
Skyguide

2017 - II

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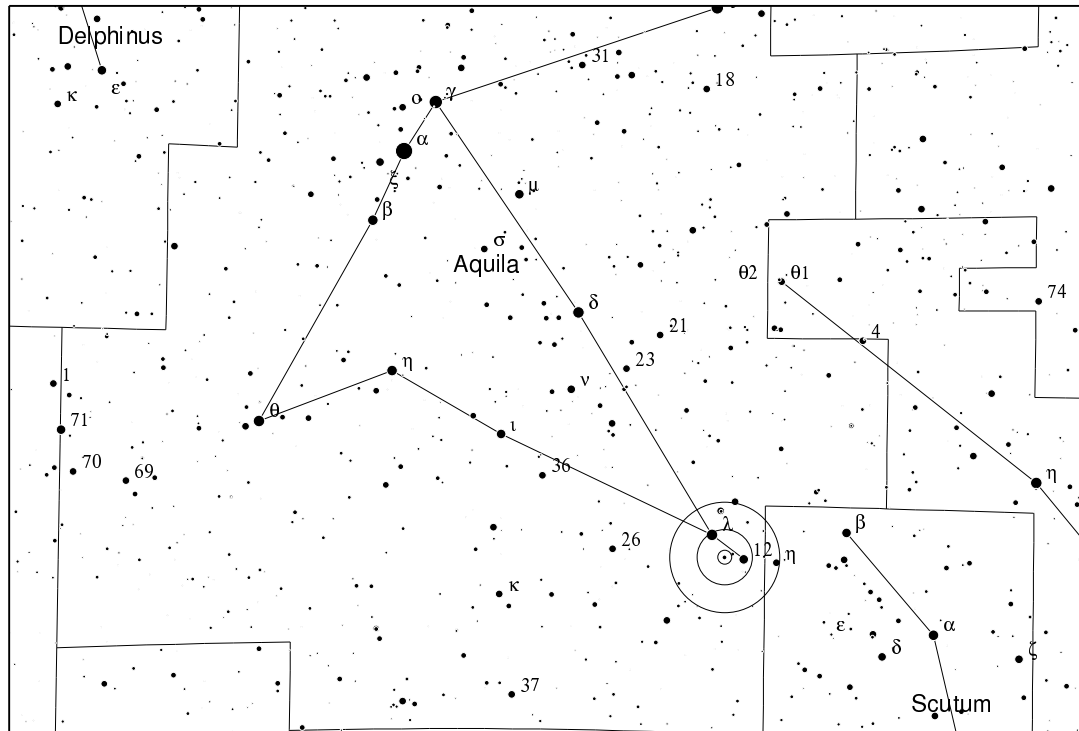
www.freunde-der-nacht.net

Skyguide - A Short Introduction

The Skyguide should mainly give you some suggestions for own observations and will briefly describe 5 objects annually for every season. It contains easy as well as difficult objects, which are sorted by ascending difficulty. How difficult an object is, depends on several factors, especially quality of sky, aperture of the used telescope and the experience of the observer.

For each object the most important information are given and if applicable a [DSS](#) image (Digitized Sky Survey). In addition you will find a chart, created by the free software [Cartes du Ciel](#) (Skychart), to get an overview of where the object is located. This chart shows stars down to a magnitude of about 8.0 mag. Telrad rings (0.5°, 2°, 4°) on the chart mark the position of the object. But basically I recommend creating your own finder charts. The visual descriptions are mainly based on own observations and only serve as a reference point.

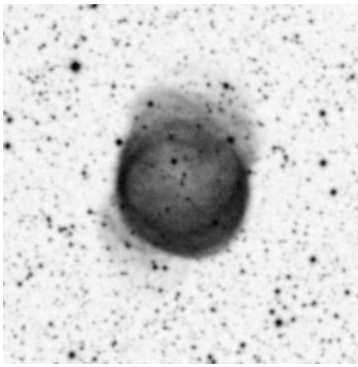
Constellation	Aql
Coordinates	19h04m24.15s / -05°41'05.40''
Brightness	6.67-7.22 mag
Period	407d



It seems to be obvious, that carbon stars are very popular by the authors. One of these stars is also V Aql. By coincidence I discovered an article of Dr. Wolfgang Steinicke, which gives some historical references regarding its discovery. According to this Friedrich Wilhelm Bessel is the discoverer of V Aql, who observed this on 18 September 1923. Other names in connection with the discovery are Julius Schmidt and George Knott, which observed this star years later. The variability of brightness was also described later by George Knott. Due to its brightness V Aql is well observable from the city even with binoculars and shows an intensive coloring. V Aql is located in the southern part of the eagle and forms the tail together with lambda and 12 Aql. So it should be easy to find.

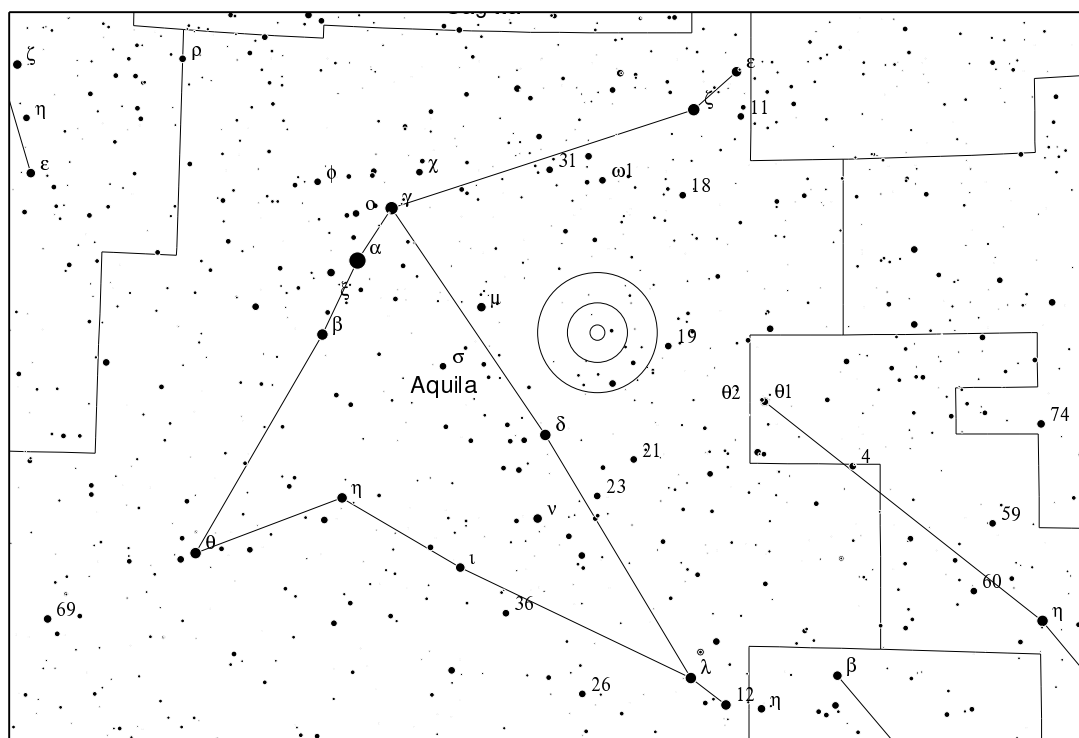
NGC 6781 (PK 41-2.1, H 3.743, Snowglobe Nebula)

PN

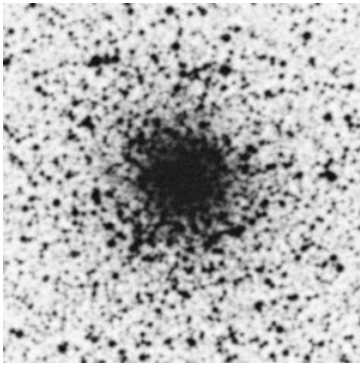


DSS II (red) - 5.0×5.0'

Constellation	Aql
Coordinates	19h18m28.09s / +06°32'19.30''
Brightness	11.8 mag
Size	1.85×1.85'

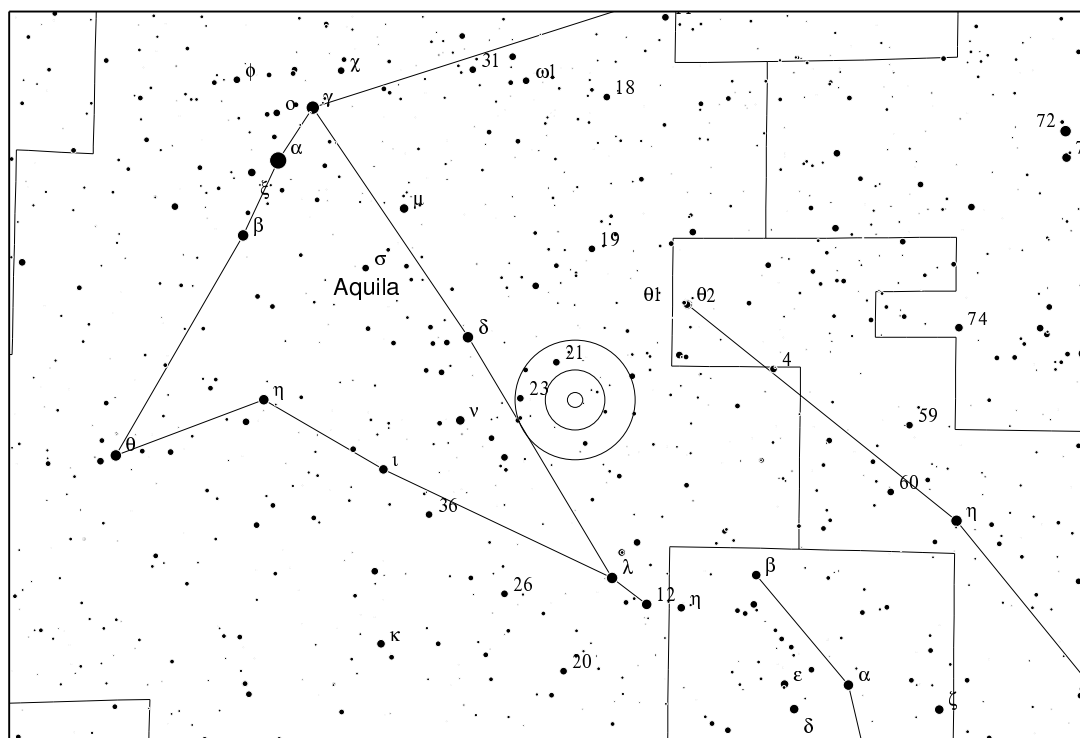


NGC 6781 is a pretty bright nebula and a bit larger than the Ring Nebula (Messier 57). It was discovered by William Herschel in 1788. The mass of the central star is about 0.6 times of the solar mass. Due to its extremely high temperature most of the luminosity is in the ultraviolet spectral range. Visually the nebula is already observable under suburban conditions with an aperture of about 5 inch. A nebula filter is very beneficial. At 18x and [OIII] filter the nebula was evident with averted vision, round, evenly bright and relatively large. Under better conditions and increasing aperture also the decrease in brightness towards the middle and fading north edge is visible.

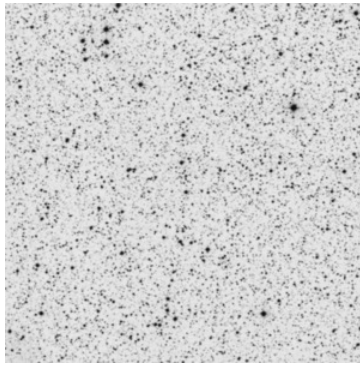


DSS II (red) - 5.0×5.0'

Constellation	Aql
Coordinates	19h11m12.06s / +01°01'49.70"
Brightness	9.1 mag
Size	2.4×2.4'

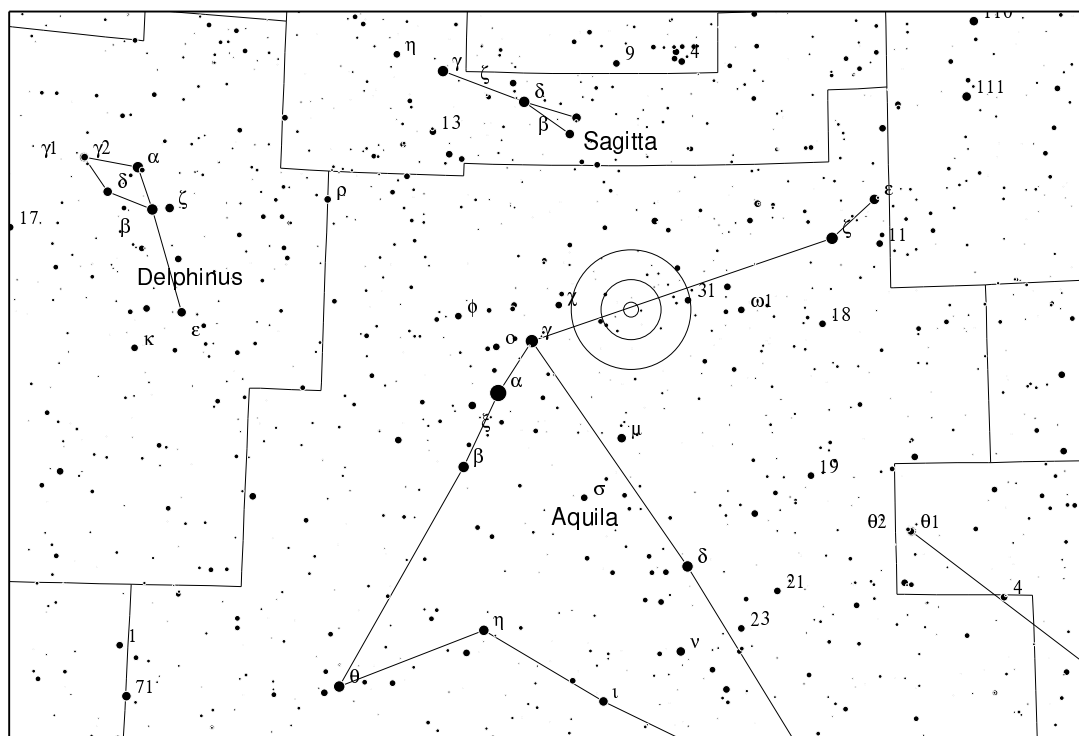


Besides some well known and particularly bright globular clusters there are also some fainter ones. NGC 6760 is due to its size comparatively quite compact, which leads to a moderate surface brightness. That is why it can be observed without any problems under suburban skies with an aperture of 5 inch. A higher magnification is recommended. With 8 inch aperture the cluster appeared under rural conditions at a magnification of 150x granulous. Larger aperture might resolve this cluster at least partly.

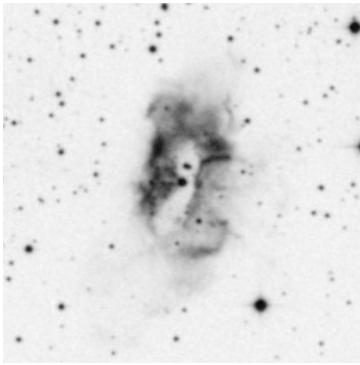


Constellation Aql
Coordinates 19h33m30.00s / +11°42'00.00"
Size 12.0×4.0'

DSS II (blue) - 15.0×15.0'

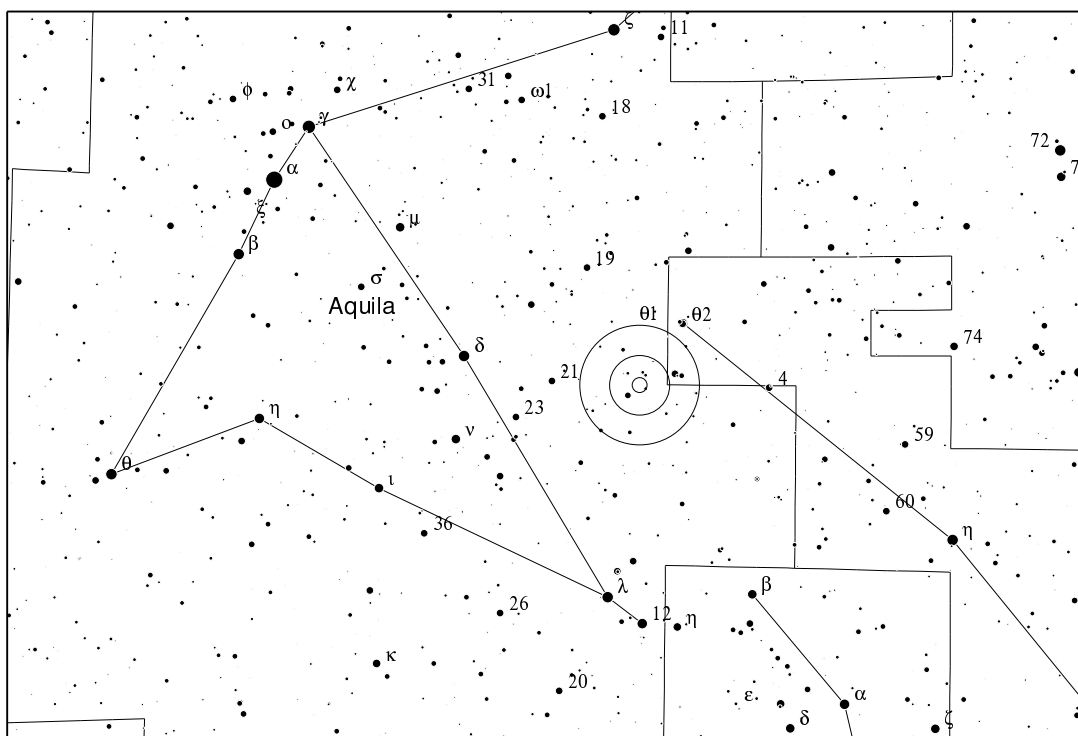


Frank Leiter, born 1972 in Wetzlar (Germany), is a German amateur astronomer, who created a catalogue of currently 16 self-'discovered' asterisms. Asterisms are rather incidental clusters of stars, which physically not belongs together and therefore differentiate from classical clusters, but nevertheless they are partly very evident. There exist small versions of well known constellations (like Orion or Cassiopeia) and other stuff like sailing boats, fish or mushrooms. The best known asterisms may be Collinder 399 (Coathanger) and Kemble's Cascade (Kemble 1). In the case of Leiter 5 we have a sword, which mainly consists of fainter stars. On the DSS image the sword is oriented with its blade towards north. A dark place and 8 inch aperture are basically sufficient to see the sword. In most cases asterisms are visually much more evident than on photographs.



DSS II (red) - 5.0×5.0'

Constellation	Aql
Coordinates	19h02m00.29s / +02°09'11.00''
Brightness	12.2 mag
Size	2.6×1.5'



The Sharpless catalogues contains in its second edition overall 312 emission nebula and was published 1959 by the US-American astronomer Stewart Lane Sharpless. The first edition (Sh1), published 1953, comprised 142 nebula. Main goal of this catalogue was a complete list of emission nebula north of -27 degree declination. Sharpless 2-71 is doubtlessly one of the more interesting planetary nebula and shows an unusual shape, which can be seen with larger aperture. With an aperture of 8 inch under rural conditions the nebula already appears elongated but evenly bright. Without any filter the nebula was pretty faint with averted vision. Due to its size higher magnification is recommended.