

Befriend the Scutum Star Cloud

This compact area of the sky – comprising less than 0.3% of the celestial sphere – has long caught the skywatcher’s eye. The Scutum Star Cloud, mottled and variegated with wispy strands of subtle glows interspersed with dark bays, entice one into looking deeper. All this variation in such a small area presents an unusual three-dimensional effect in 10x50 binoculars.

And it leaves the impression that more lies just beyond reach. How true that is!

“Gem of the Milky Way”

Yerkes Observatory astronomer EE Barnard over one hundred years ago called it the “Gem of the Milky Way.” Many amateur observers remember it as being an “Oh, wow!” moment on their first binocular viewing of this part of the summer Milky Way.

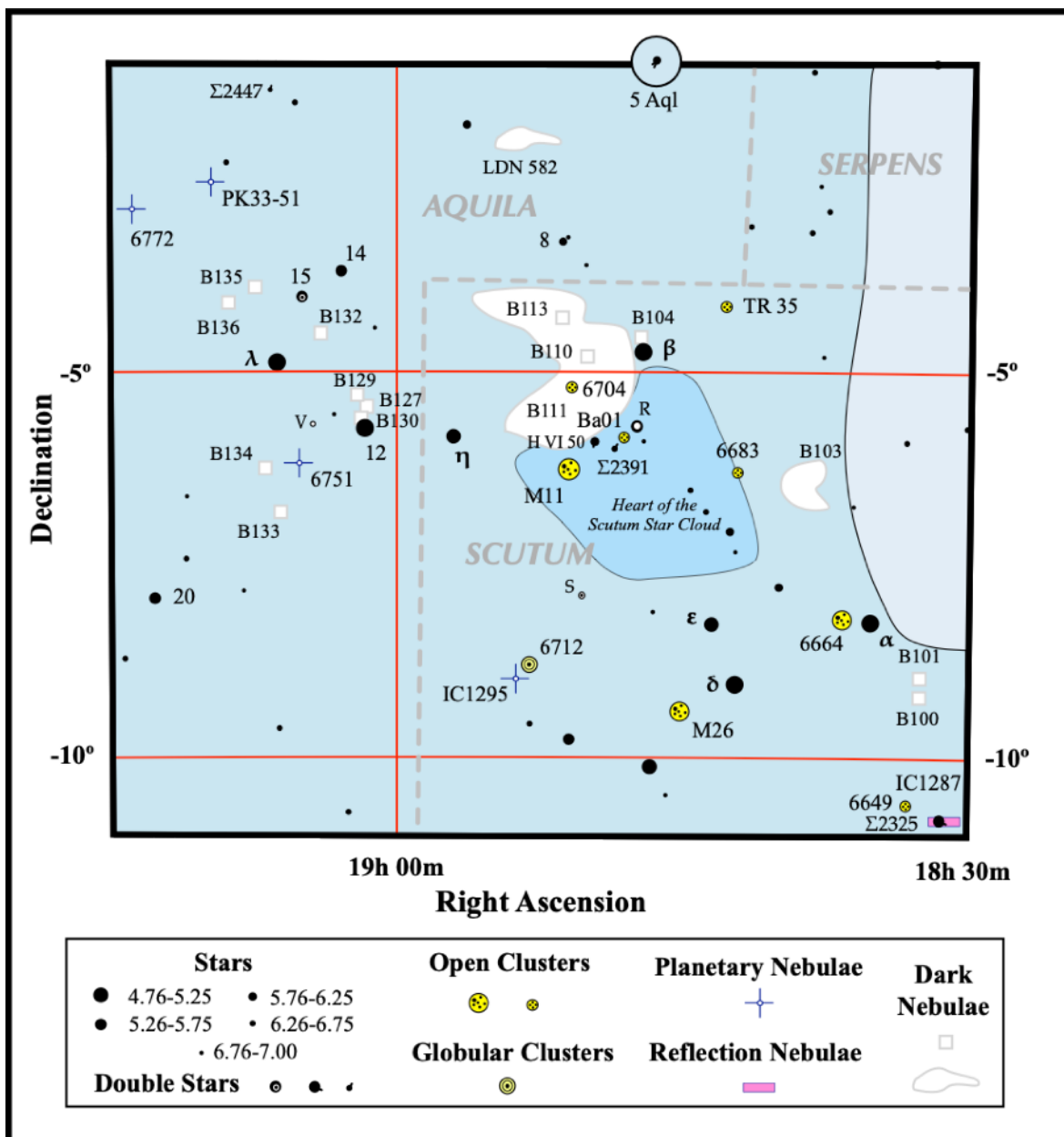
Late nineteenth century astronomy popularizer Garrett Serviss greatly admired the Scutum Star Cloud. “But, whether you use an opera-glass or a field-glass, do not fail to gaze long and steadily at this island of stars, for much of its beauty becomes evident only after the eye has accustomed itself to disentangle the glimmering rays with which the whole field of view is filled. Try the method of averted vision, and hundreds of the finest conceivable points of light will seem to spring into view out of the depths of the sky. The necessity of a perfectly clear night, and the absence of moonlight, can not be too much insisted upon for observations such as these.”

— Serviss, Garrett, “Astronomy with an Opera Glass,” 1888, 1920 ed., p 39.

It is interesting to note – interesting in that it was penned in the year 1888 – that Garrett Serviss also went on to state, “Always avoid the neighborhood of any bright light. Electric lights in particular are an abomination to star-gazers.” How prescient.

On a clear, transparent, dark night take in what the Scutum Star Cloud offers the intrepid, curious stargazer. Begin your careful study with the unaided eye, then bring out binoculars, and next move to the telescope.

Your task is to explore this small area – dig deeper than your quick first observations of M11 and M26. Experience what Garrett Serviss wrote nearly 140 years ago, “Look carefully all around this region, and you will perceive that the old gods, who traveled this road, trod upon golden sands. But do not imagine the thousands of stars that your opera-glass or field-glass reveals comprise all the riches of his Golconda of the heavens. You might ply the powers of the greatest telescope in a vain attempt to exhaust its wealth.”



Your Tasks – Required Celestial Destinations

1. Outreach requirement:

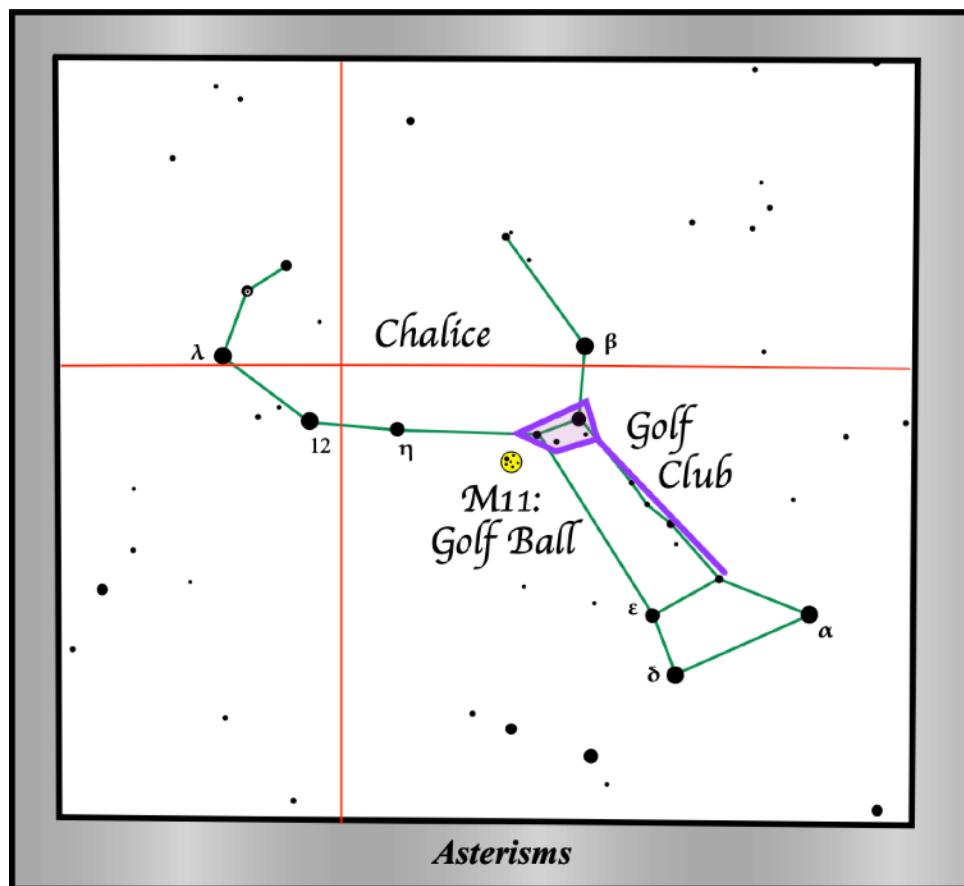
Do at least one of these three ...

- Hold an observing session featuring the Scutum Star Cloud,
- Give a club presentation on the Scutum Star Cloud,
- Write a club newsletter article on your experience observing the offerings of the Scutum Star Cloud.

2. Using binoculars, draw the asterisms the “Chalice” and the “Golf Club.”

See the asterism map.

Do you see other asterisms?

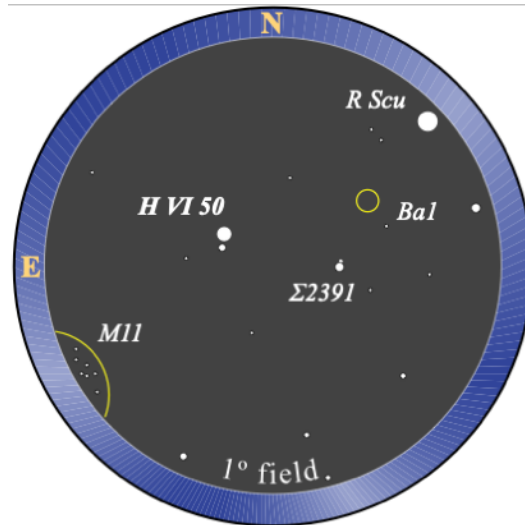


2. Identify and sketch (or image) these **Double Stars**:

15 Aquilae

HIP 92296 ($\Sigma 2391$)

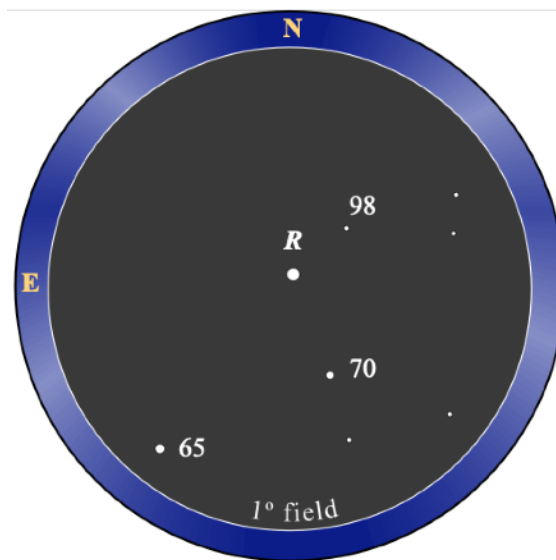
HIP 92391 (H VI 50)



Double Stars H VI 50 & $\Sigma 2391$

3. Identify this **Variable Star** and estimate its brightness:

R Scuti. When it's at its brightest, it is visible to the unaided eye. During much of its period, R Scuti is a binocular object.



Variable Star R Scuti

4. Observe and sketch (or image) these **Open Clusters**:

M11 (NGC 6507)

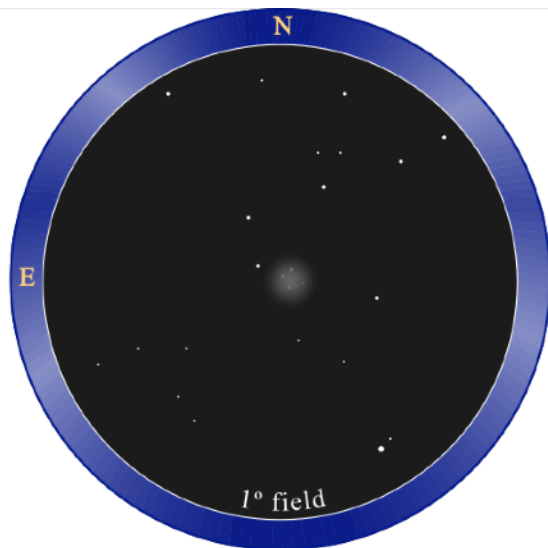
M26 (NGC 6694)

NGC 6683

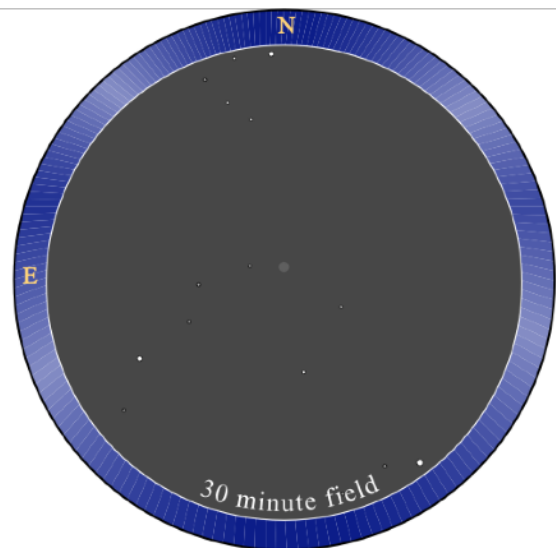
NGC 6664

5. Observe and sketch (or image) this **Globular Cluster**:

NGC 6712



Globular Cluster NGC 6712



Planetary Nebula NGC 6751

6. Observe and sketch (or image) this **Planetary Nebulae**:

NGC 6751

7. Observe and sketch (or image) these **Dark Nebulae**:

B103

B110

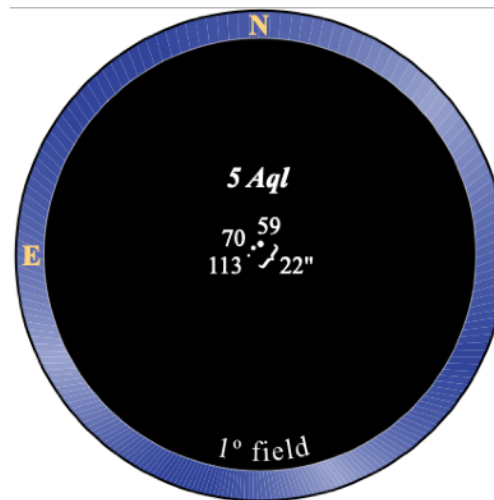
Complete Celestial Destinations:

Double Stars

5 Aquilae (a wonderful triple star 4° north of the main action)

HIP 90804 ($\Sigma 2325$). Reflection nebula IC 1287 lies around the double star and to its west. (IC 1287 is not required when viewing the double star.

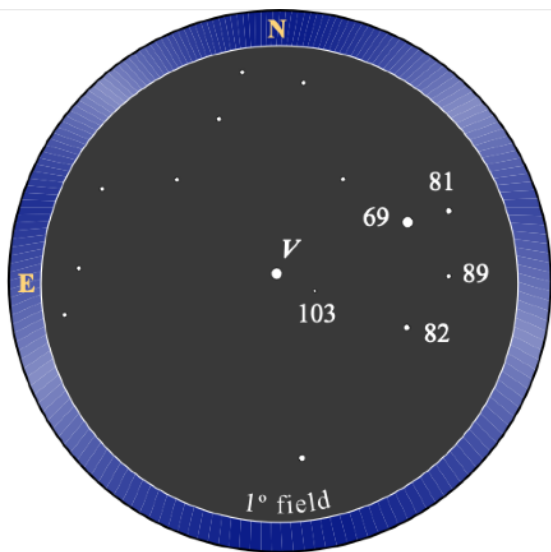
HIP 93836 ($\Sigma 2447$)



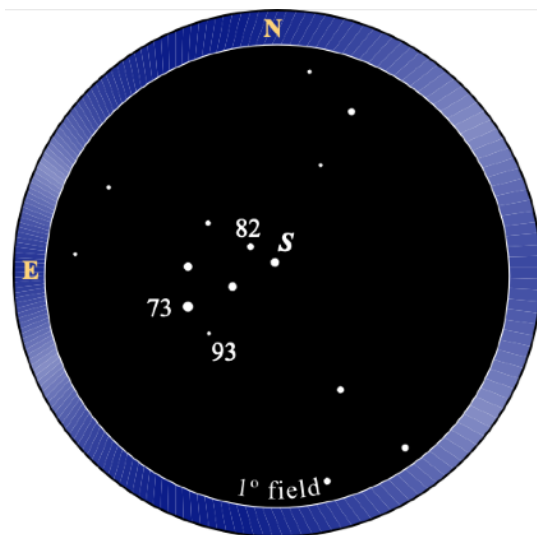
Multiple Star 5 Aquilae



Double Star $\Sigma 2325$



Variable Star V Aquilae



Variable Star S Scuti

Variable Stars

V Aquilae (AL Carbon star 71), Magnitude: 6.6–8.4; Approx. Period: 353 days

S Scuti (AL Carbon star 69), Magnitude: 6.8-7.3; Approx. Period: 148 days

Open Clusters

NGC 6649

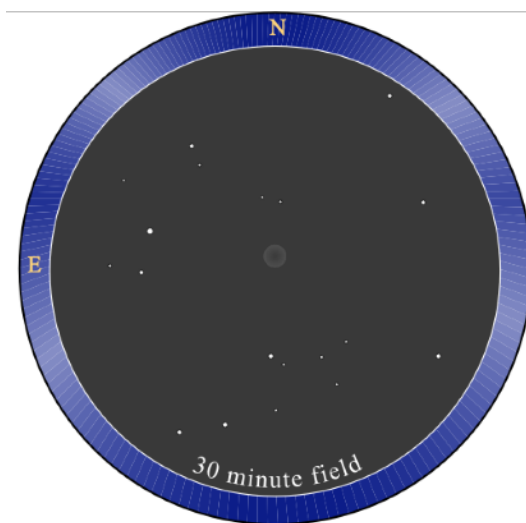
NGC 6704

Basel 1 (see Double Star drawing in the Required Celestial Destinations)

Tr 35

Planetary Nebula

IC 1295 (20 minutes east-southeast of the globular cluster NGC 6712)



Planetary Nebula IC1295

Dark Nebula

B100

B101

B104

B111/B113

LDN 582

References:

Serviss, Garrett, "Astronomy with an Opera Glass," D. Appleton & Co., 1888, 1920 ed., p. 39.

Hass, Sissy, "Double Stars for Small Telescopes," Sky Publishing, 2006

Levy, David, "Observing Variable Stars," Cambridge University Press, 1989.

Kepple, George Robert; Sanner, Glen W., "The Night Sky Observer's Guide, vol 2," Willmann-Bell, Inc., 2002.