Skyguide

2018 - III

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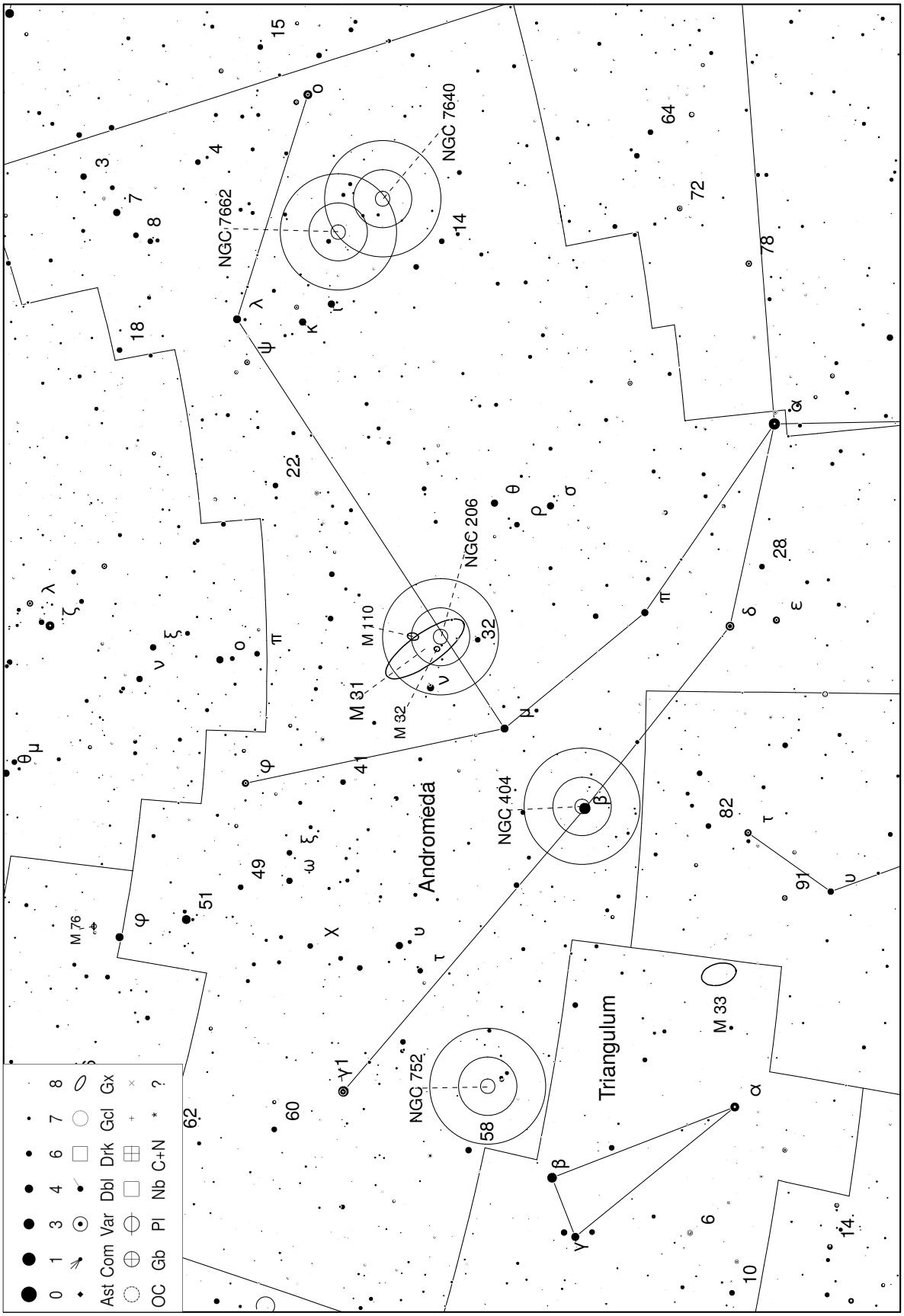
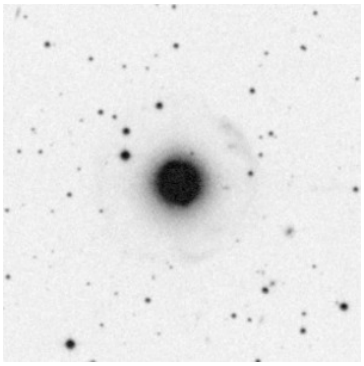
Skyguide - A Short Introduction

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.

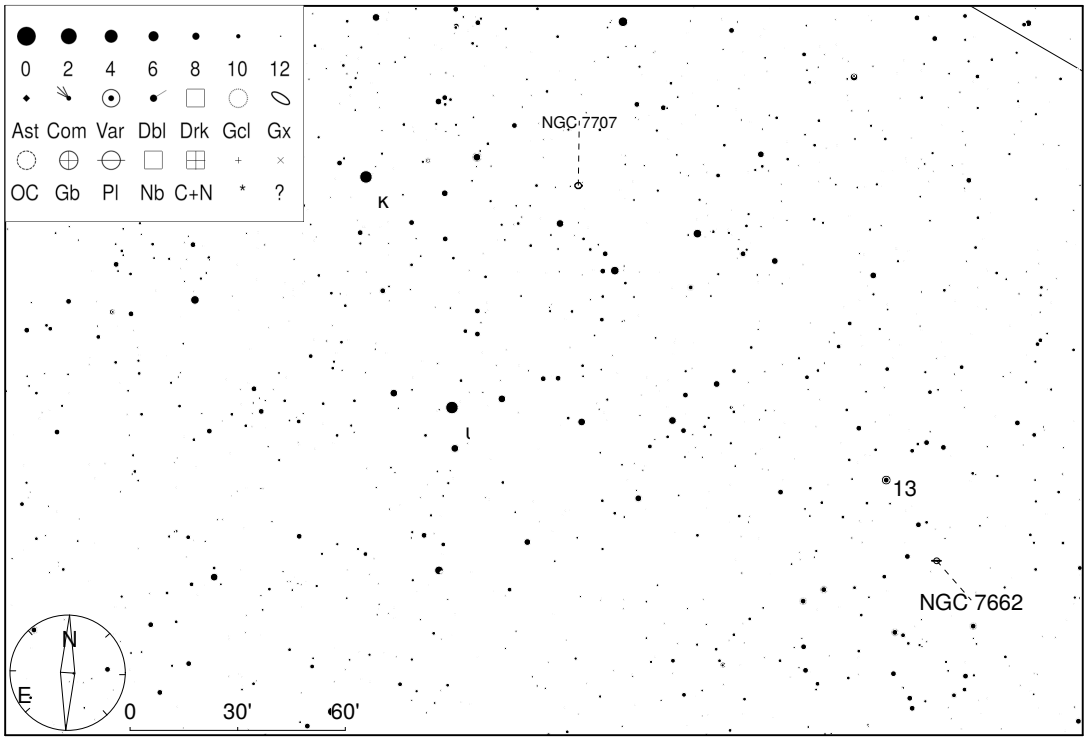

NGC 7662
NGC 7640
NGC 206
M 110
M 31
M 32
NGC 404
Andromeda
Triangulum
M 33
NGC 752
M 76
Ast Com Var Dbl Drk Gcl Gx
0 1 3 4 6 7 8
OC Gb Pl Nb C+N ? *

NGC 7662 (PK 106-17.1, H 4.18, Blue Snowball Nebula) PN



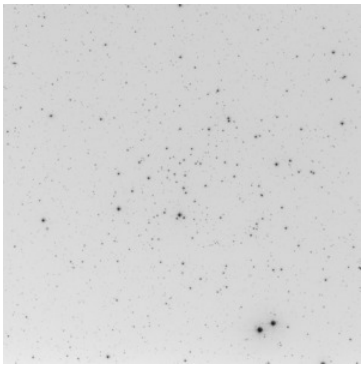
DSS II (blue) - 5.0×5.0'

Constellation	And
Coordinates	23h25m53.60s / +42°32'06.00''
Brightness	8.2 mag
Size	1.0×0.7'



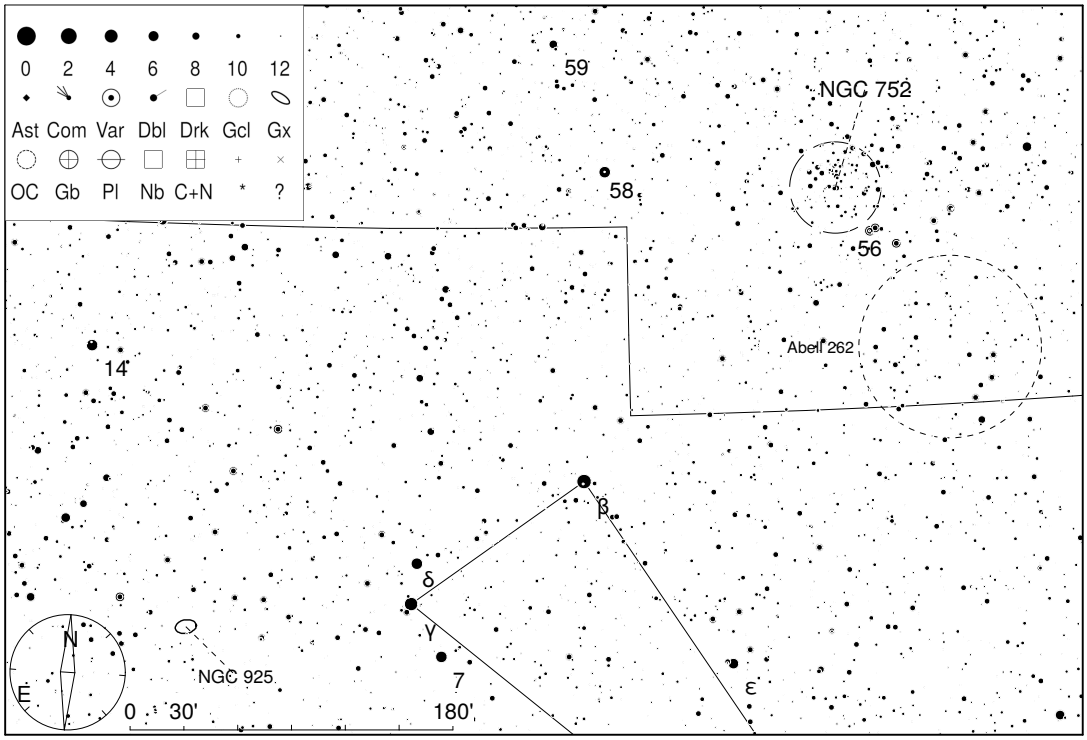
A particularly bright planetary nebula is NGC 7662, which already shows its blue-green color in the telescope. There are not many deep sky objects where color can be detected because the surface brightness is often too low. Its central star is a white dwarf with a surface temperature of about 75,000 Kelvin. He is probably one of the hottest stars known. Visually, the nebula can already be seen under a rural sky with small binoculars, but then appears stellar. In the telescope at higher magnification, the nebula appears clearly flat and round. NGC 7662 is one of the few objects that can still be easily observed even under a brightened sky.

NGC 752 (H 7.32) OC



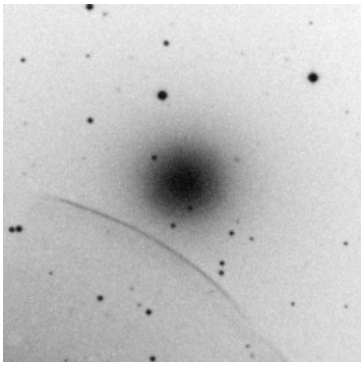
DSS II (blue) - 80.0×80.0'

Constellation	And
Coordinates	01h57m41.00s / +37°47'06.00''
Brightness	5.7 mag
Size	50.0×50.0'



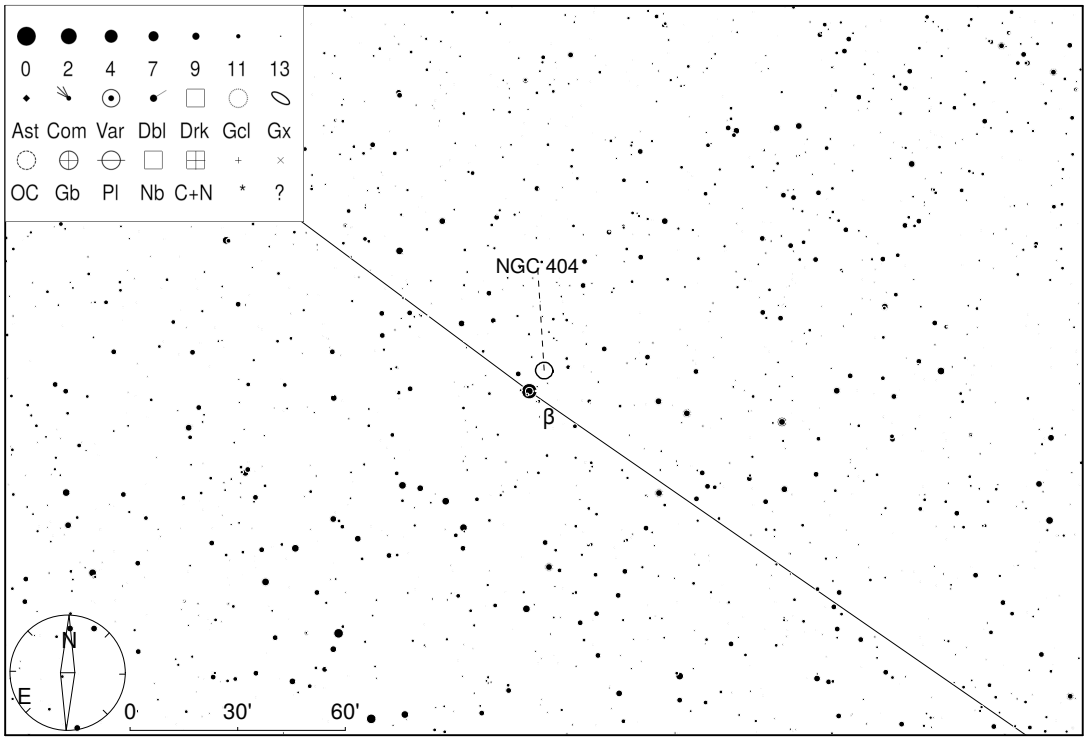
The constellation Andromeda contains only very few open clusters, of which NGC 752 is the most conspicuous representative. With an estimated age of 1.1 to 1.6 billion years, this cluster is already relatively old and therefore quite poor with loosely distributed members. This can be easily observed visually. Under a rural sky (Bortle 4), a small pair of binoculars is sufficient, whereby a chain of brighter stars is conspicuous at the southwestern end of the cluster. Otherwise the star cluster shows some scattered members of different brightness.

NGC 404 (UGC 718, H 2.224, Mirach's Ghost) GLX



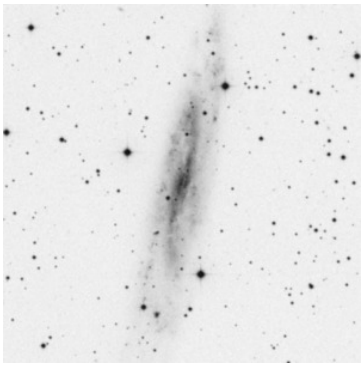
DSS II (blue) - 5.0×5.0'

Constellation	And
Coordinates	01h09m27.10s / +35°43'05.00''
Brightness	10.0 mag
Size	3.5×3.5'



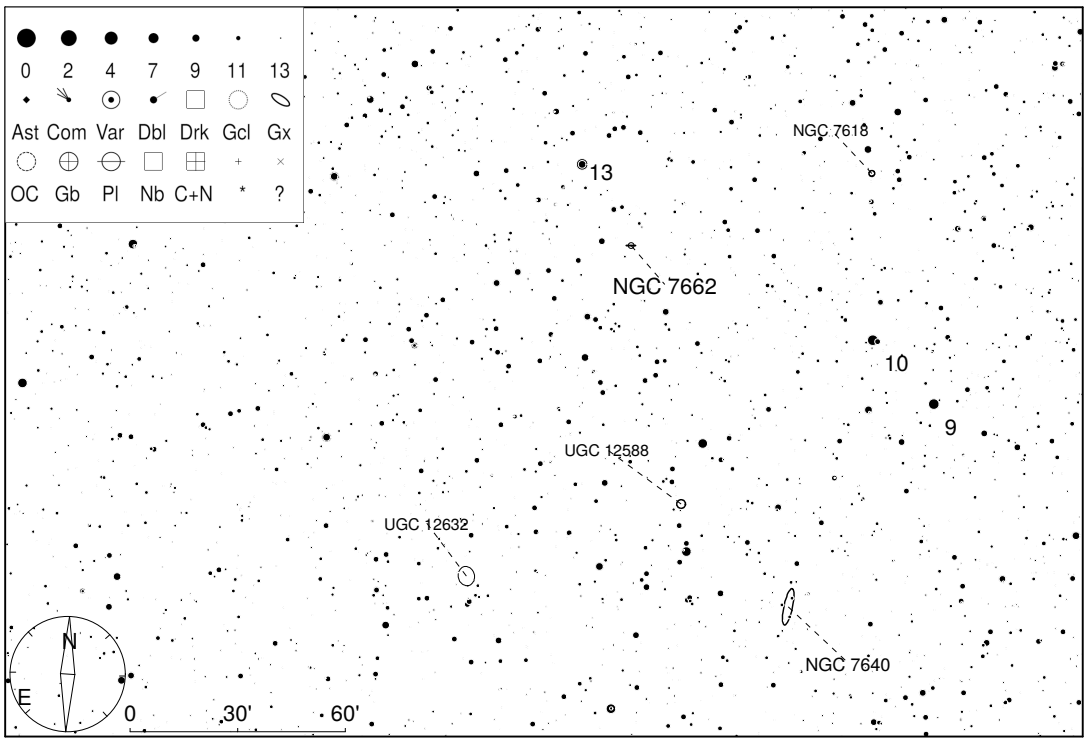
NGC 404 is a lentil-shaped dwarf galaxy and was discovered in 1784 by Friedrich William Herschel. Due to the small angular distance to beta Andromedae (Mirach) it is also called Mirach's ghost. I've read over and over again that this galaxy is causing problems for some observers. At least it is easy to find and with 10.0 mag relatively bright. Under urban conditions (Bortle 6-7) the galaxy is still well observable with 4-5 inch aperture with averted vision, under a rural sky (Bortle 4) even with 50mm aperture. With 8 inch aperture, the galaxy becomes an easy target, even under urban conditions. A higher magnification is highly recommended. The increase in brightness towards the middle is then clearly visible.

NGC 7640 (UGC 12554, H 2.600) GLX



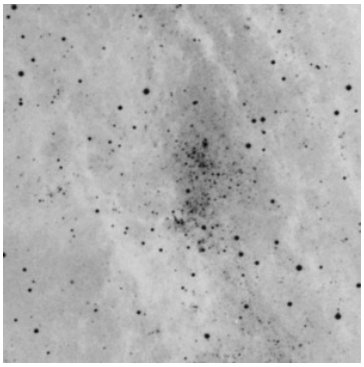
DSS II (blue) - 10.0×10.0'

Constellation	And
Coordinates	23h22m06.58s / +40°50'43.54''
Brightness	11.1 mag
Size	10.0×2.0'



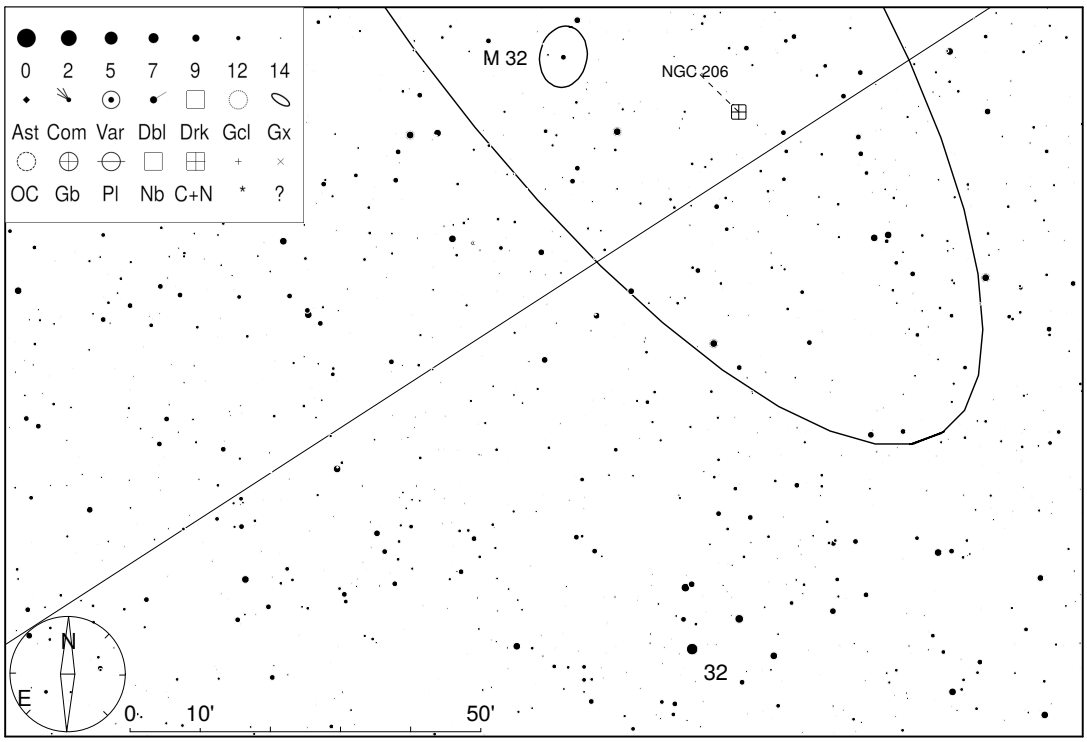
NGC 7640 is a barred spiral galaxy in edge position and shows clear structures, which are certainly also photographically very attractive. There are indications that this galaxy collided with a smaller galaxy. One consequence of this seems to be a higher star formation rate. Visually this galaxy is a bit more demanding, because its surface brightness is comparatively low. The last own observations date back several years, where it was visible with averted vision under a rural sky (Bortle 4) with 8 inch aperture as an elongated nebula with a brighter, also elongated center. The experienced observer can try himself also with a smaller telescope or less good conditions. For owners of larger telescopes, some details will certainly be accessible.

NGC 206 OC



DSS II (blue) - 10.0×10.0'

Constellation	And
Coordinates	00h40m33.80s / +40°44'22.00''
Brightness	12.8 mag
Size	4.2×4.2'



NGC 206 is not a typical open cluster, but a large star association within the galaxy Messier 31. Compared to open clusters, the stars are gravitationally less bound to each other. NGC 206 is the visually brightest extragalactic object in Messier 31, which is often conspicuous in photographs of Messier 31. Visually, NGC 206 is quite easily accessible under a rural sky with an aperture of 8 inch, whereby higher magnification and a decent finder chart are highly recommended. At 150x magnification, NGC 206 was visible as a rather weak, slightly elongated, uniform brightening with averted vision.