Skyguide

2015 - IV

created by:

Robert Zebahl

www.faint-fuzzies.de

in cooperation with:

Rene Merting

www.freunde-der-nacht.net

www.deepsky.vdsastro.de

www.vds-astro.de

Skyguide - A Short Introduction

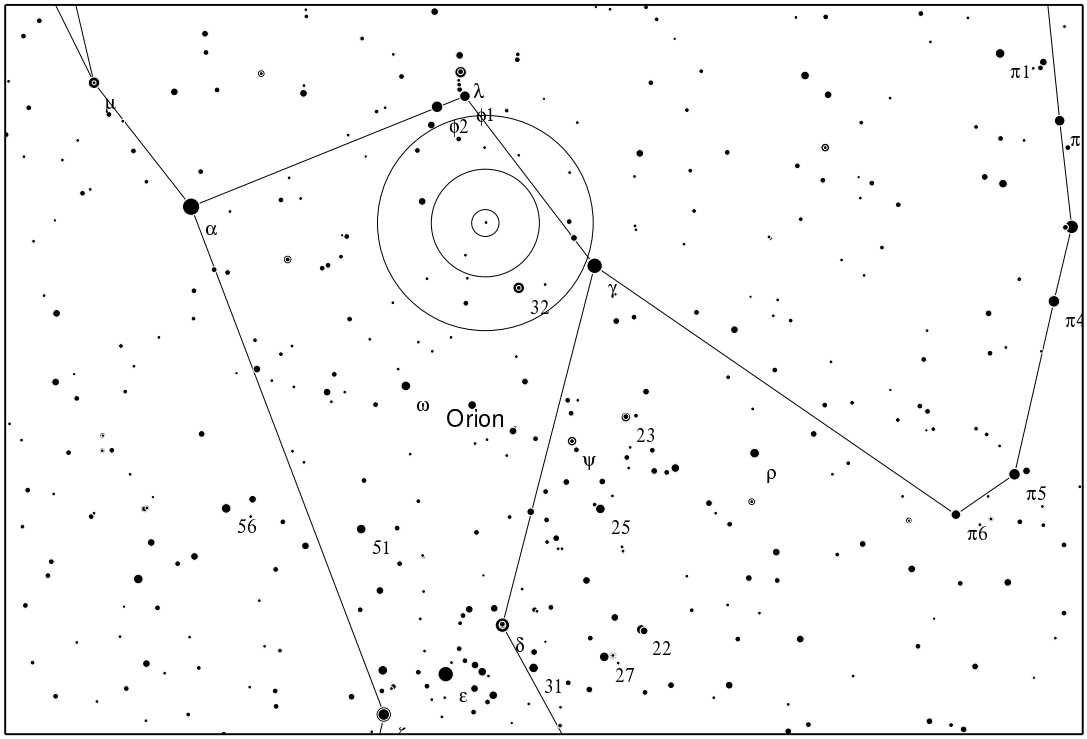
The Skyguide should mainly give you some suggestions for own observations and will briefly describe 5 objects annually for every season. It contains easy as well as difficult objects, which are sorted by ascending difficulty. How difficult an object is, depends on several factors, especially quality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

RT Ori

C*

Constellation	Ori
Coordinates	05h33m13.75s / +07°09'12.40''
Brightness	8.0-8.9 mag
Period	321d

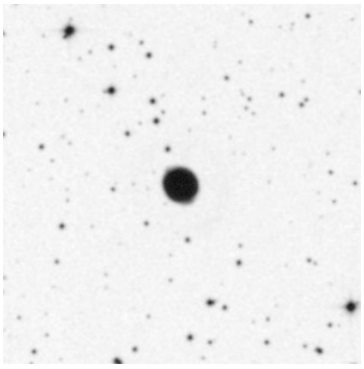


RT Ori is a carbon star of the spectral class C6 and is visually located about 2° away from Bellatrix (gamma Ori). Due to its visual brightness RT Ori should be always visible in smaller telescopes to show its conspicuous orange to red coloring. Under dark skies you could also try binoculars to see some color. About 25 arcminutes southwest is the planetary Abell 10, a not too faint nebula of the abell catalogue.

created by:
Robert Zebahl

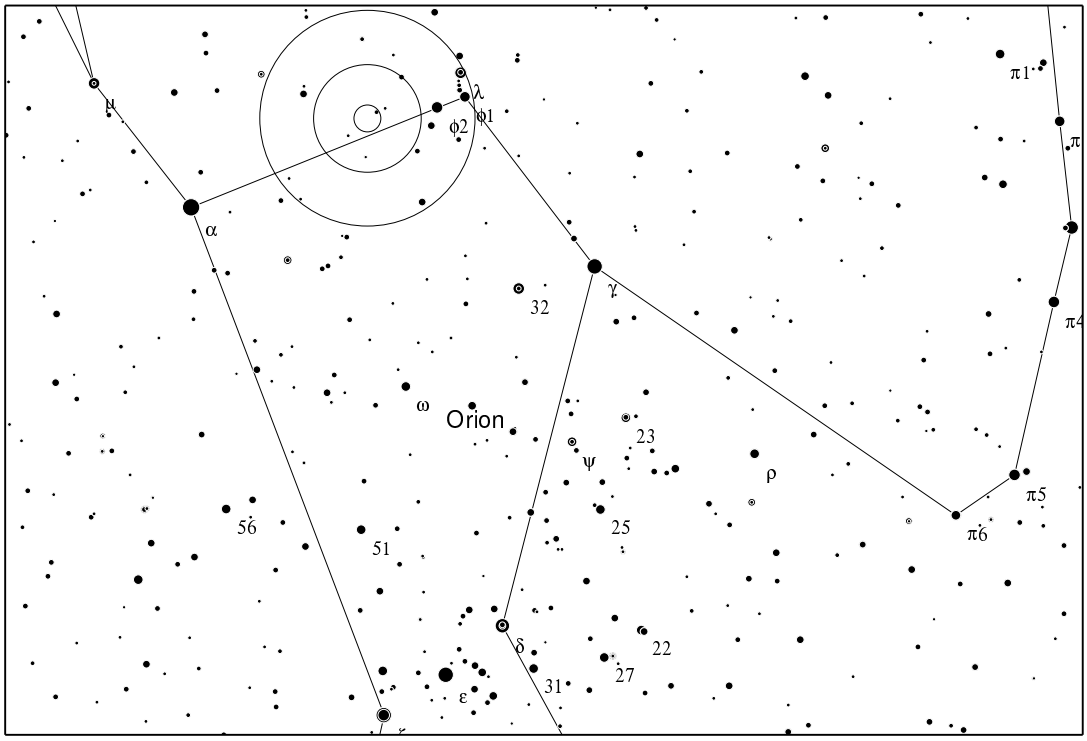
FACHGRUPPE DEEP-SKY
Vereinigung der Sternfreunde e.V.

NGC 2022 (H 4.34, Collarbone Nebula) PN



DSS II (blue) - 5.0×5.0'

Constellation	Ori
Coordinates	05h42m06.20s / +09°05'10.30''
Brightness	11.6 mag
Size	0.65×0.65'

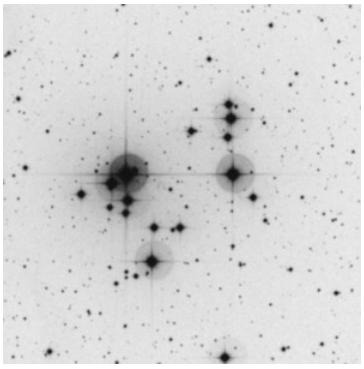


NGC 2022 is about 7000 light years away and was discovered by Friedrich William Herschel in 1785. The surname 'Collarbone Nebula' comes from its location in the constellation Orion. Due to its pretty high surface brightness observers from the city could also have a try. Its small angular size makes high magnifications useful. Under rural skies (Bortle 4) with an 8 inch Dobsonian at 171x the nebula appeared slightly oval. Otherwise the nebula appears roundish, evenly bright and well defined. To see details within the nebula a larger aperture is needed.

created by:
Robert Zebahl

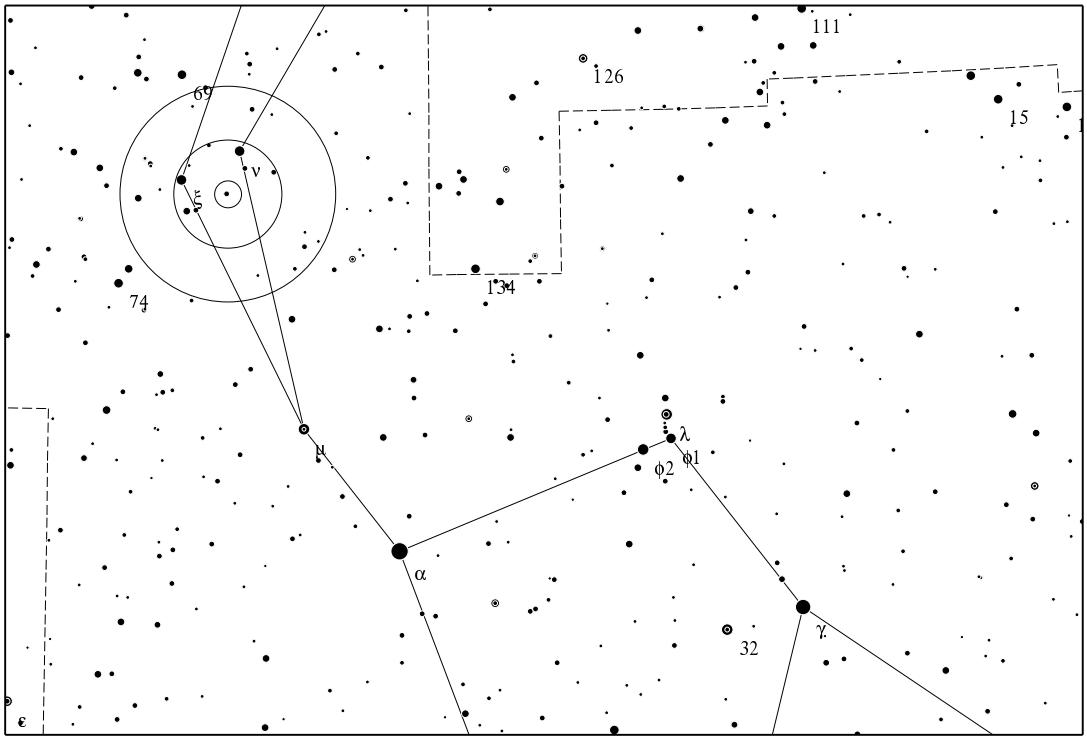
FACHGRUPPE DEEP-SKY
Vereinigung der Sternfreunde e.V.

NGC 2169 (H 8.24) OC



DSS II (blue) - 10.0×10.0'

Constellation	Ori
Coordinates	06h08m24.00s / +13°58'00.00''
Brightness	5.9 mag
Size	7.0×7.0'

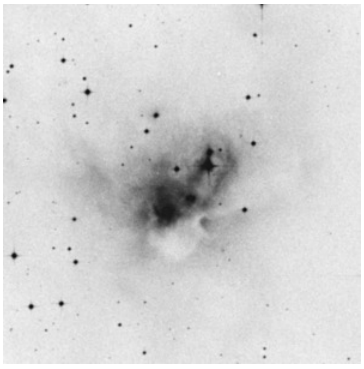


The open cluster NGC 2169 with a distance of about 1200 light years is quite compact and appears more like a group of about 15 moderately bright stars. Due to its visual brightness it can be well observed from city. The cluster is evident and therefore easy to find. On a closer look the cluster might appear like the number '37', which is tilted towards northeast.

created by:
Robert Zebahl

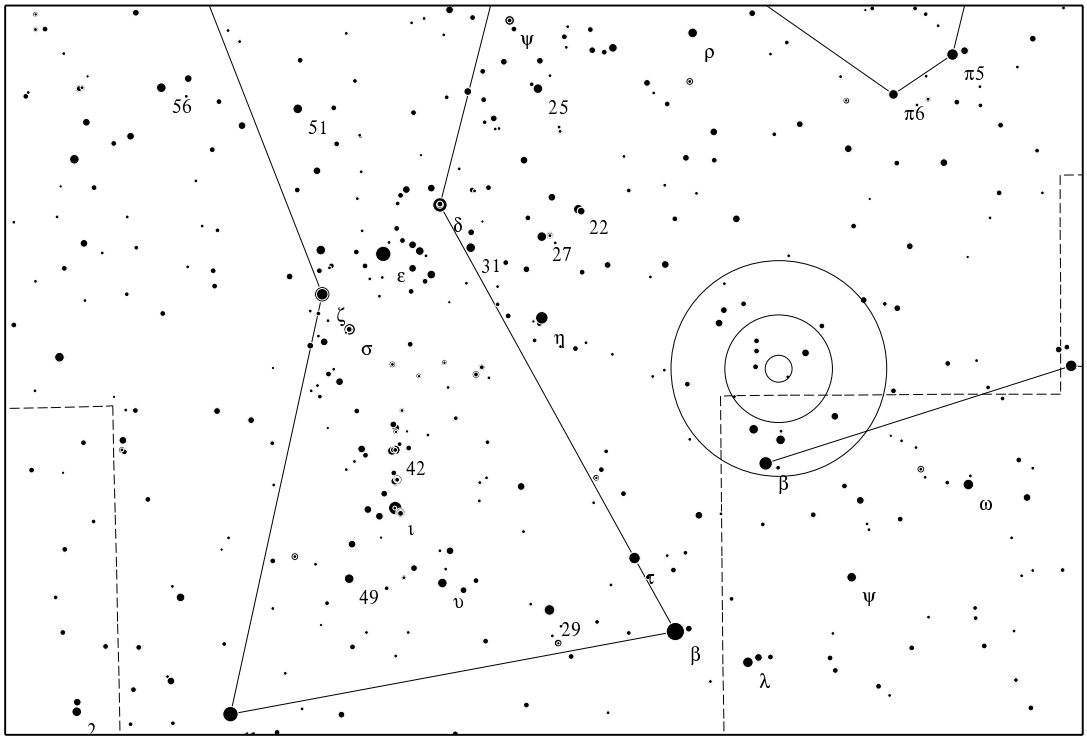
FACHGRUPPE DEEP-SKY
Vereinigung der Sternfreunde e.V.

NGC 1788 (H 5.32, Bat Nebula) BN



DSS II (red) - 10.0×10.0'

Constellation	Ori
Coordinates	05h06m54.00s / -03°20'30.00''
Brightness	b5.8 mag
Size	5.0×3.0'

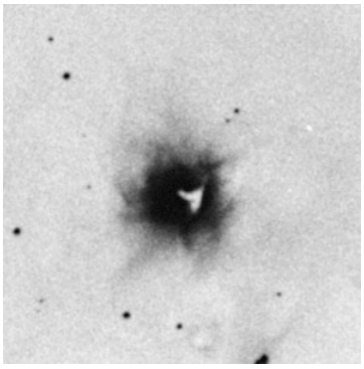


A less known, but pretty bright reflection nebula is NGC 1788, which is located in the southwestern part of Orion. Most of the stars within the nebula are hidden by dust so only a few embedded stars can be observed. Brightest star is the 10.11 mag HD 293815 in the northwestern part. The nebula itself appears well defined and elongated depending on aperture, whereby the distribution of brightness is not uniform. Even with binoculars under rural conditions you might see a small brightening. Immediately adjacent in the southwest is the dark nebula LDN 1616.

created by:
Robert Zebahl

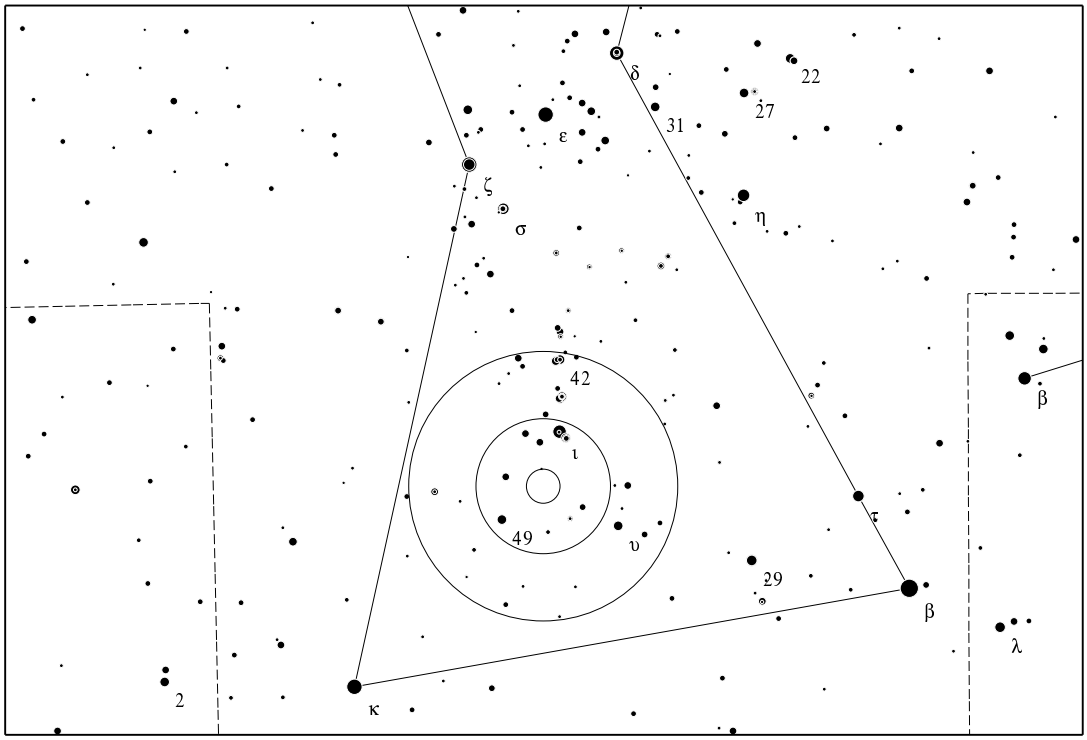
FACHGRUPPE DEEP-SKY
Vereinigung der Sternfreunde e.V.

NGC 1999 (H 4.33, Keyhole Nebula) BN



DSS II (red) - 5.0×5.0'

Constellation	Ori
Coordinates	05h36m25.00s / -06°42'42.00''
Brightness	b9.5 mag
Size	2.0×2.0'



Another fairly bright and small reflection nebula is NGC 1999 with a distance of about 1500 light years, which is located south of the Great Orion Nebula Messier 42. The nebula shines from the light of the variable star V380 Orionis. The black patch within the nebula is not a dark nebula in front of illuminated dust like Barnard 33 (Horsehead Nebula) in front of IC 434 but it's truly empty space. This looks like a keyhole from which the surname comes from. The nebula should be easily visible with an 8 inch Dobsonian under rural skies. At a magnification of 200x the nebula appeared slightly asymmetrical around the star. To see the keyhole high magnification and rather good seeing seems to be important.

created by:
Robert Zebahl

FACHGRUPPE DEEP-SKY
Vereinigung der Sternfreunde e.V.