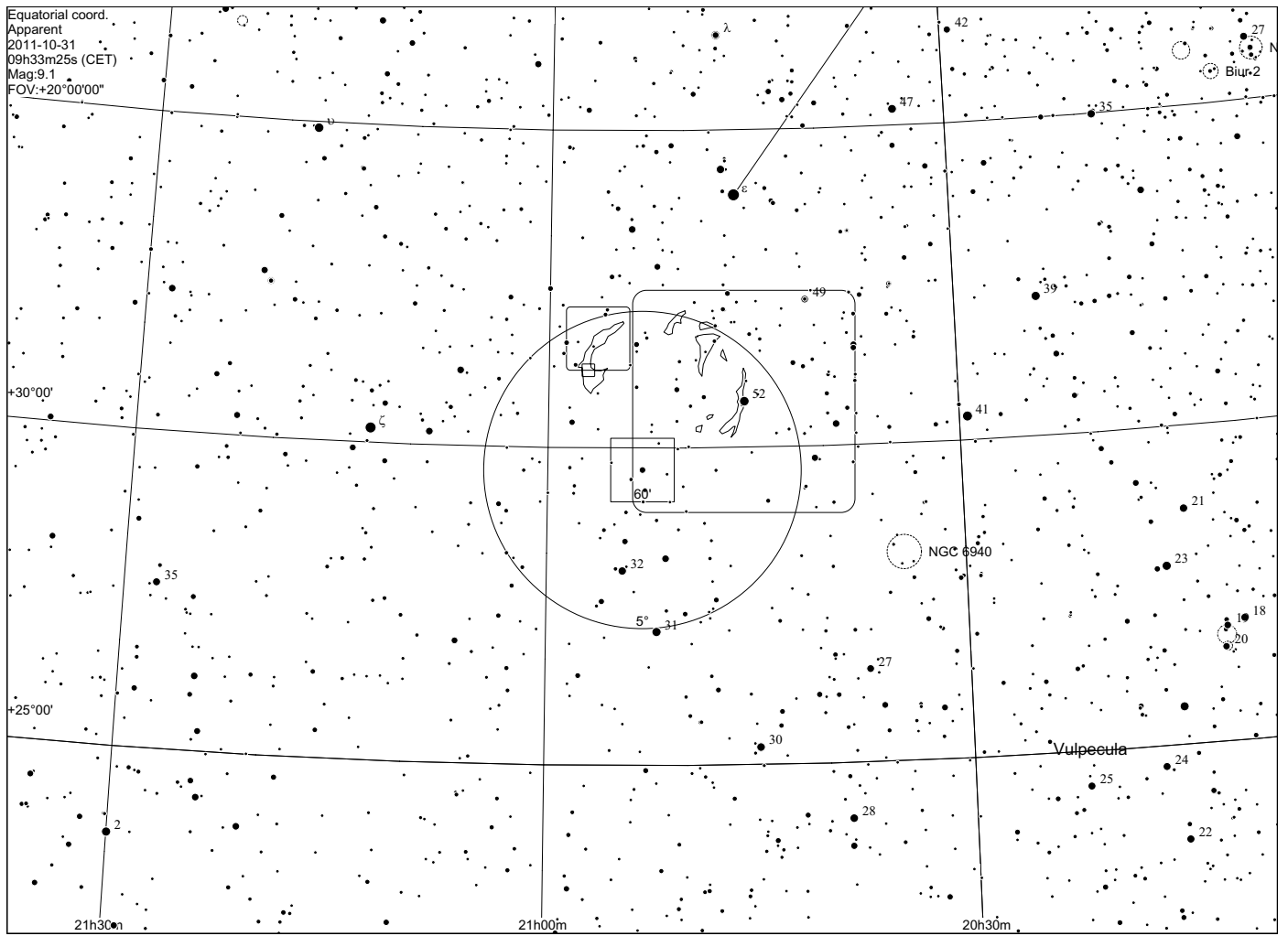


Cirrus Südbogen Simeis 3-210 in Cygnus

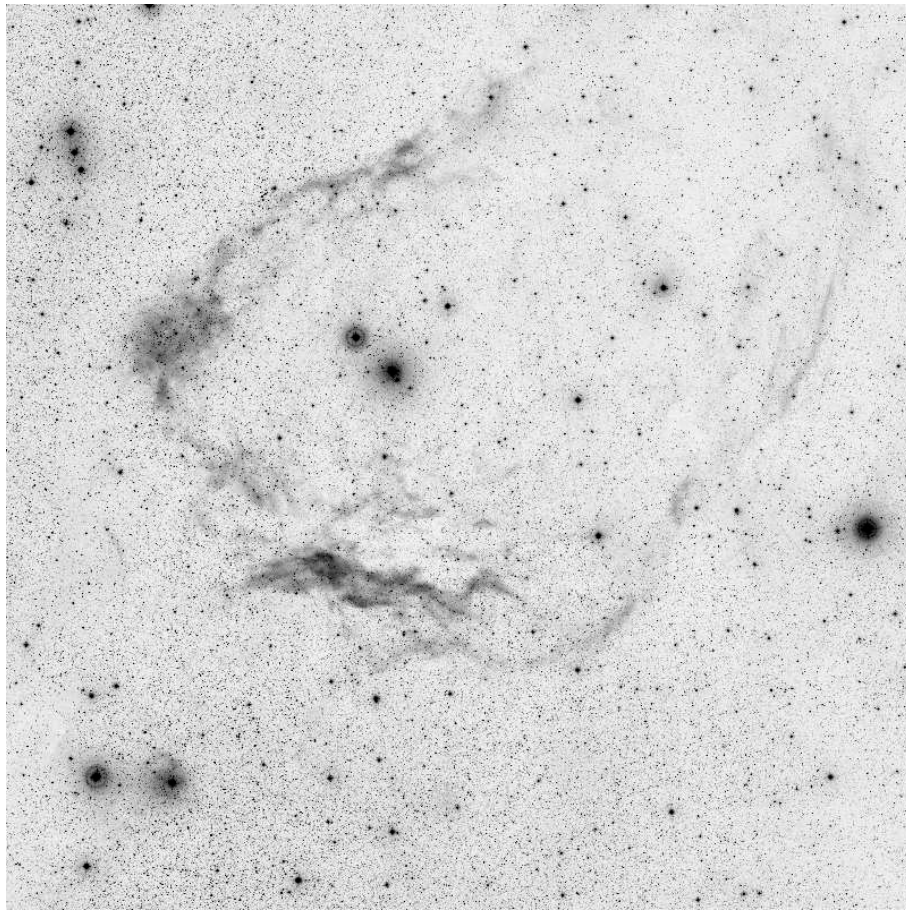


Simeis 3-210

20 53 07 +29 38 57



Sharpless 129 in Cepheus

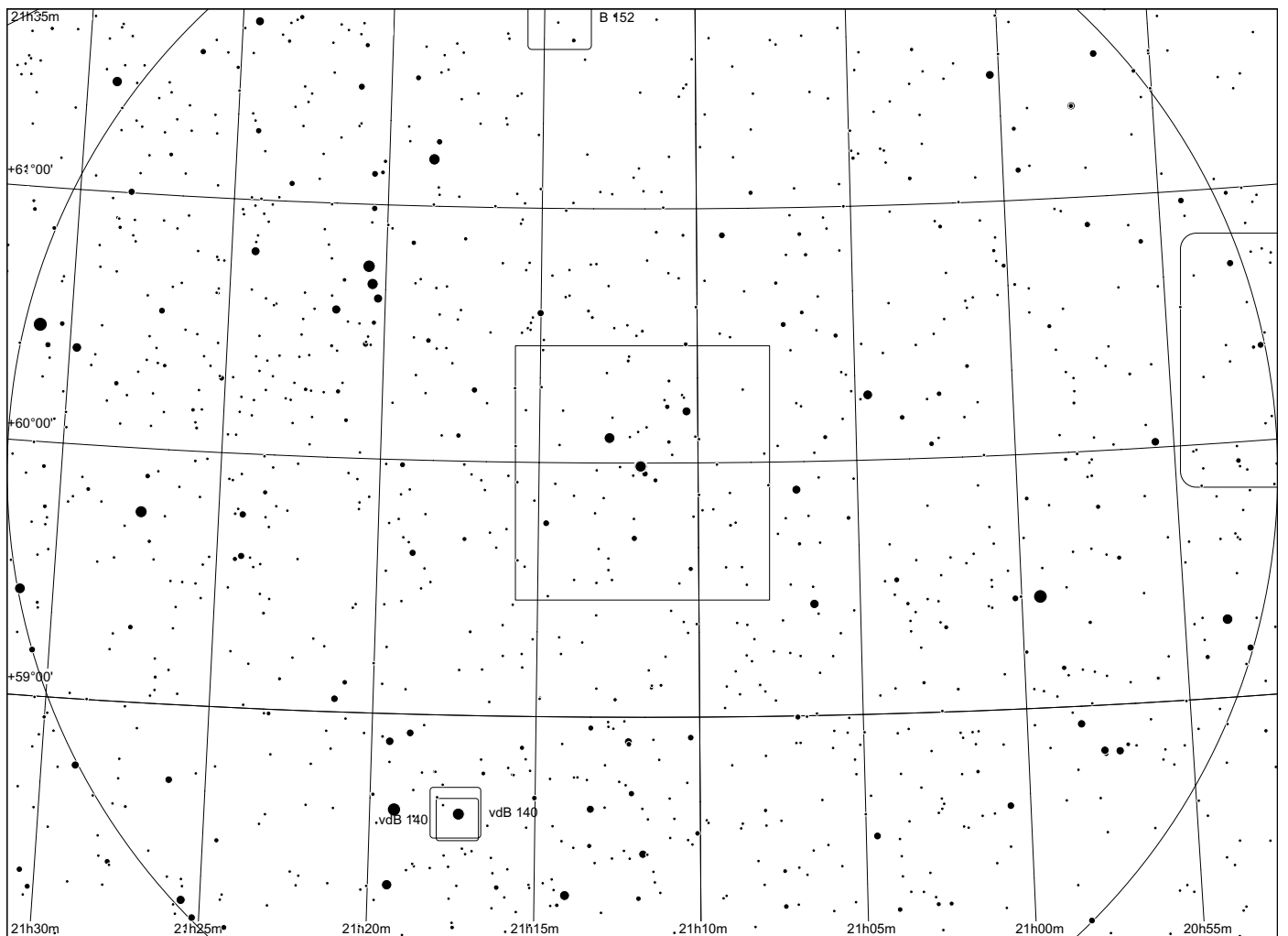
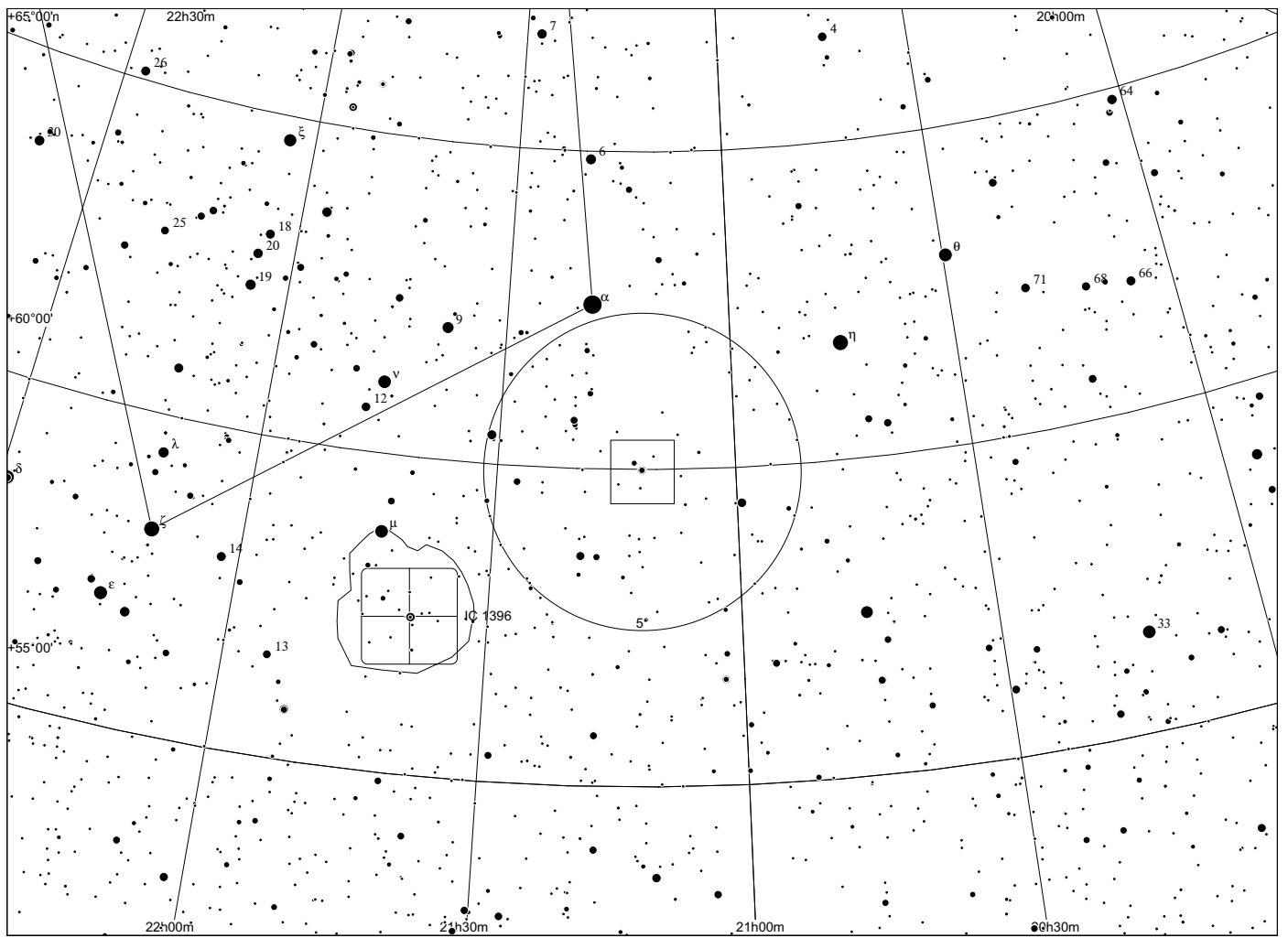


3°x3°

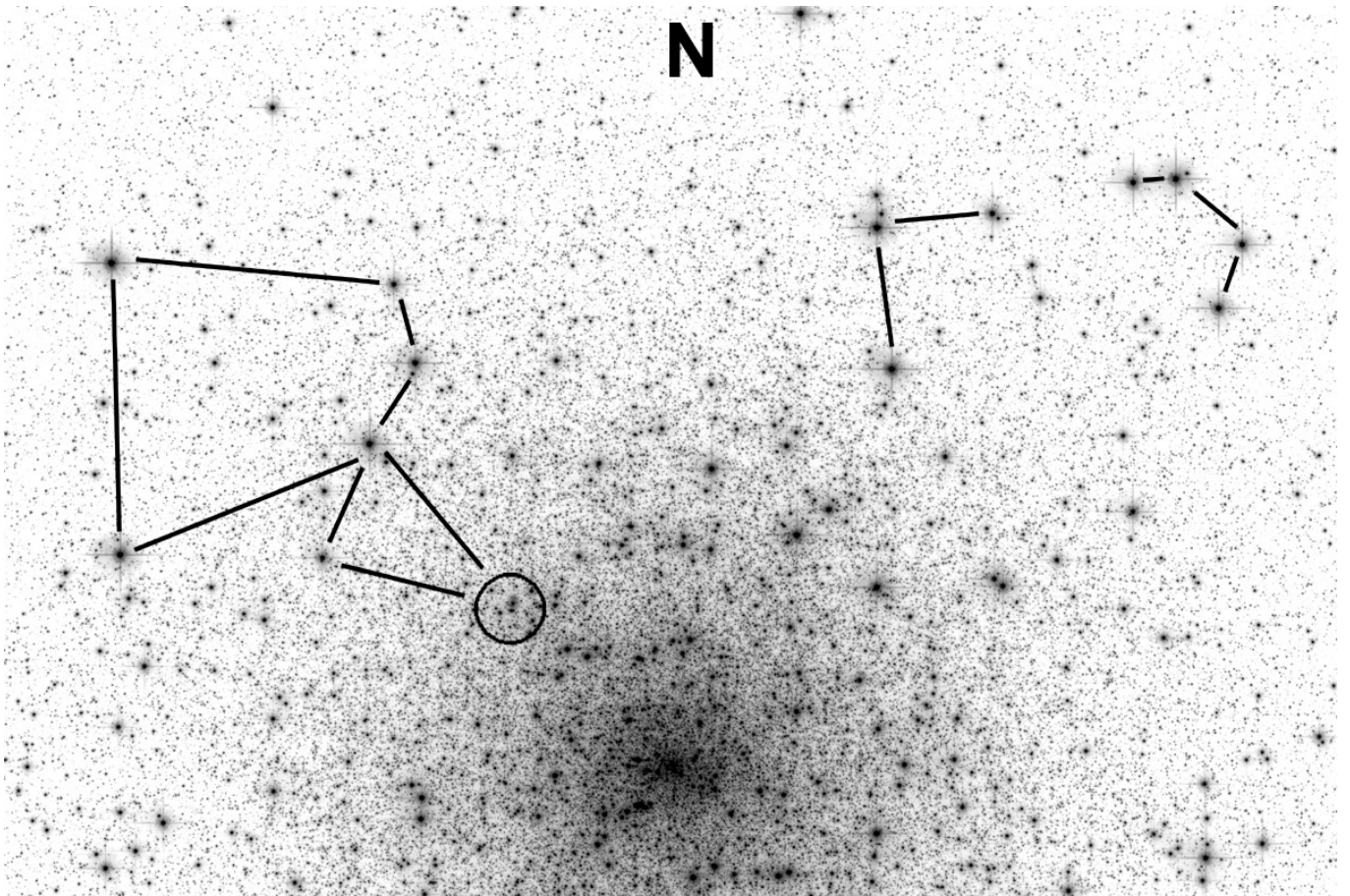


Sh2-129

21 10 00.00 +59 42 00.0

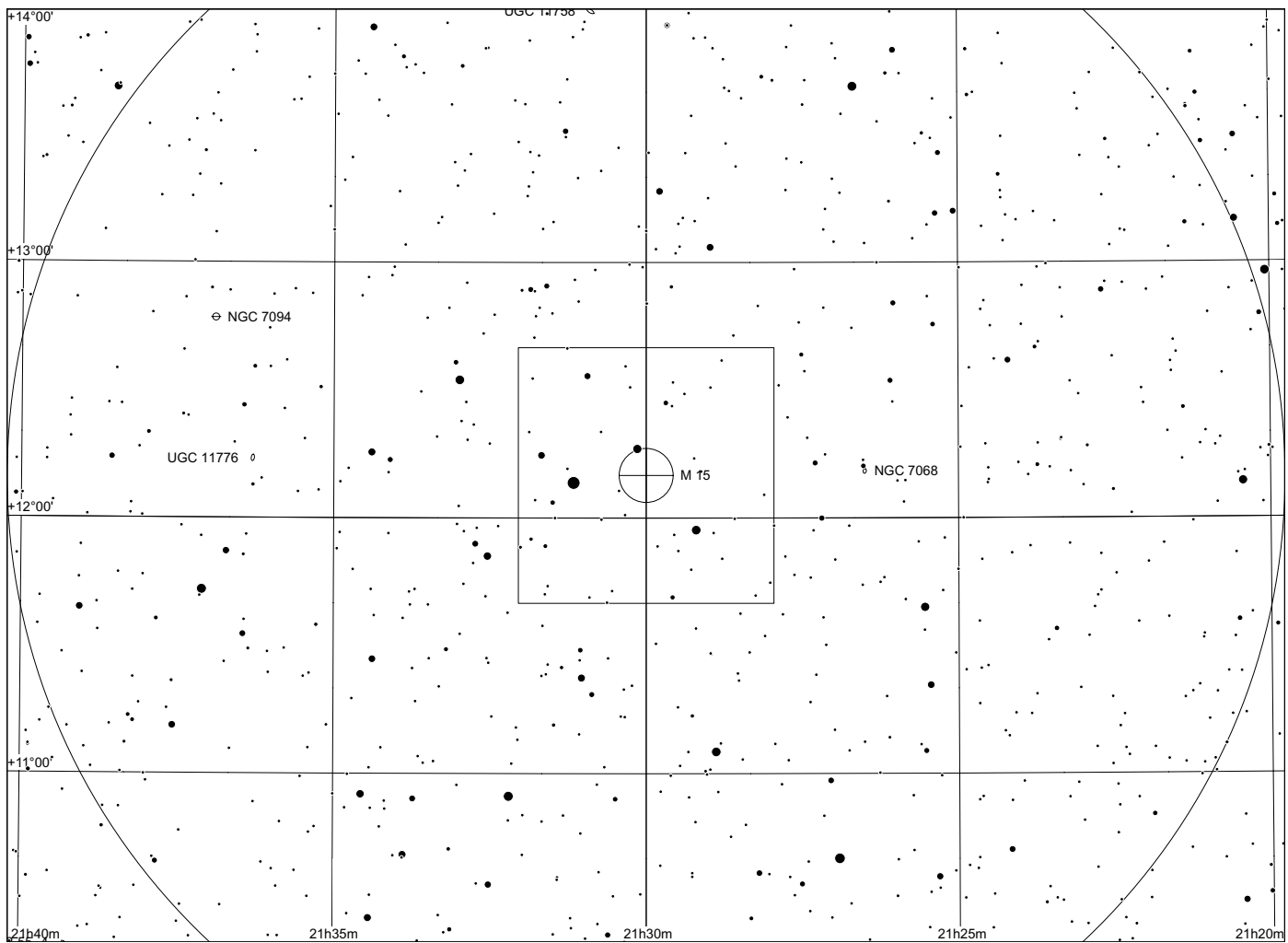
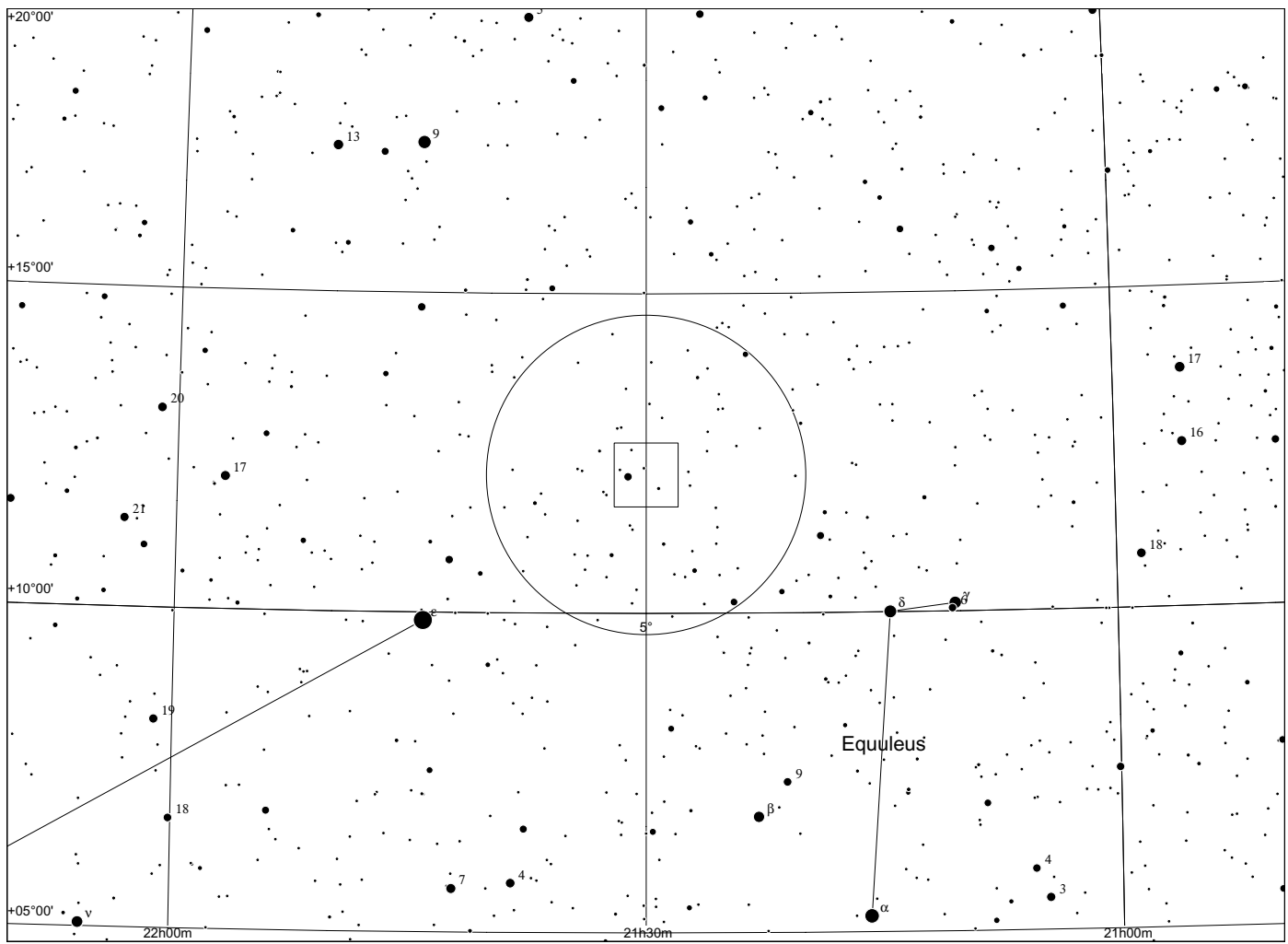


Pease 1 (M15) in Pegasus

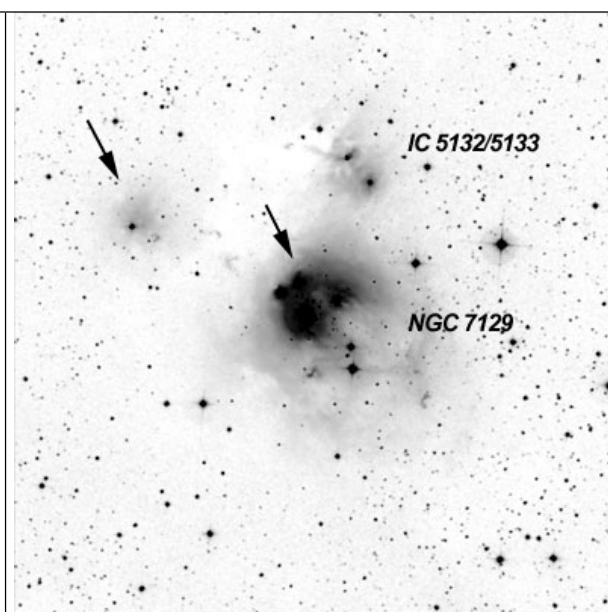
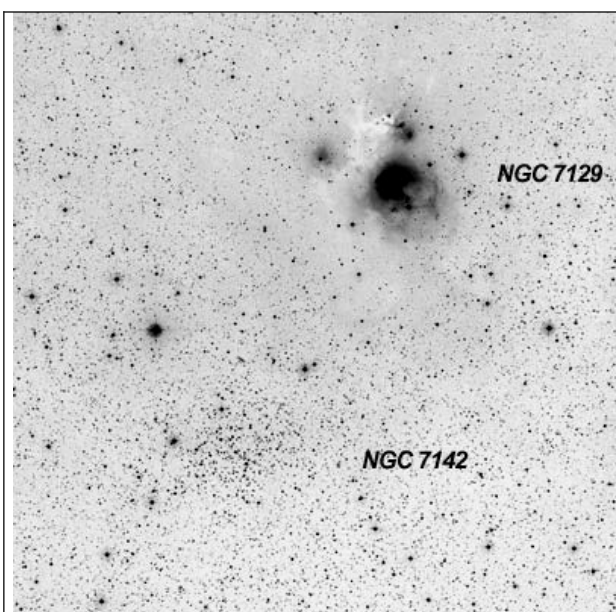
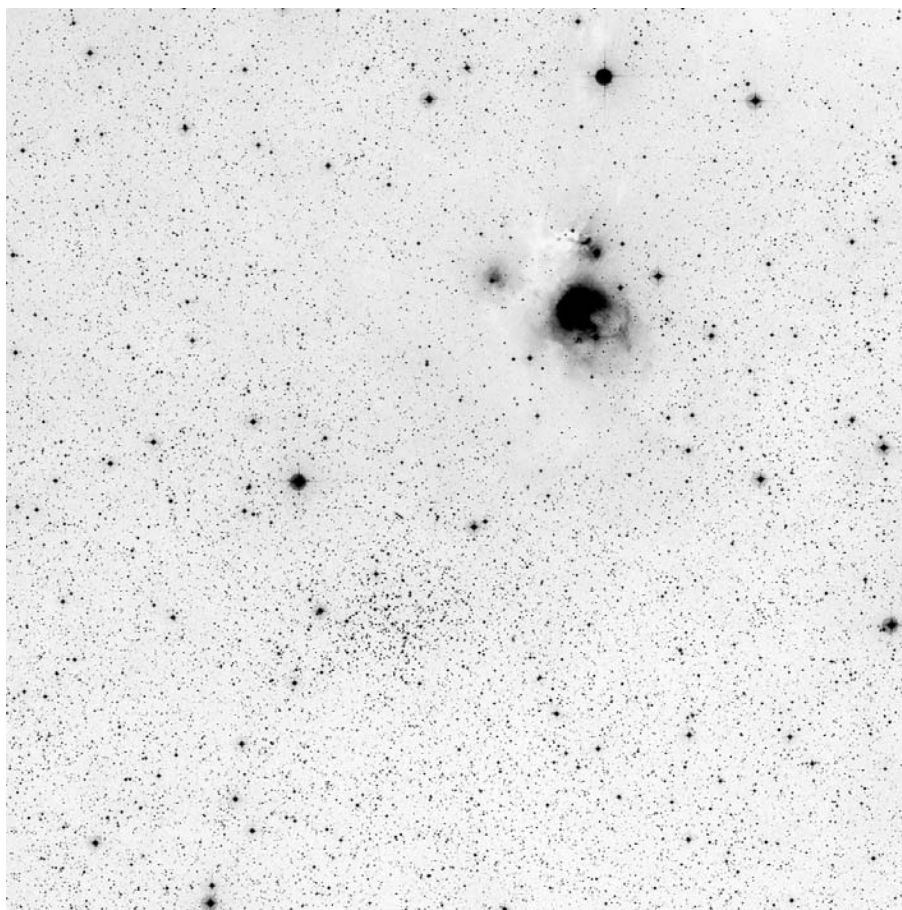


M15

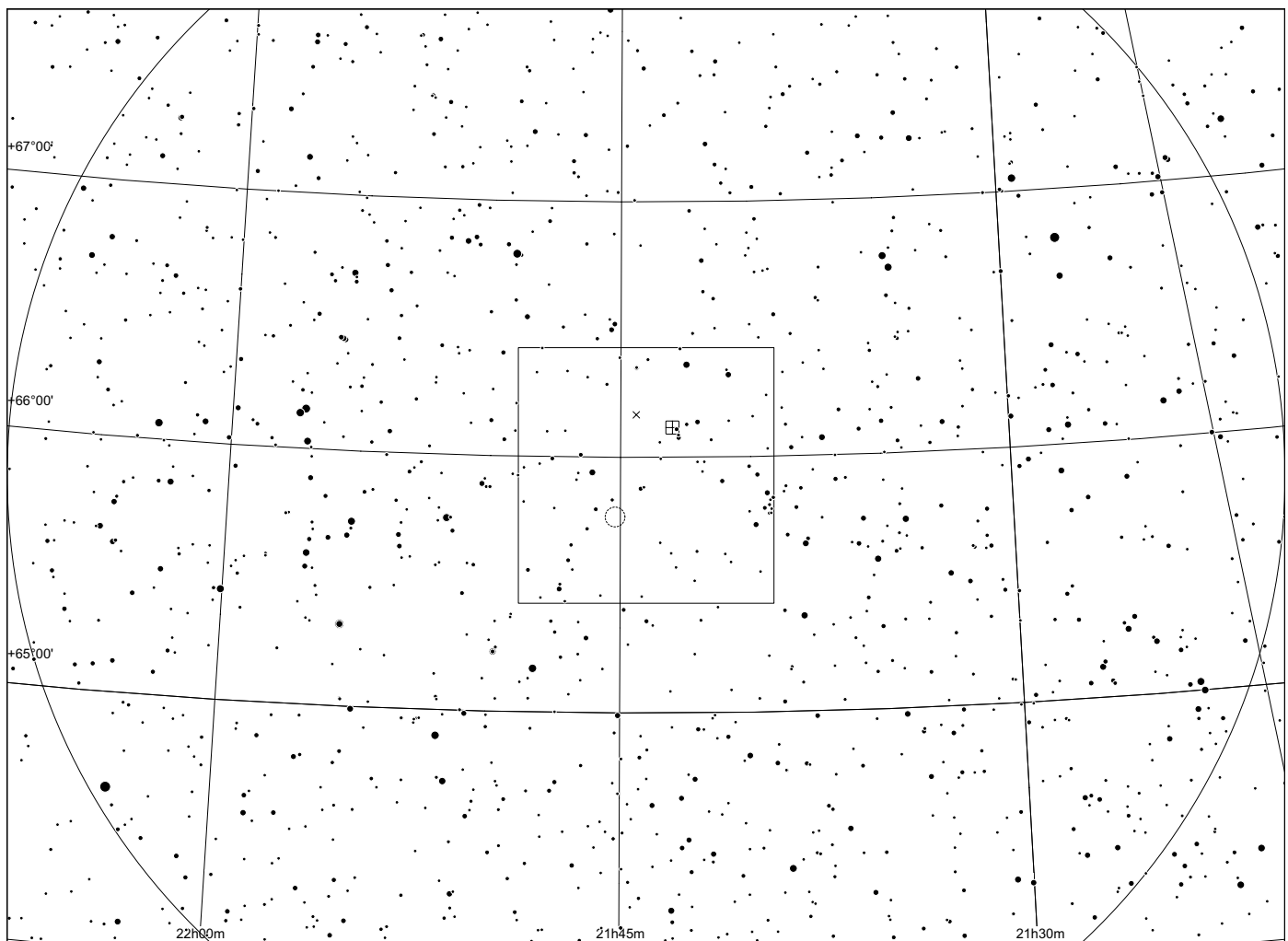
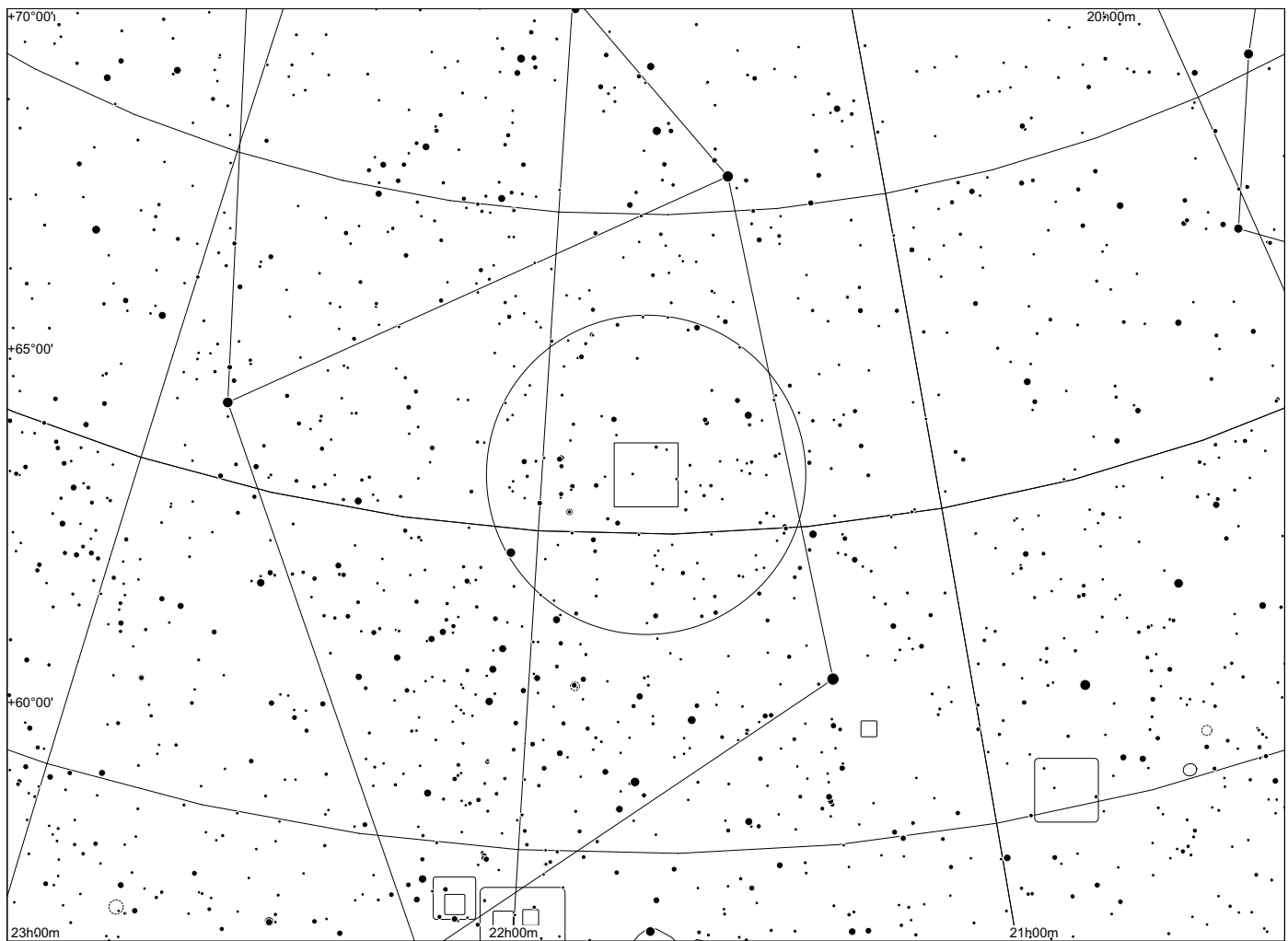
21 29 58.33 +12 10 01.2



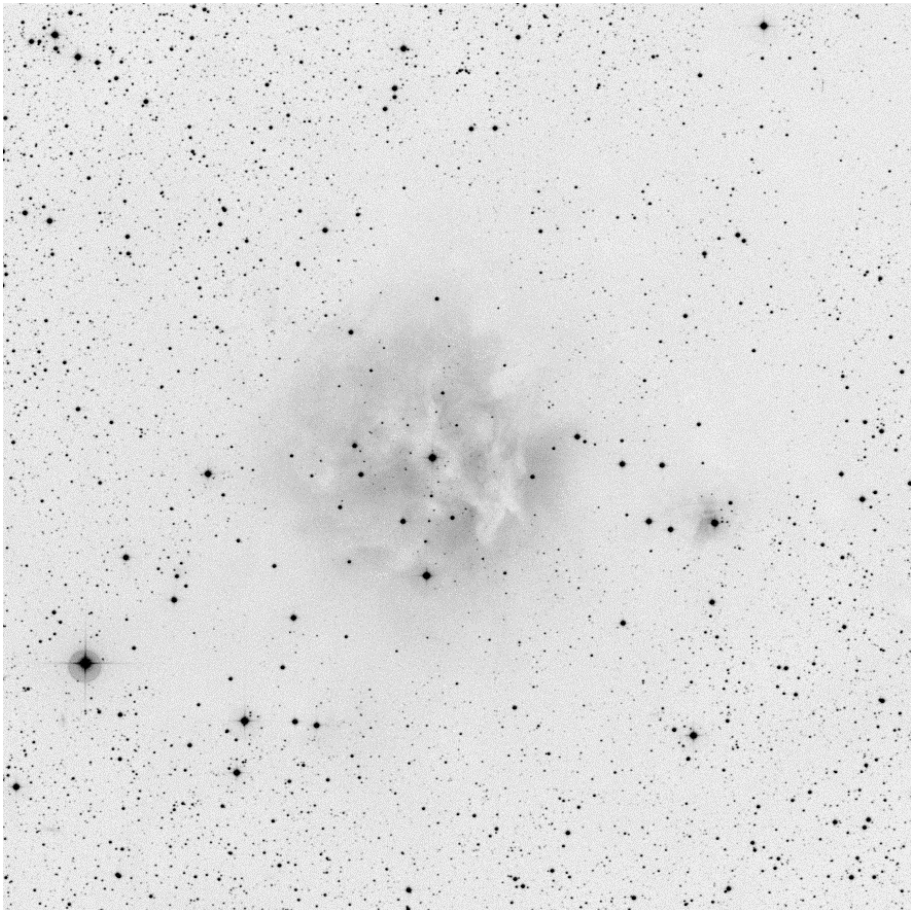
NGC 7129/7142 in Cepheus



| | | | |
|----------|-------------|-------------|--|
| NGC 7129 | 21 42 55.92 | +66 06 10.8 | |
|----------|-------------|-------------|--|



Cocoon Nebula IC 5146 in Cygnus



IC 5146

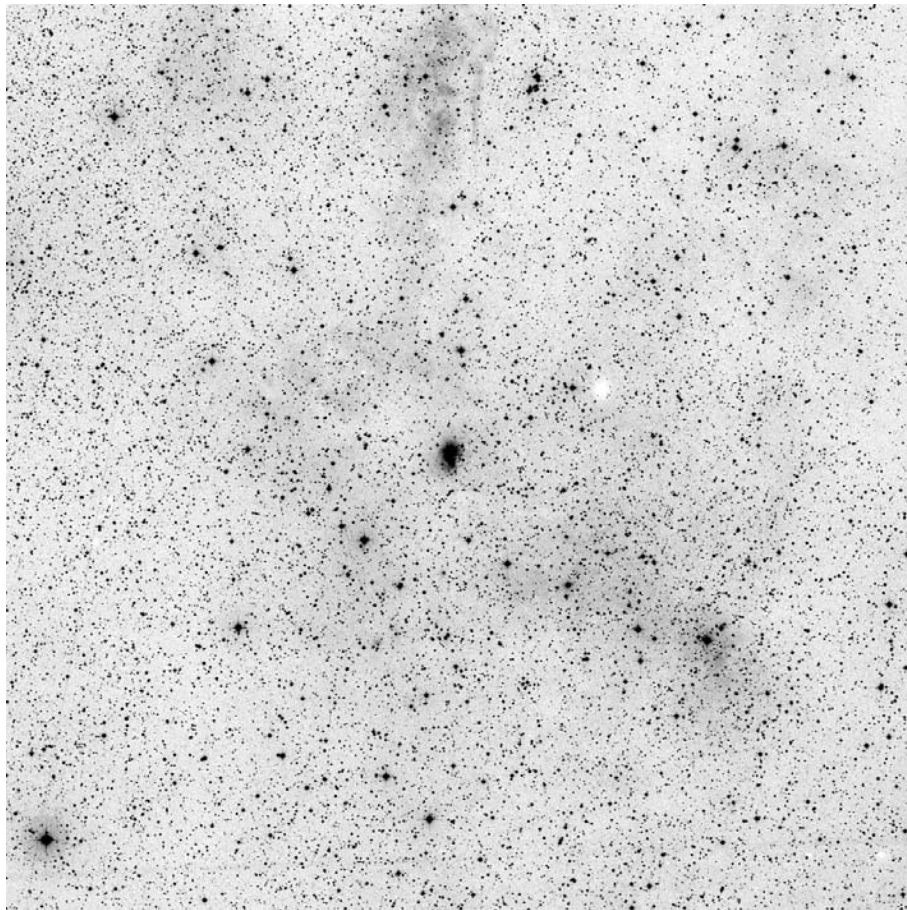
21 53 28.76



+47 16 00.9

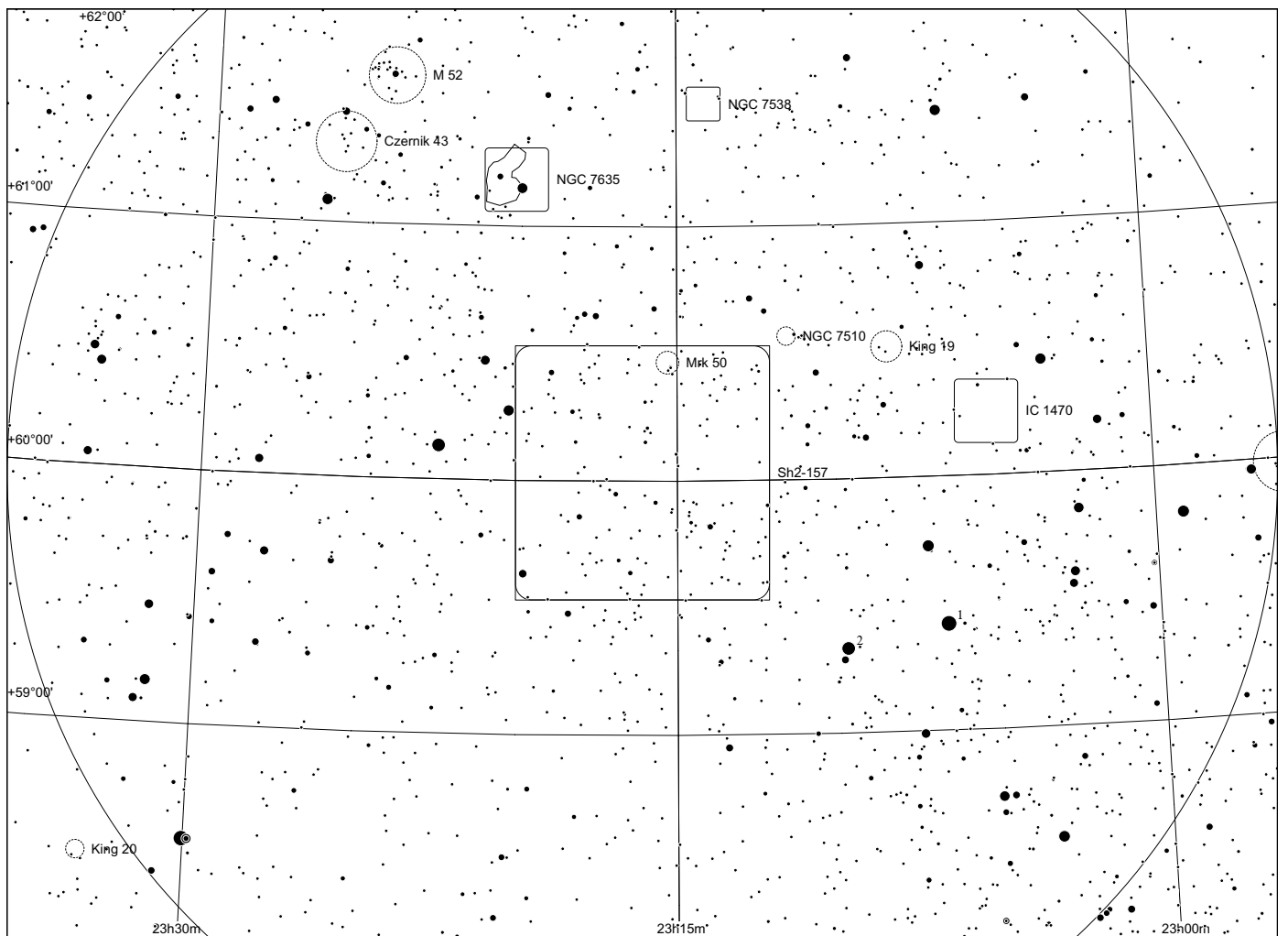
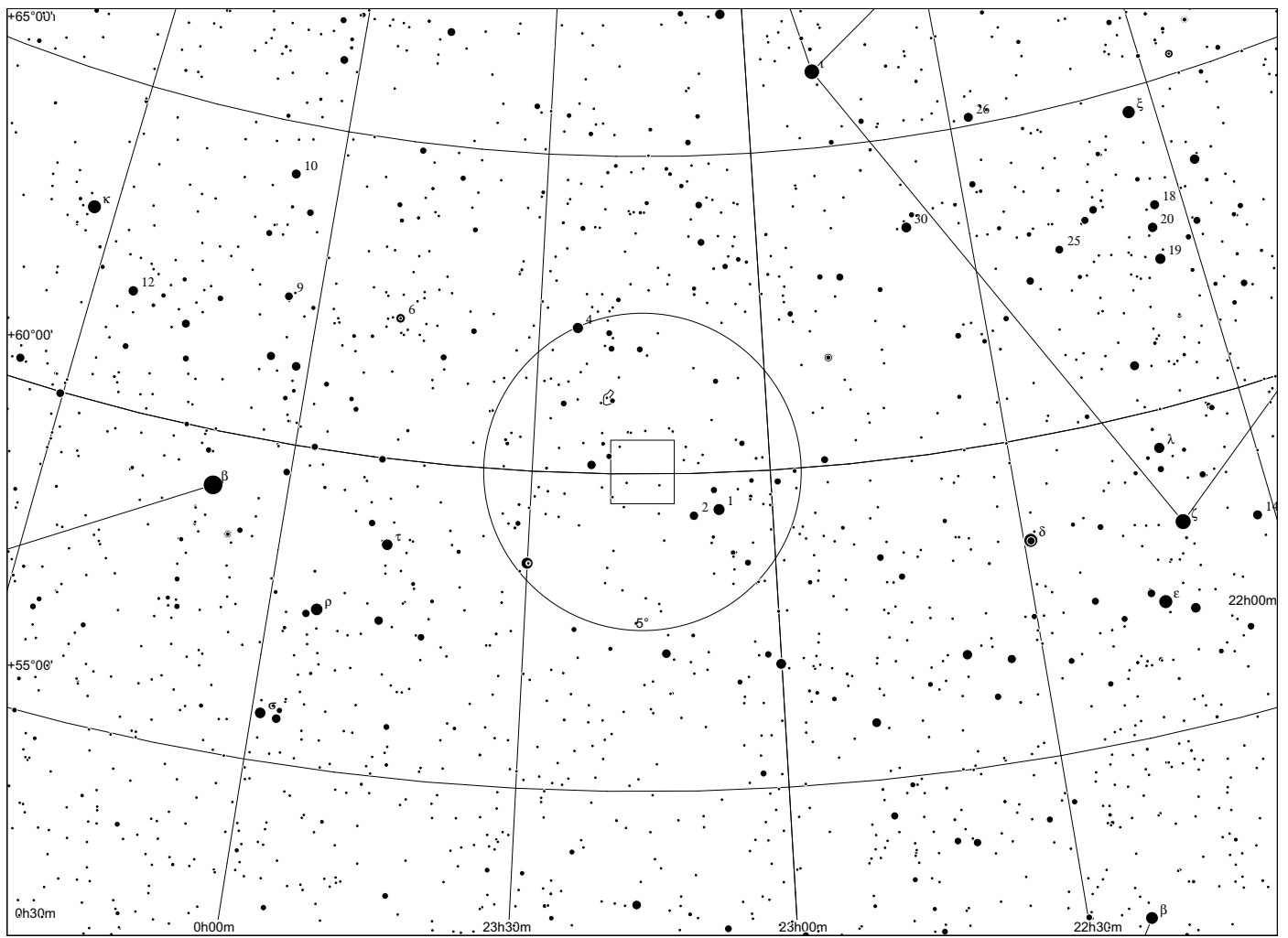
HII region/RN

Sharpless 157 in Cepheus/Cassiopeia

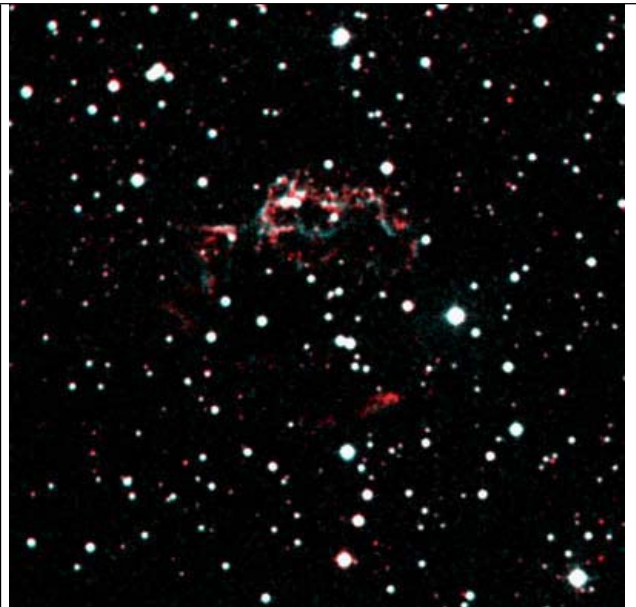
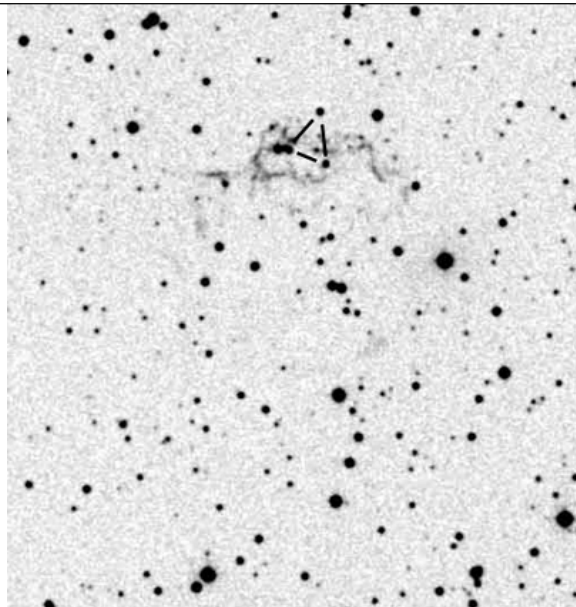
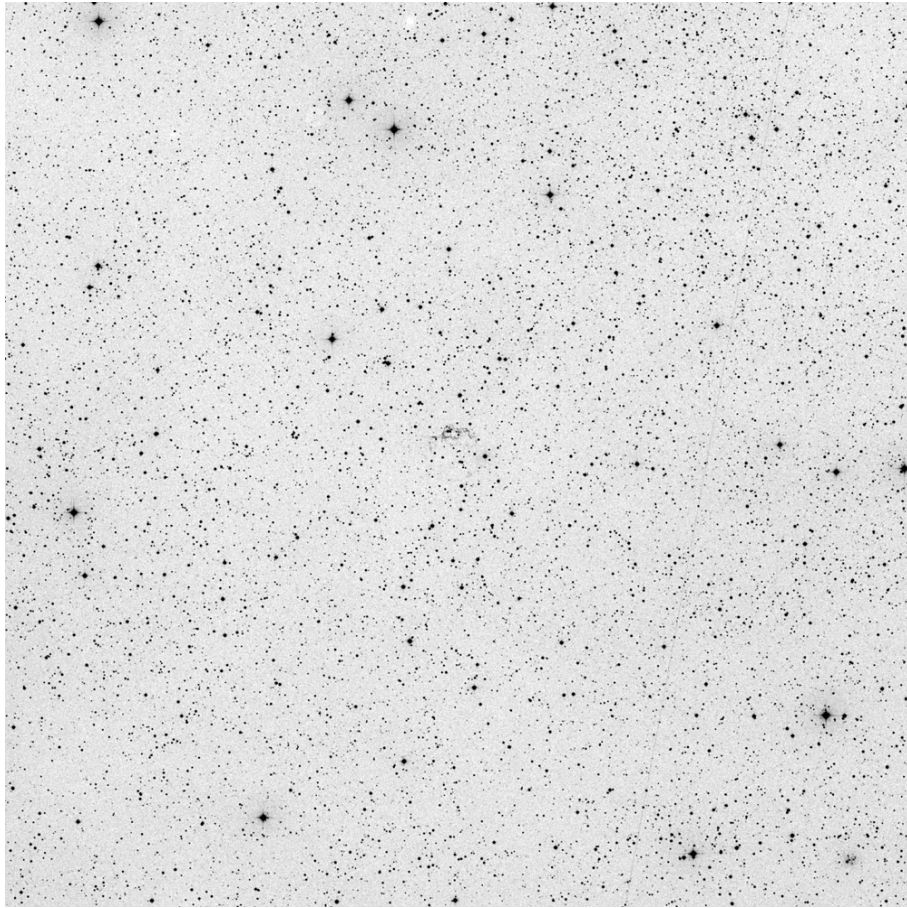


Sh2-157

23 16 04.08 +60 02 06.0



Cassiopeia A

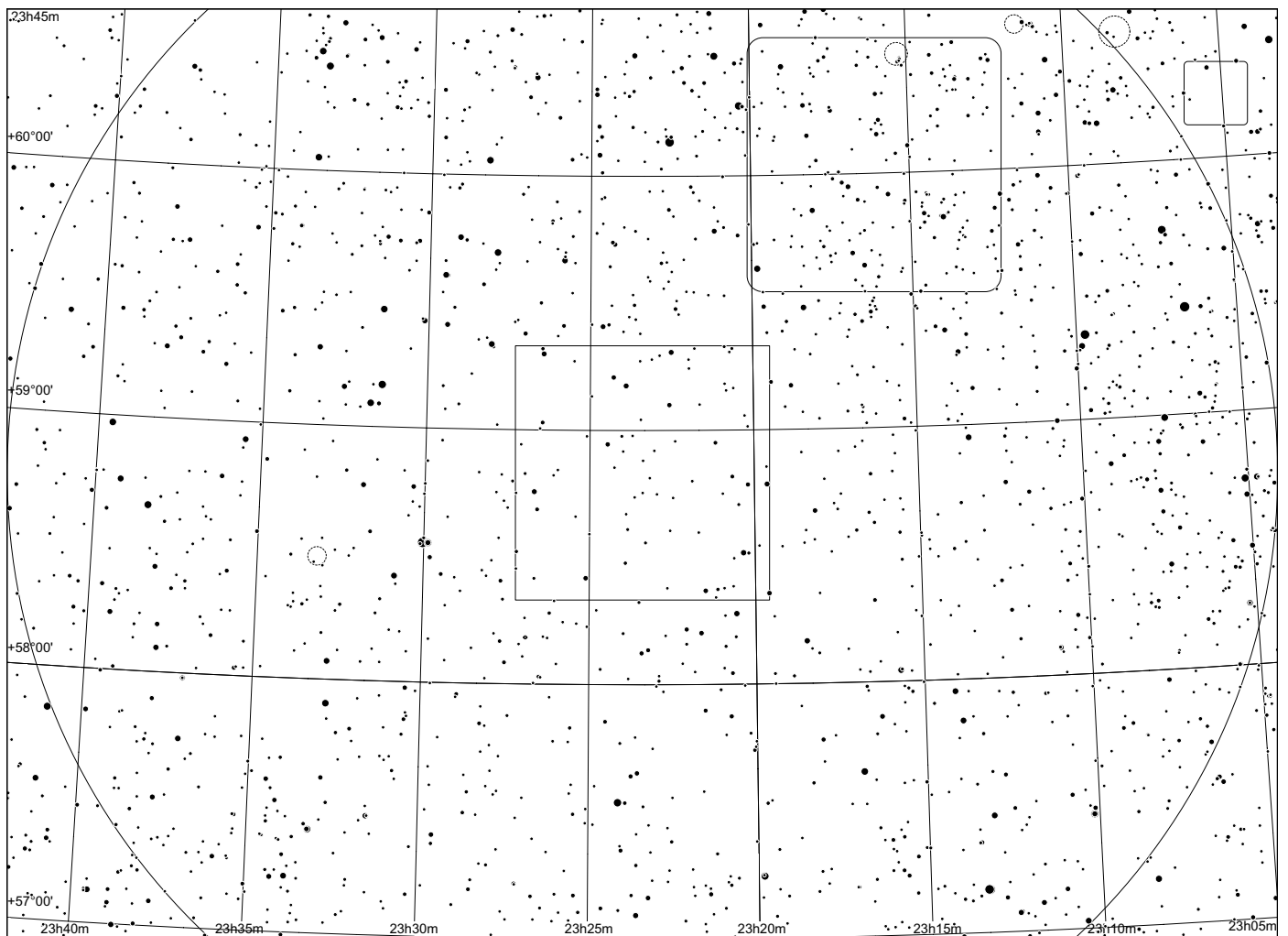
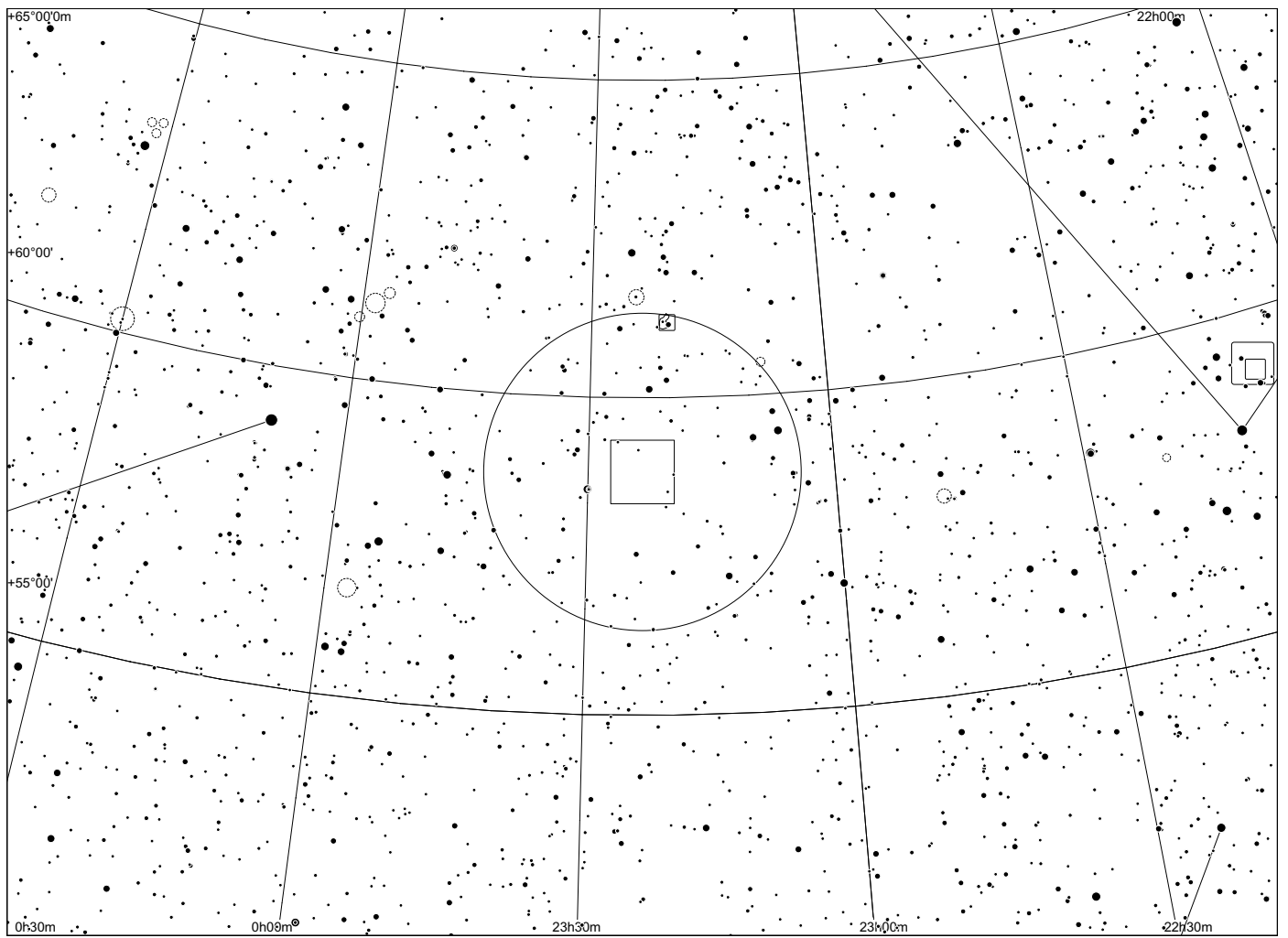


Cassiopeia A

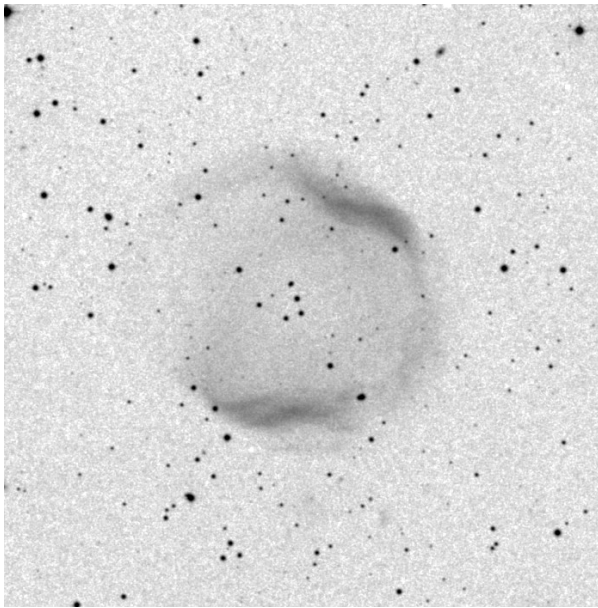
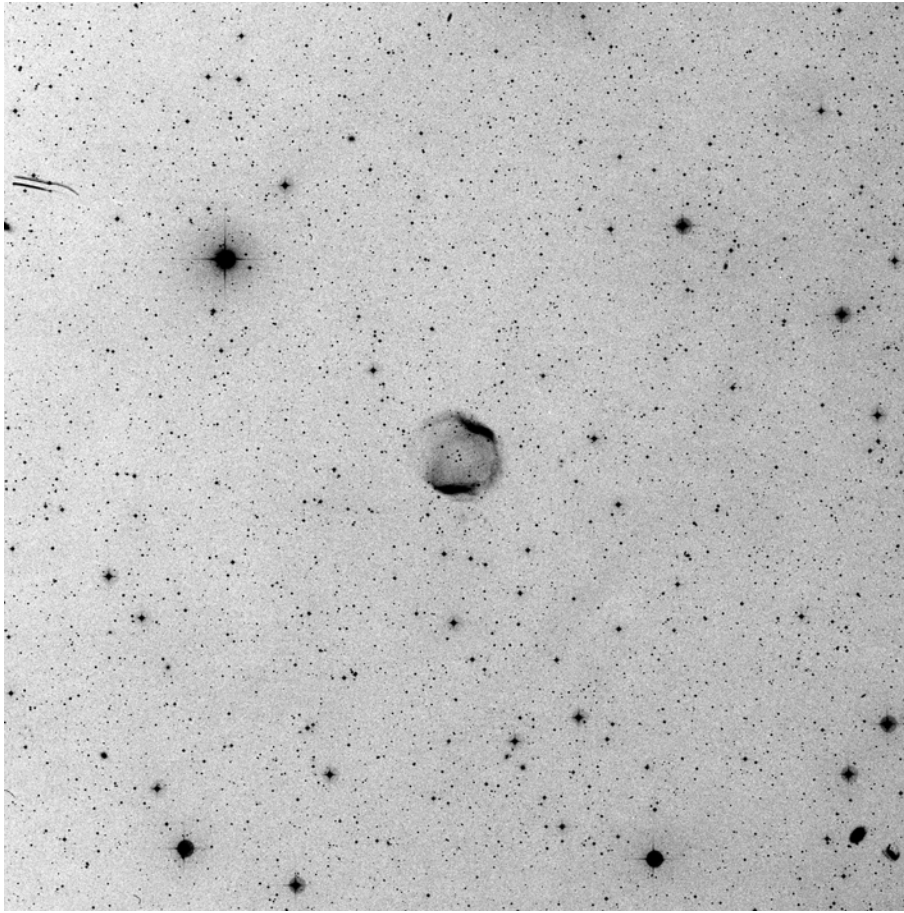
23 23 24.00

+58 48 54.0

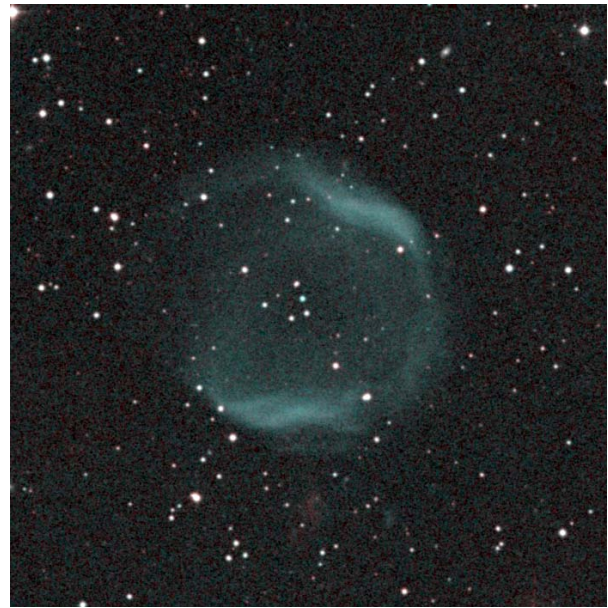
SNR



Jones 1 in Pegasus



POSS blue



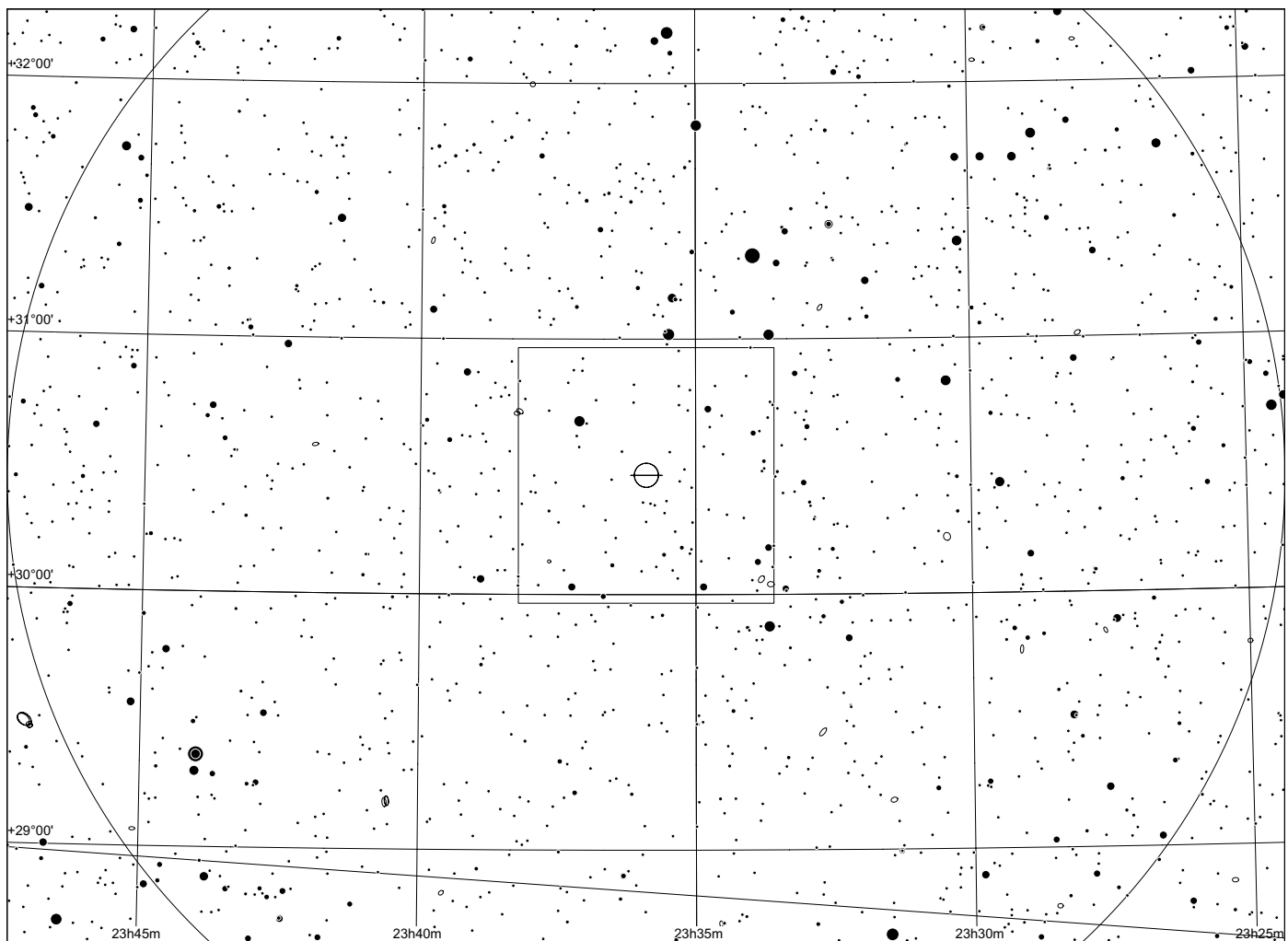
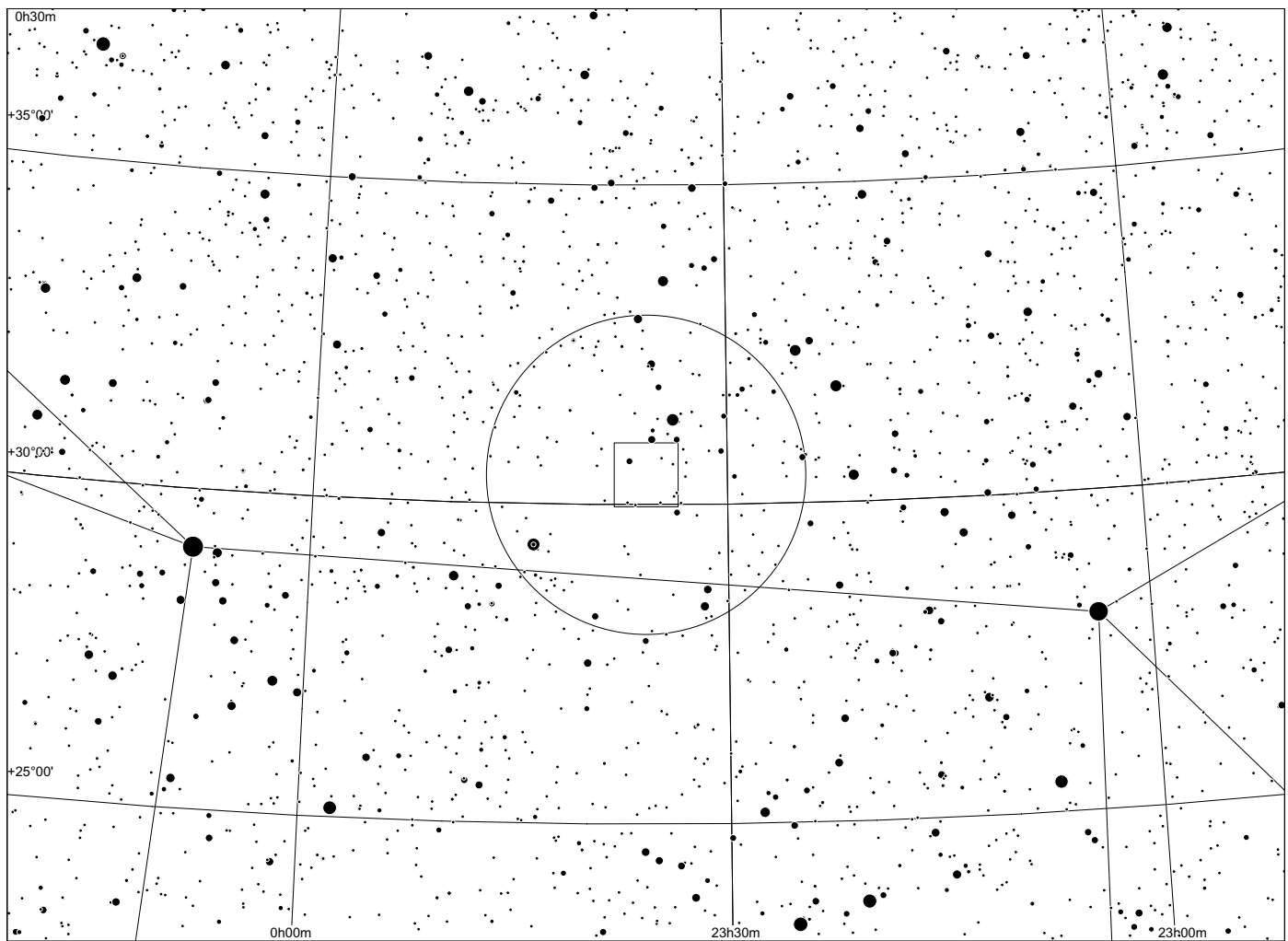
POSS composite

| | RA | dec | diam ['] | other | visibility on POSS II |
|----------------|-------------|-----------|----------|-------|-----------------------|
| Jones 1 | 23 35 53.60 | +30 28 02 | 5' | | |

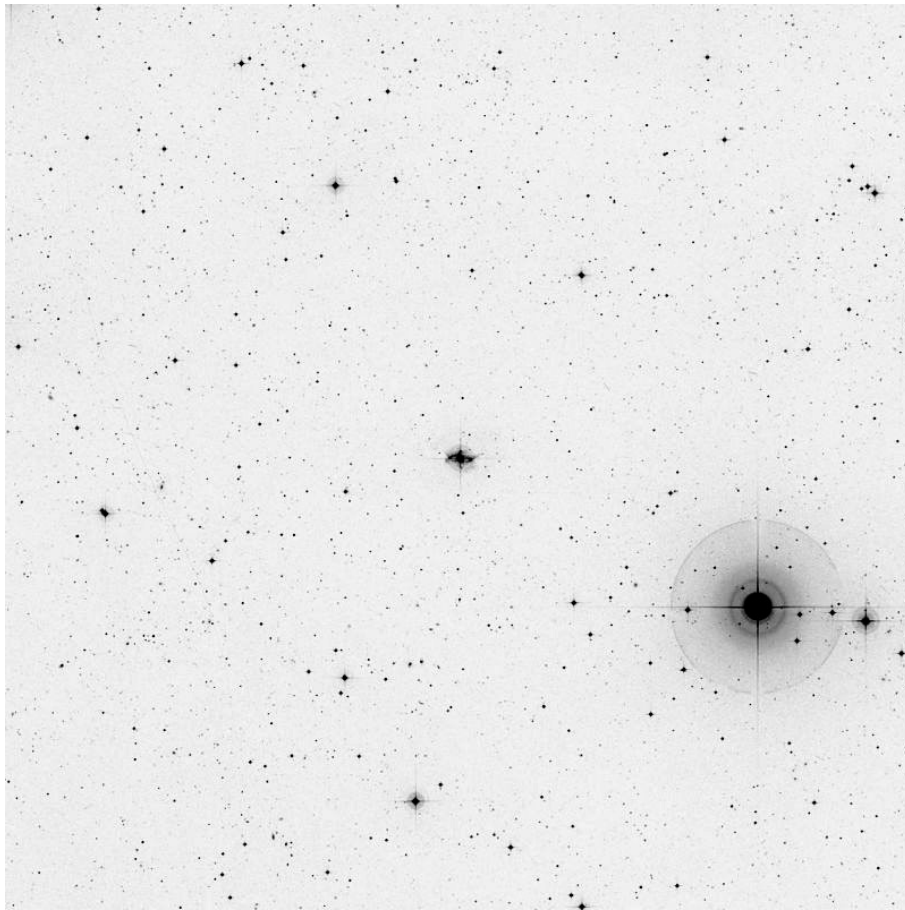
Observing notes:

22" f/4.5

Relatively bright PN that responds very well to the OIII filter. Forms a ghostly C-shaped PN that is open toward E with brighter rims N and S.

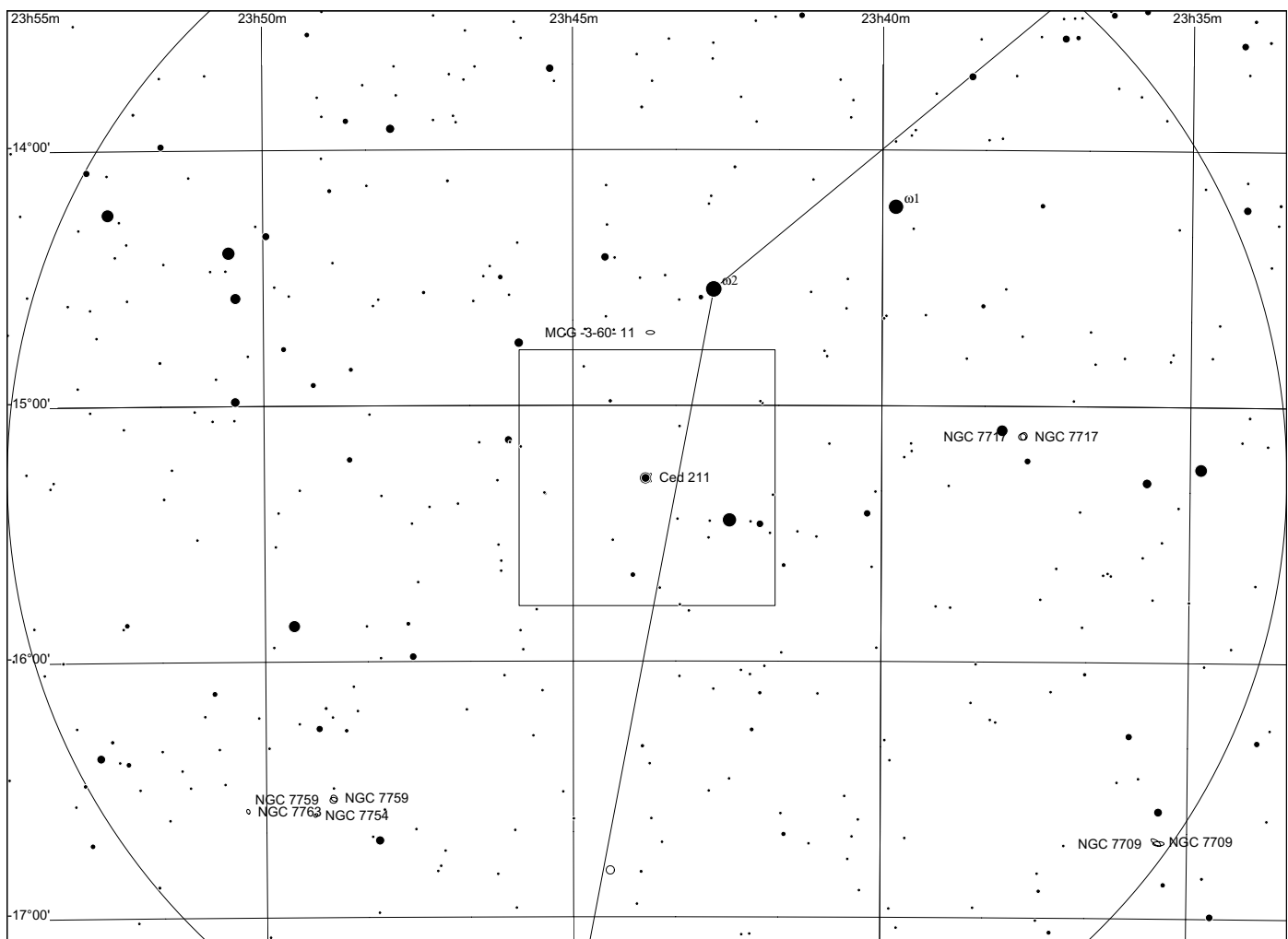
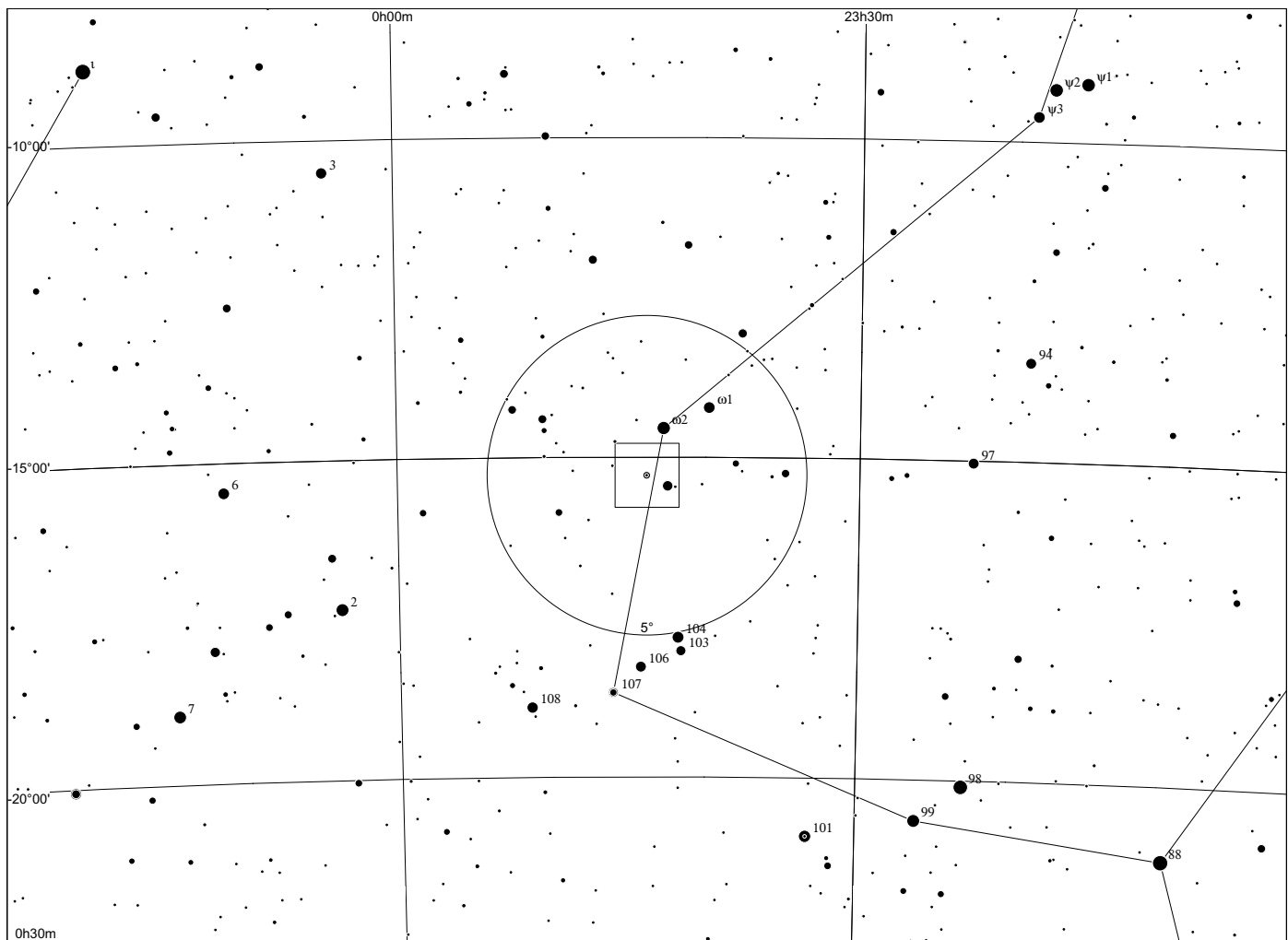


R Aquarii (Ced 211) in Aquarius

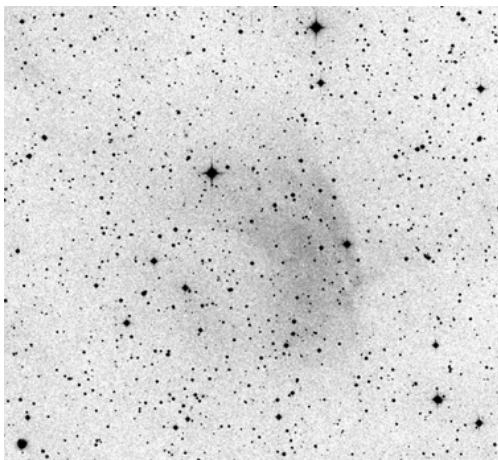
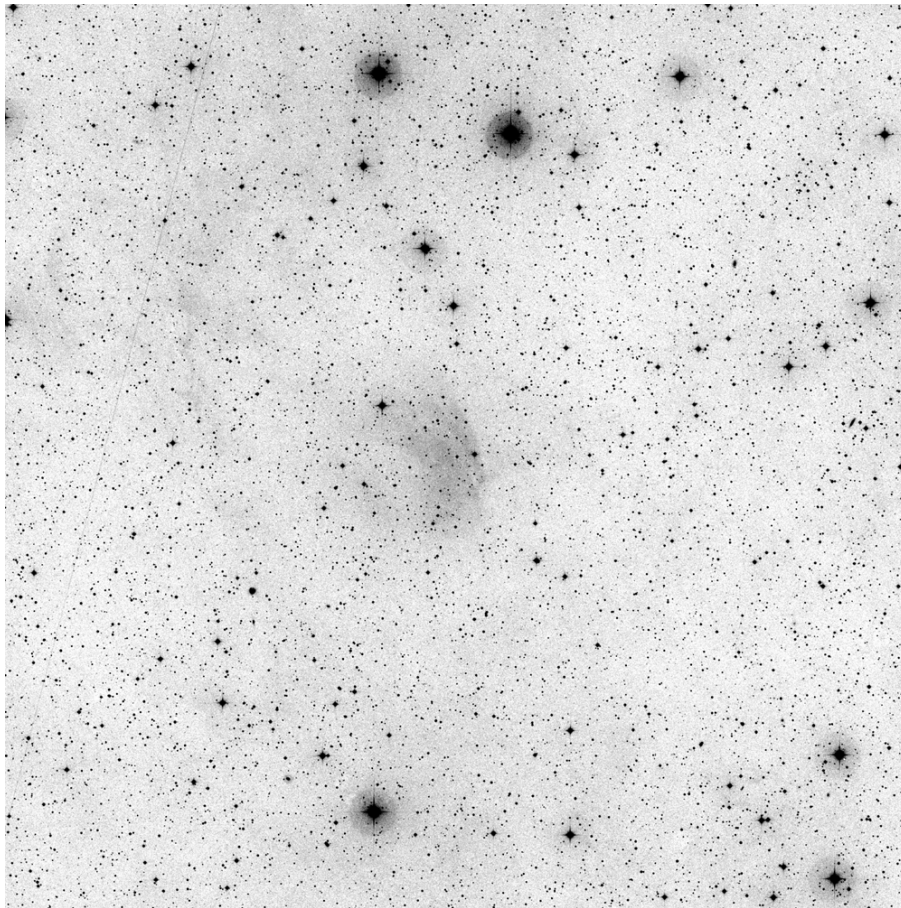


R Aquarii

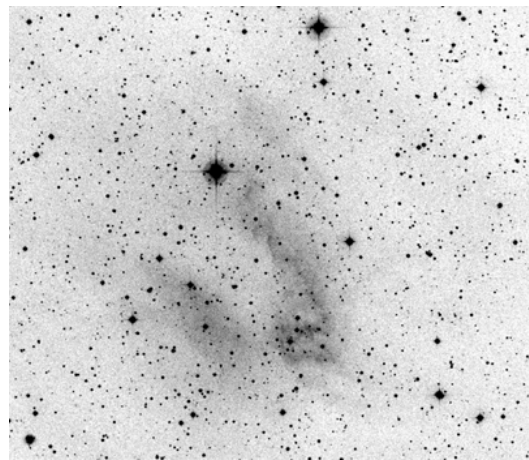
23 43 49.46 -15 17 04.1



Sh 2-174 in Cepheus



POSS blue



POSS red

| | RA | dec | diam ['] | other | visibility on POSS II |
|-----------------|-----------|----------|----------|-------|--|
| Sh 2-174 | 23h 46 49 | 80 56 20 | 15*10 | | good on blue, better defined filaments on red, H α >>OIII, possibly no PN |

Observing notes:

22" f/4.5

9 and 10/2010: at 100x visible both with OIII and H beta. Diffuse with no sharp boundaries. OIII emission is mainly restricted to the NW part of the PN, while H beta extends over a much larger part, corresponding to the extent on the red plates. This is supported by narrowband images.

01/2011: In an exceptionally clear night, the PN is relatively easy and appears largely round with UHC.

