Skyguide

2015 - III

created by:

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FACHGRUPPE DEEP-SKY

Vereinigung der Sternfreunde e.V.

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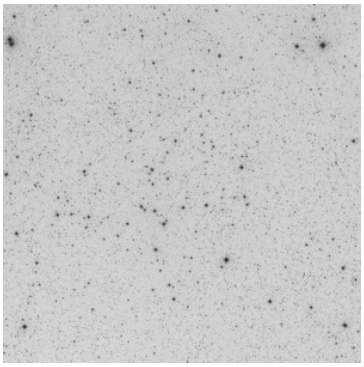
Skyguide - A Short Introduction

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.

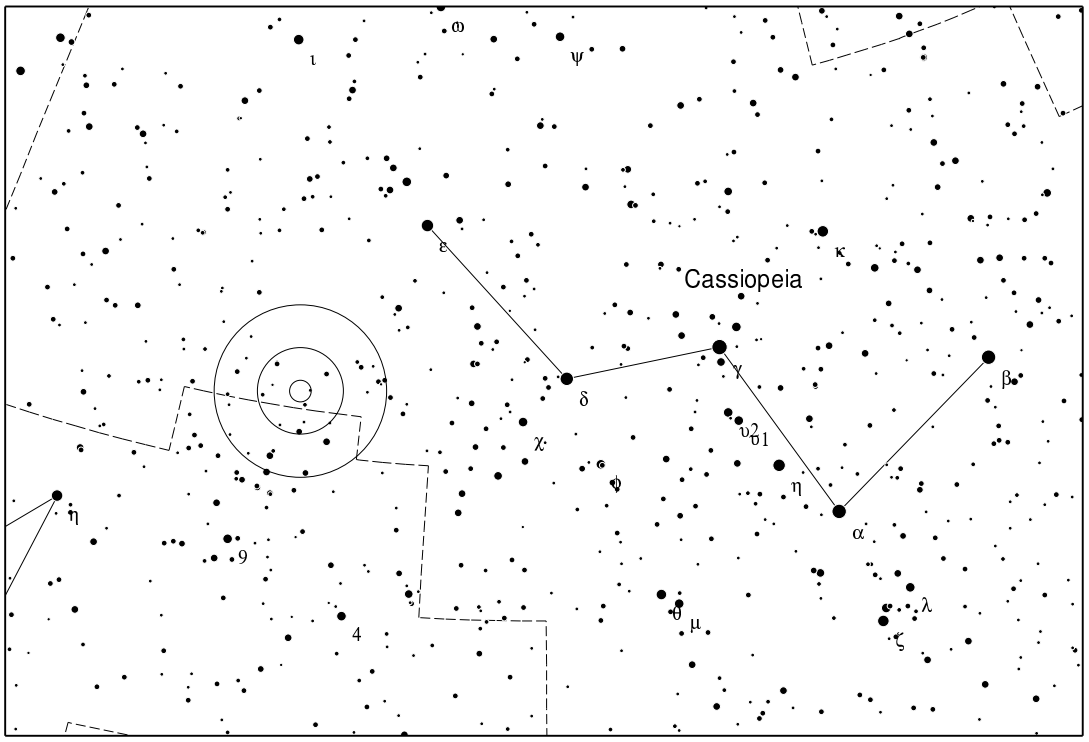
For each object the most important information are given and if applicable a DSS image (Digitized Sky Survey). In addition you will find a chart, created by the free software Cartes du Ciel (Skychart), to get an overview of where the object is located. This chart shows stars down to a magnitude of about 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.

Stock 2 OC



DSS I - 80.0×80.0'

Constellation	Cas
Coordinates	02h14m43.00s / +59°29'06.00''
Brightness	4.4 mag
Size	60.0×60.0'



Stock 2 is a nice, quite large cluster near the well known double cluster (NGC 869 and NGC 884) in Perseus. Due to its angular size small aperture at low magnification is recommendable. Binoculars are a good choice. Its sobriquet 'The muscleman' comes from the similarity to that. I have never seen this strong man consciously. Under rural skies with 40mm binoculars the cluster is well observable and shows many fainter stars of similar brightness scattered over a large area, but with good contrast to the surroundings. There is also an evident chain of brighter stars towards NGC 869.

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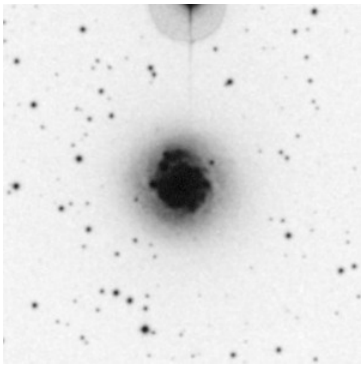
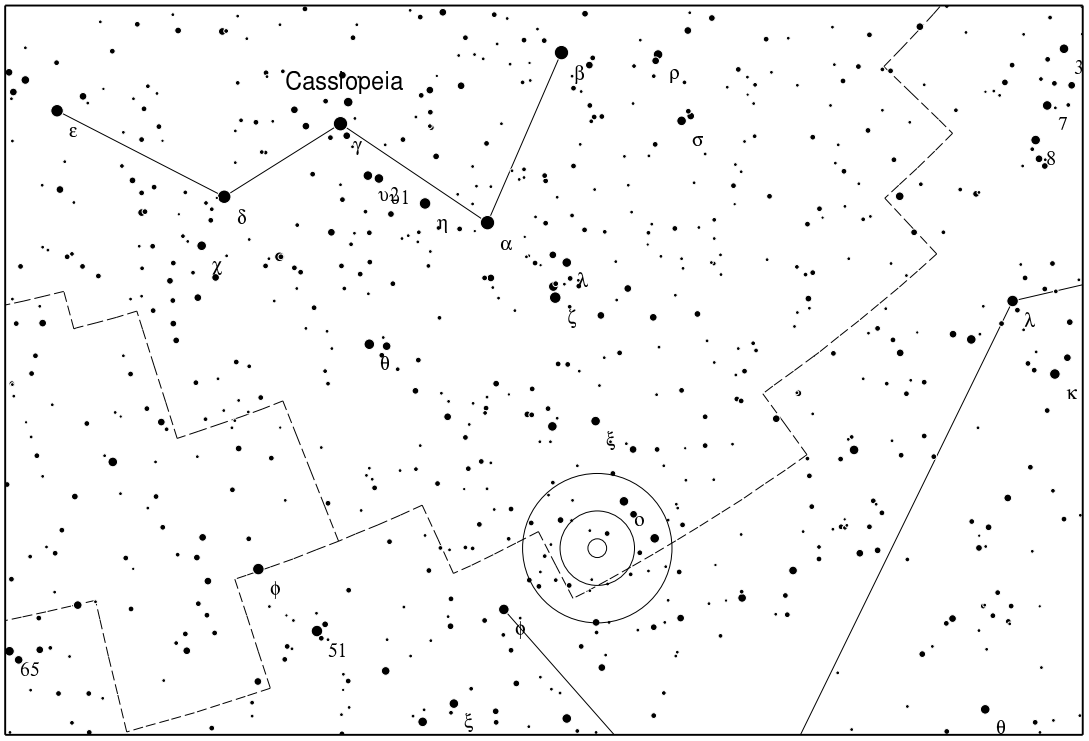
NGC 278 (UGC 528, H 1.159) GLX



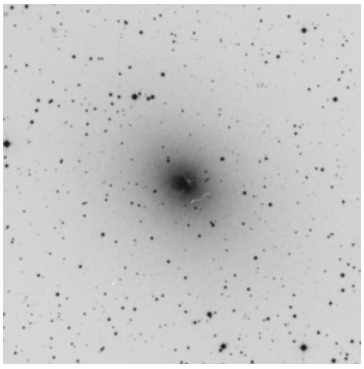
DSS II (blue) - 5.0×5.0'

Constellation	Cas
Coordinates	00h52m04.30s / +47°33'01.90''
Brightness	10.7 mag
Size	2.4×2.4'



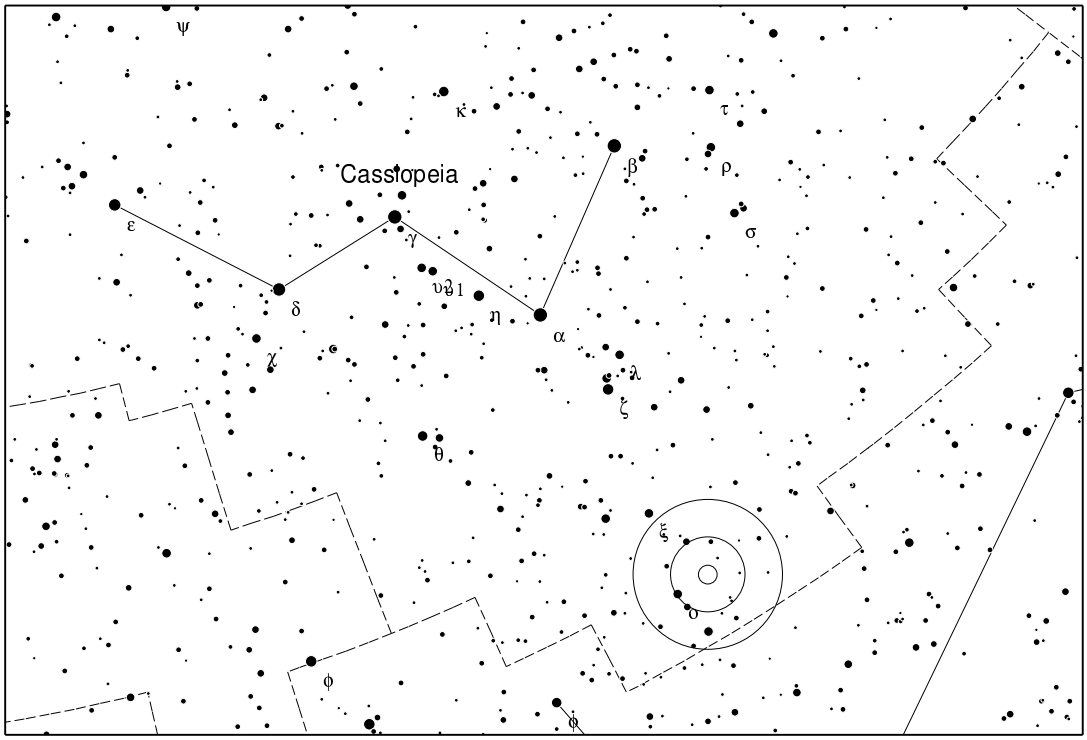
NGC 278 is a galaxy with a high surface brightness, but quite compact. So it can be well observed under urban skies with about 4 inch aperture. It appears round with partly much brighter center. This galaxy is a spiral, for some authors also a barred spiral.

NGC 185 (UGC 396, H 2.707) GLX



DSS II (blue) - 13.0×13.0'

Constellation	Cas
Coordinates	00h38m57.97s / +48°20'14.60''
Brightness	9.2 mag
Size	12.5×10.4'



NGC 185 is Dwarf elliptical galaxy and part of the Local Group, to which our Galaxy also belongs. It is about 2 million light-years away and a satellite of the Andromeda Galaxy (Messier 31). Due to its active galactic nucleus (AGN) NGC 185 is classified as a type 2 Seyfert galaxy. Friedrich William Herschel discovered this galaxy on 30. November 1787. Visually it can be easily observed with 8 inch aperture under rural skies, where it appears as quite large, oval nebula with a brighter center. But also urban observers can have a try: Under Bortle-7 skies with 4.5 aperture I could at least barely saw the brighter central area with averted vision. So NGC 185 is one of the brighter members of the Local Group. The nearby NGC 147, also member of the Local Group, appears much fainter.

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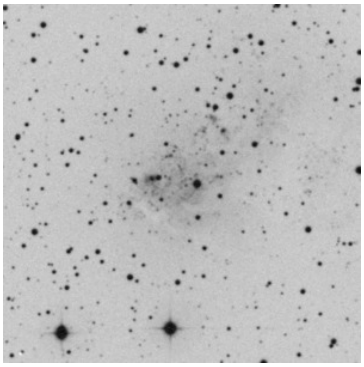
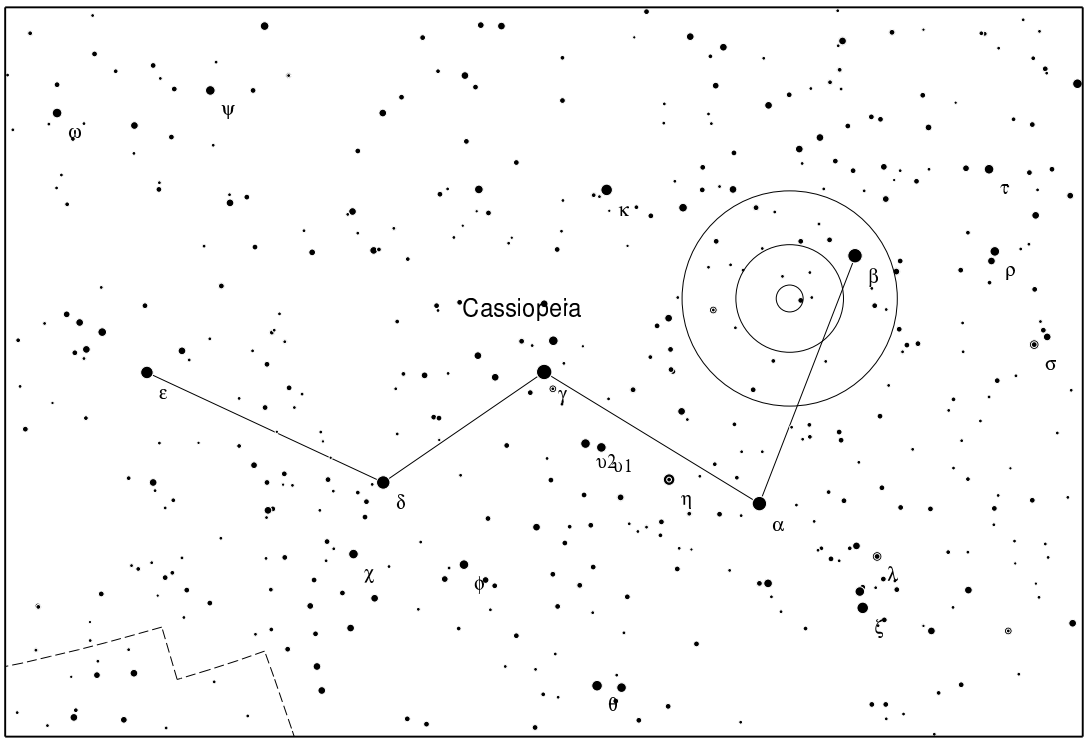
IC 10 (UGC 192) GLX



DSS II (blue) - 7.0×7.0'

Constellation	Cas
Coordinates	00h20m23.16s / +59°17'34.70''
Brightness	10.4 mag
Size	6.4×5.3'



Another member of the Local Group is IC 10, a quite young, irregular Dwarf galaxy with an exceptionally high rate of star formation (Starburst galaxy). It is currently the only known Starburst galaxy of the Local Group. IC 10 is difficult to study due to interstellar matter, because it lies near the plane of the Milky Way. Thus its membership in the Local Group was finally confirmed in 1996 through direct measurements of the distance. The visual observation of this galaxy is also somewhat difficult. I recommend to observe under a preferably dark sky. Bortle 4 sky with a NELM of about 6.0 mag should be sufficient to see this galaxy with 8 inch aperture. But under these conditions it still appears at 80x as a roundish, evenly bright glow without any structure. Besides dark skies also experience and patience are conducive.

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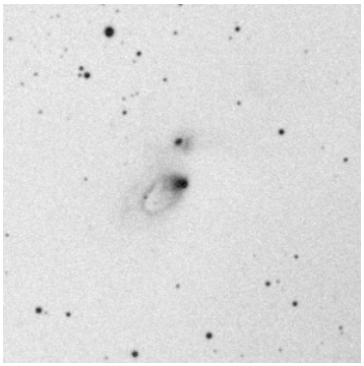
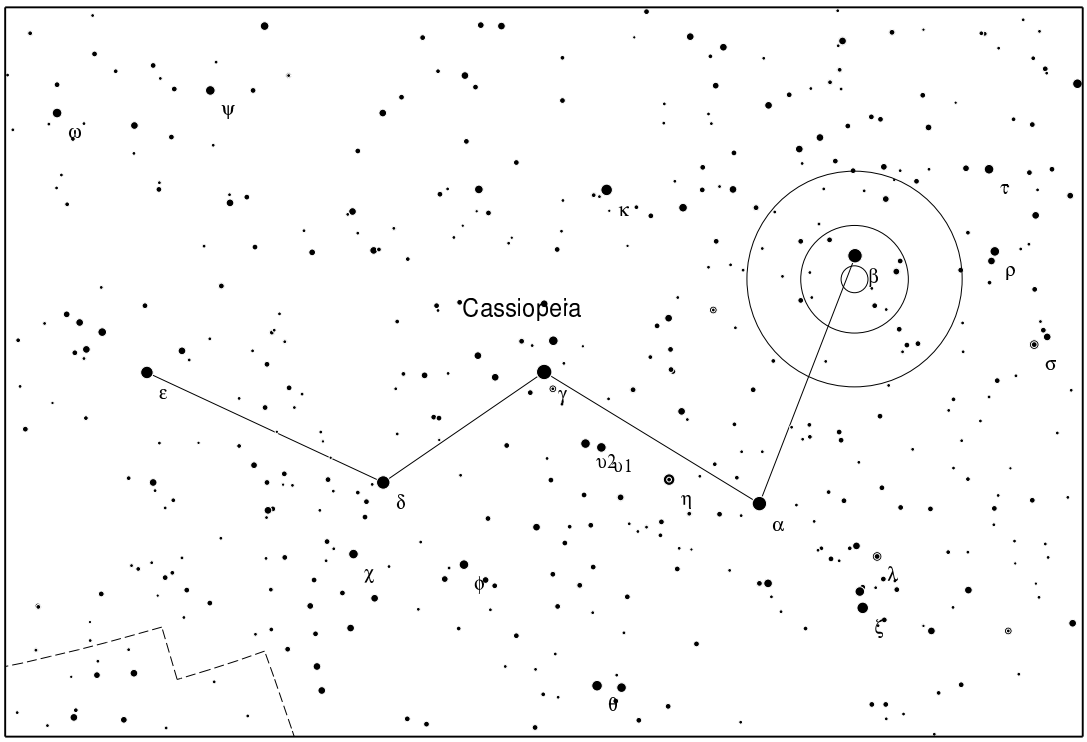
HH 164 BN



DSS II (blue) - 5.0×5.0'

Constellation Cas
Coordinates 00h11m26.10s / +58°49'29.00''



HH 164 is a so called Herbig-Haro object, that are formed around young stars. These objects are named by the astronomers George Herbig and Guillermo Haro, who have intensively studied them. They are formed when ejected gas from the star collides with surrounding dust. In this case the young variable star V633 Cas is the origin. But visible is only the surrounding dust envelope. The southeastern extension on the DSS image is HH 161. Visually the nebula appears under dark skies (Bortle 4) with 8 inch aperture at 171x as a quite compact, diffuse brightening, similar to a fuzzy star. A comparison to nearby stars might be helpful.

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