Skyguide

2014 - IV

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FACHGRUPPE DEEP-SKY

Vereinigung der Sternfreunde e.V.

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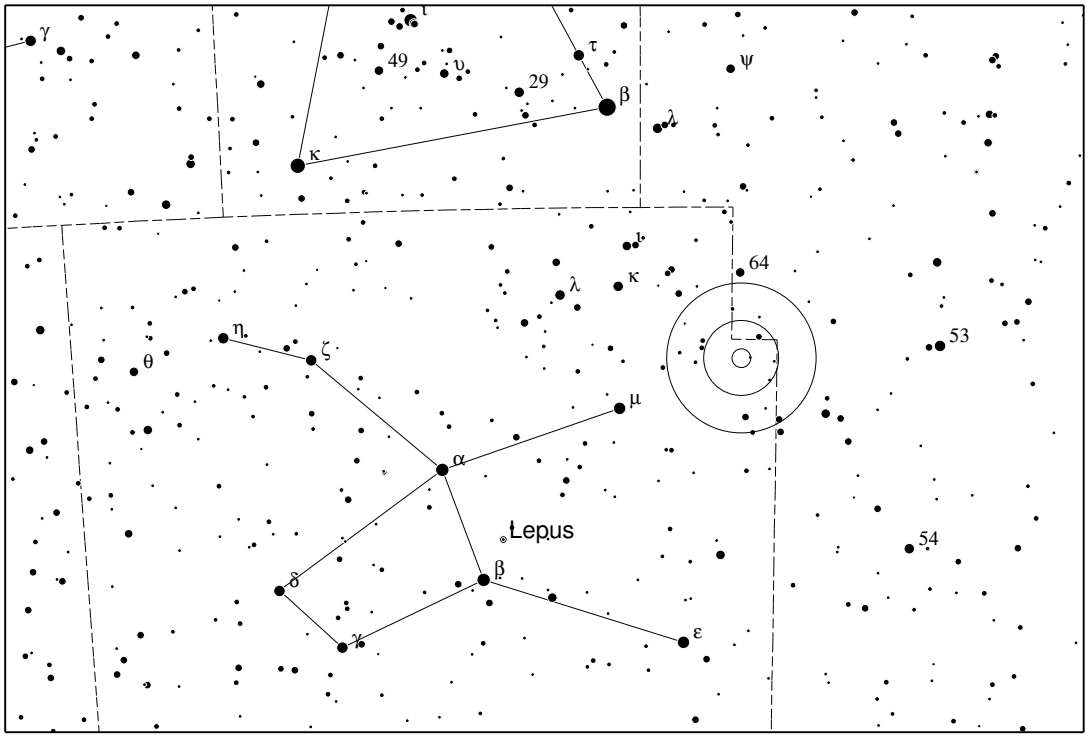
Skyguide - A Short Introduction

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.

R Lep (Hind's Crimson Star) C*

Constellation	Lep
Coordinates	04h59m36.35s / -14°48'22.50''
Brightness	5.5-11.7 mag
Period	445d



R Lep belongs to the class of carbon stars and Mira variables with large amplitude. The distance is about 800 light years. The magnitude is currently about 6.5 mag, so this star can be easily observed also with small binoculars. Particularly apparent is the partly intensive color. The variability of this star was described by the British astronomer John Russel Hind, why R Lep was given the sobriquet Hind's Crimson Star. However this is a worthwhile star, which is easy to find also without a detailled chart, when near to its maximum.

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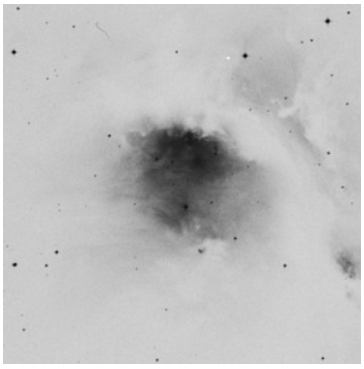
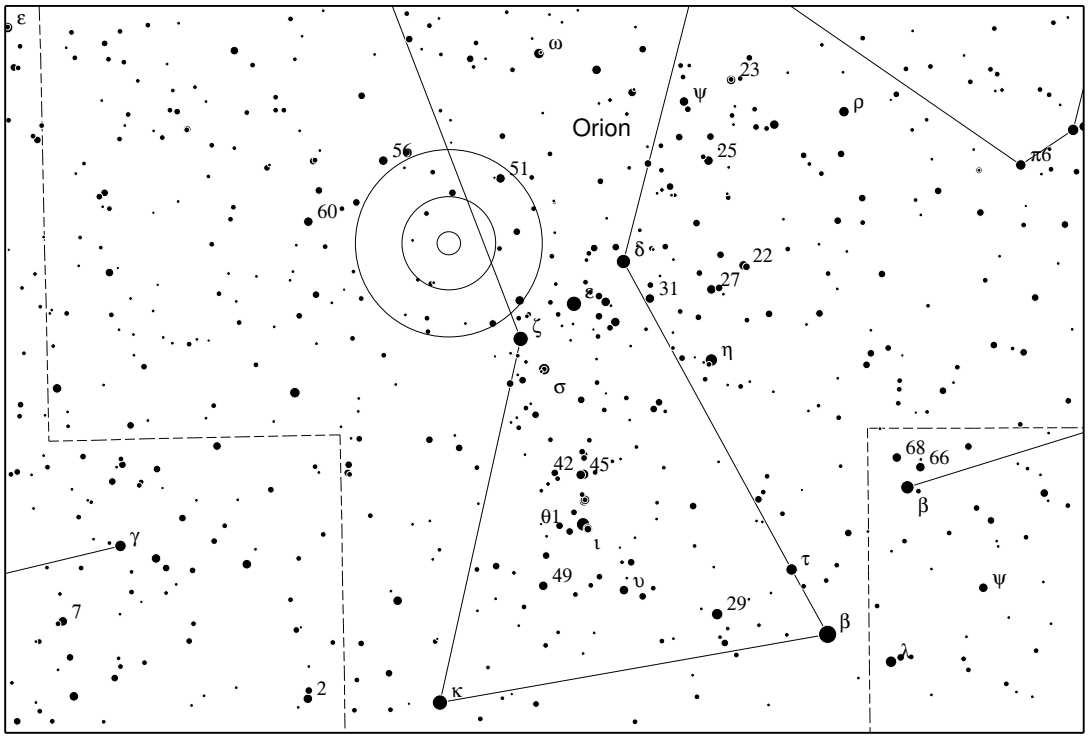
M 78 (NGC 2068) BN



DSS II (red) - 15.0×15.0'

Constellation	Ori
Coordinates	05h46m45.96s / +00°03'37.80''
Brightness	8.3 mag
Size	8.0×6.0'



Messier 78 is one of the brightest reflection nebulas and visible under dark skies (Bortle 4) even with 40mm binoculars, in wich the nebula appears as a small, rather faint brightening with averted vision. With 8 inch aperture the nebula shows a slightly irregular shape, whereby the northern edge appears more sharply defined, towards south getting very diffuse. Within the nebula is the apparent double star BU 559 AC with components of a magnitude of about 10.5 mag.

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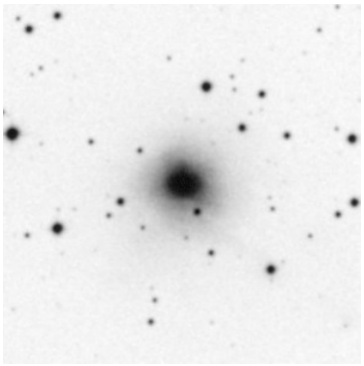
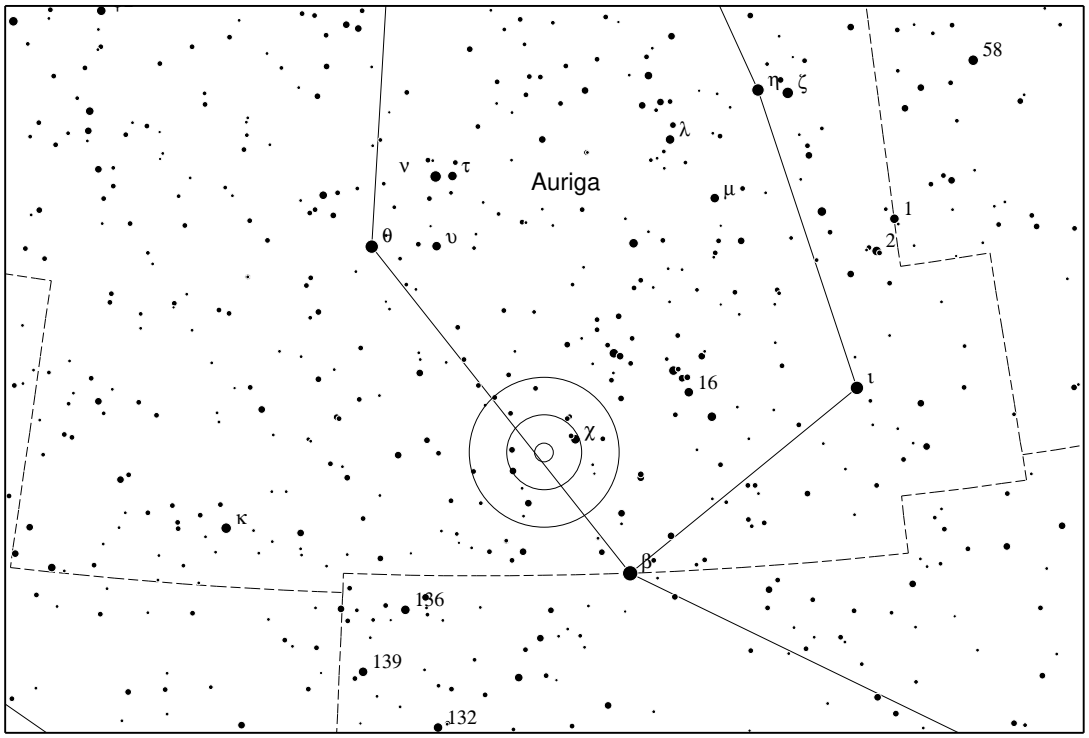
UGC 3327 (MCG+05-14-001) BN



DSS II (blue) - 5.0×5.0'

Constellation	Aur
Coordinates	05h36m40.90s / +31°51'16.00''
Brightness	b13.0 mag
Size	2.5×2.5'



Apparently this object is a relatively bright reflection nebula, which was mistakenly recorded in the UGC (Uppsala General Catalogue of Galaxies) during the photographic sky survey of the POSS plates (Palomar Observatory Sky Survey). At this position the star catalogue UCAC4 (The Fourth US Naval Observatory CCD Astrograph Catalog) shows the 10.59 mag bright star UCAC4-610-022085, which probably illuminates the surrounding nebula. Under rural conditions (Bortle 4) the nebula appears with 8 inch aperture at 150x as diffuse brightening, getting much brighter toward the middle and is well visible with averted vision. The stellar center is immediately obvious.

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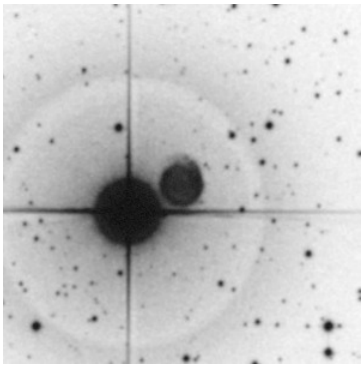
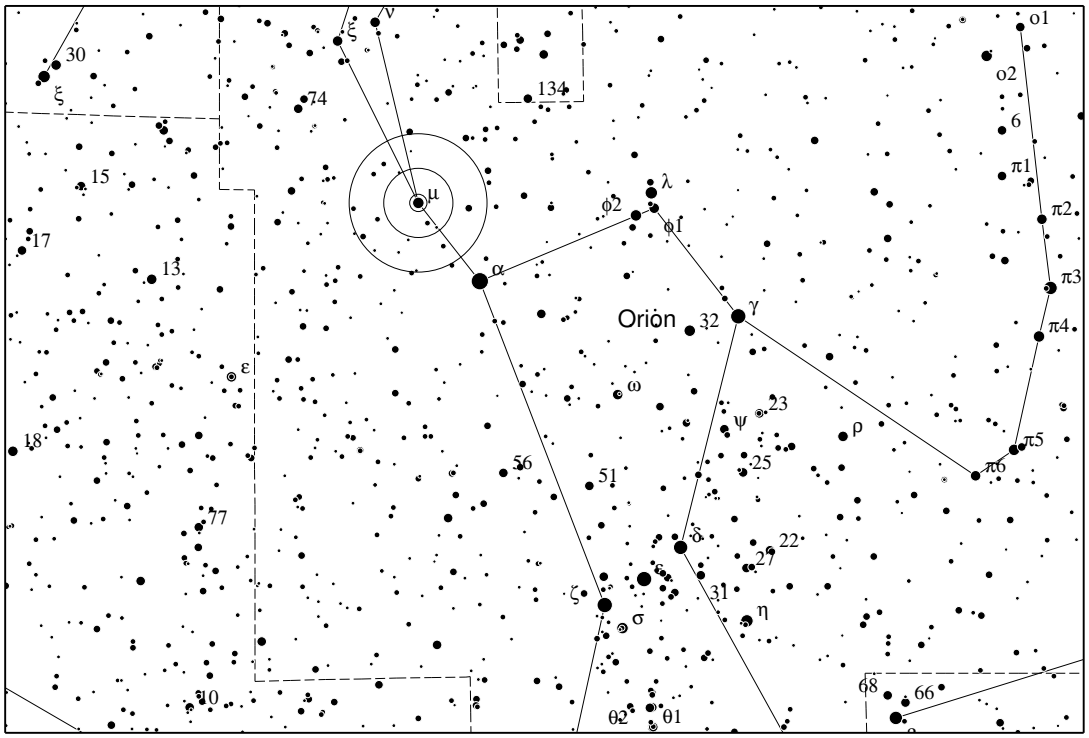
Abell 12 (PK 198-6.1) PN



DSS II (red) - 5.0×5.0'

Constellation	Ori
Coordinates	06h02m20.05s / +09°39'14.10''
Brightness	13.9 mag
Size	0.6×0.6'



Abell 12 is one of the 86 planetary nebulas of the Abell catalogue, which was published in 1966 by the American astronomer George Ogden Abell. Whereas some of these planetaries are large and especially faint, this one is rather compact and bright. Basically this planetary is well observable with moderate aperture, but the angular distance of less than 1 arcminute to the 4.12 mag bright mu Ori makes it difficult, so a filter is almost a must. That is why the nebula is also called "hidden planetary". On the other side the nebula with its bright neighboring star is easy to find and to get into focus at medium power with narrowband filter. Under moderately dark skies (Bortle 4-5) the planetary appeared with 8 inch aperture at 96x and [OIII] filter round, evenly bright, rather small and was relatively well visible with averted vision.

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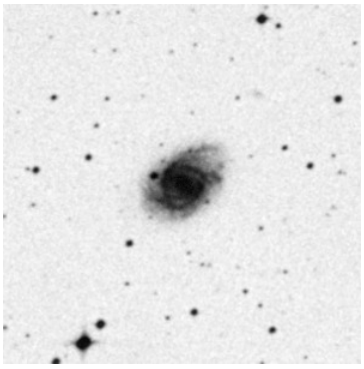
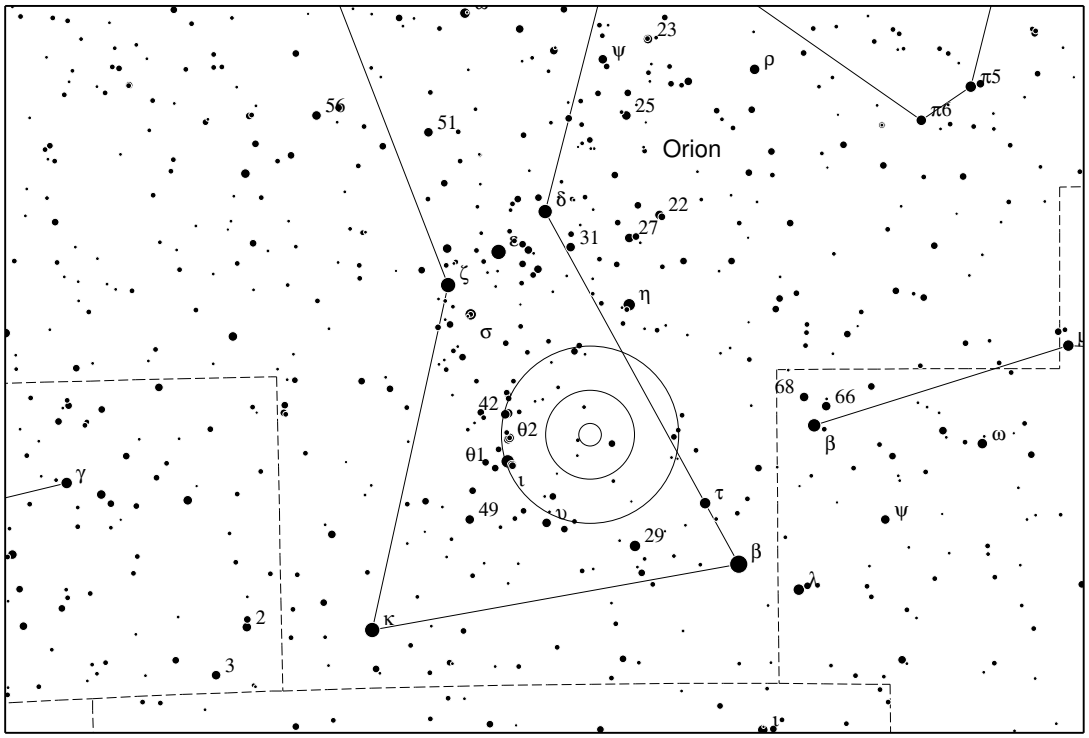
NGC 1924 (H 3.447) GLX



DSS II (red) - 5.0×5.0'

Constellation	Ori
Coordinates	05h28m01.97s / -05°18'38.30''
Brightness	12.5 mag
Size	1.6×1.2'



This galaxy was discovered in 1785 by Friedrich William Herschel and might be one of the brightest galaxies in the constellation Orion. Especially the fairly small angular distance of about 2 degree to the Great Orion Nebula (Messier 42) makes this galaxy interesting, although Orion is not renowned for its galaxies. With a visual magnitude of 12.5 mag and moderate angular size NGC 1924 is observable under suburban skies (Bortle 5) with 8 inch. At 100x the galaxy appeared roundish and evenly bright, but overall rather faint due to the low culmination altitude (about 35 degree at our latitudes).

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