Skyguide

2016 - III

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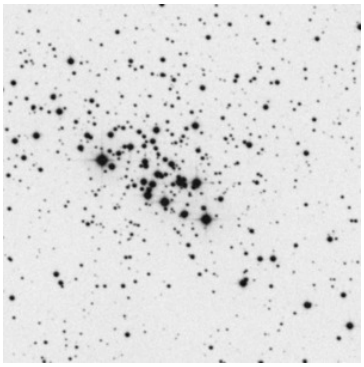
Skyguide - A Short Introduction

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.

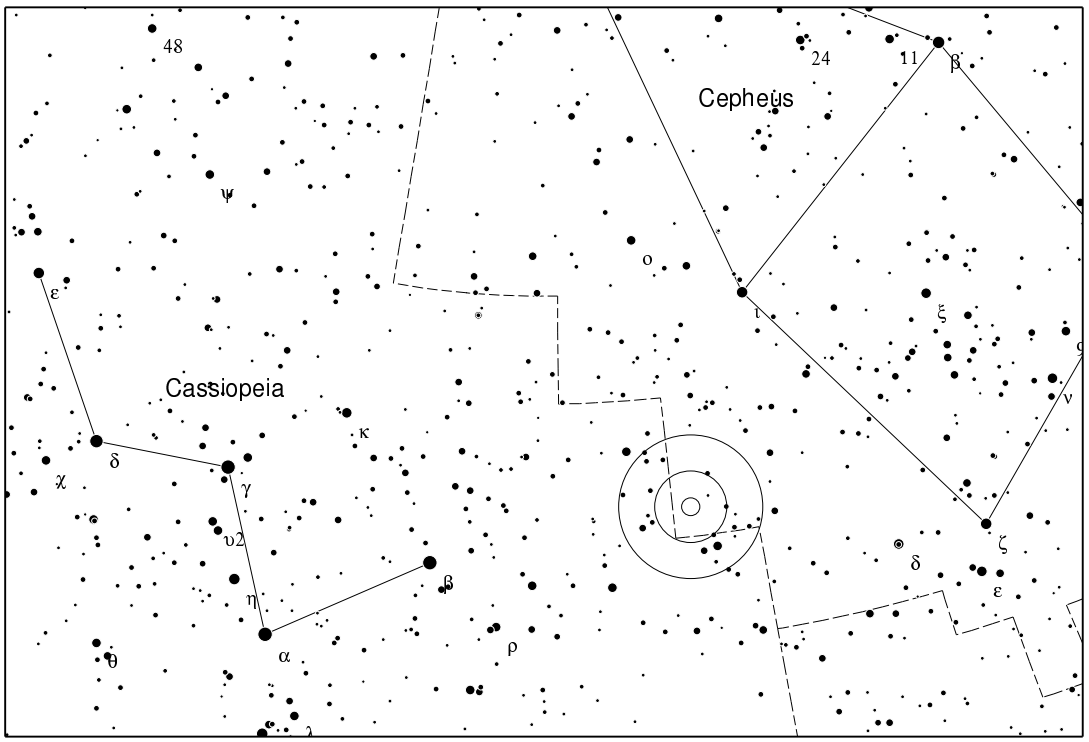
For each object the most important information are given and if applicable a DSS image (Digitized Sky Survey). In addition you will find a chart, created by the free software Cartes du Ciel (Skychart), to get an overview of where the object is located. This chart shows stars down to a magnitude of about 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 7510 (H 7.44) OC



DSS II (blue) - 8.0×8.0'

Constellation	Cep
Coordinates	23h11m00.00s / +60°34'00.00''
Brightness	7.9 mag
Size	4.0×4.0'



With an age of about 10 million years NGC 7510 is a quite young cluster. Interstellar dust weakens the visual brightness of the cluster, but it is still pretty bright. Very interesting is the elongated shape and compactness. In a small telescope of about 3 inch the cluster appears under urban conditions more as an elongated brightening. Under a dark, rural sky the cluster could be well resolved, whereby the background stays still diffuse. An evident star is on one ending of the cluster. Besides this star two rows of stars in an acute angle are dominating the cluster. With 8 inch aperture many faint members are visible.

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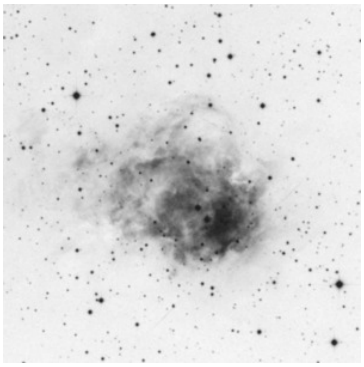
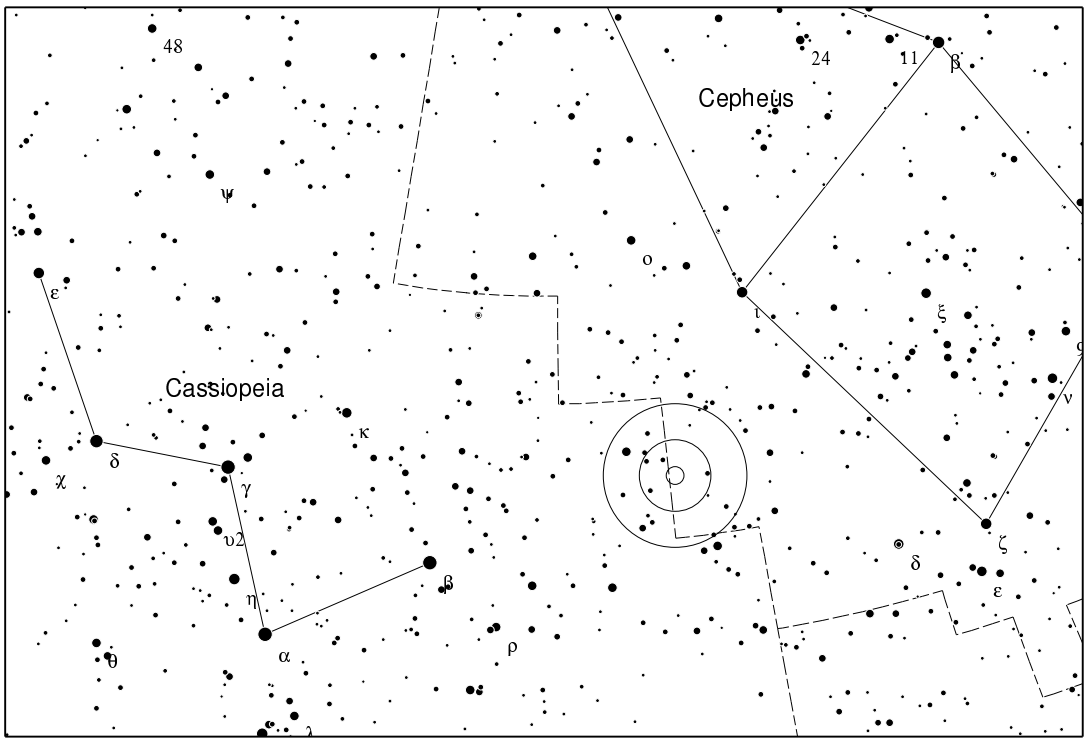
NGC 7538 (H 2.706) BN



DSS II (red) - 12.0×12.0'

Constellation Cep
Coordinates 23h13m41.00s / +61°31'30.00''
Size 8.0×7.0'



NGC 7538 is a fairly bright nebula consisting of emission and reflection elements. For visual observation a filter is very useful. Under rural conditions a telescope with 8 inch aperture will show at 37x with an [OIII] filter a roundish, evenly bright nebula. A closer look and higher magnification will offer more details. With 12 inch aperture at 70x with an UHC filter the diffusely fading eastern part could be well seen.

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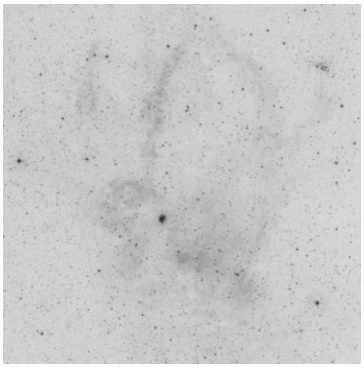
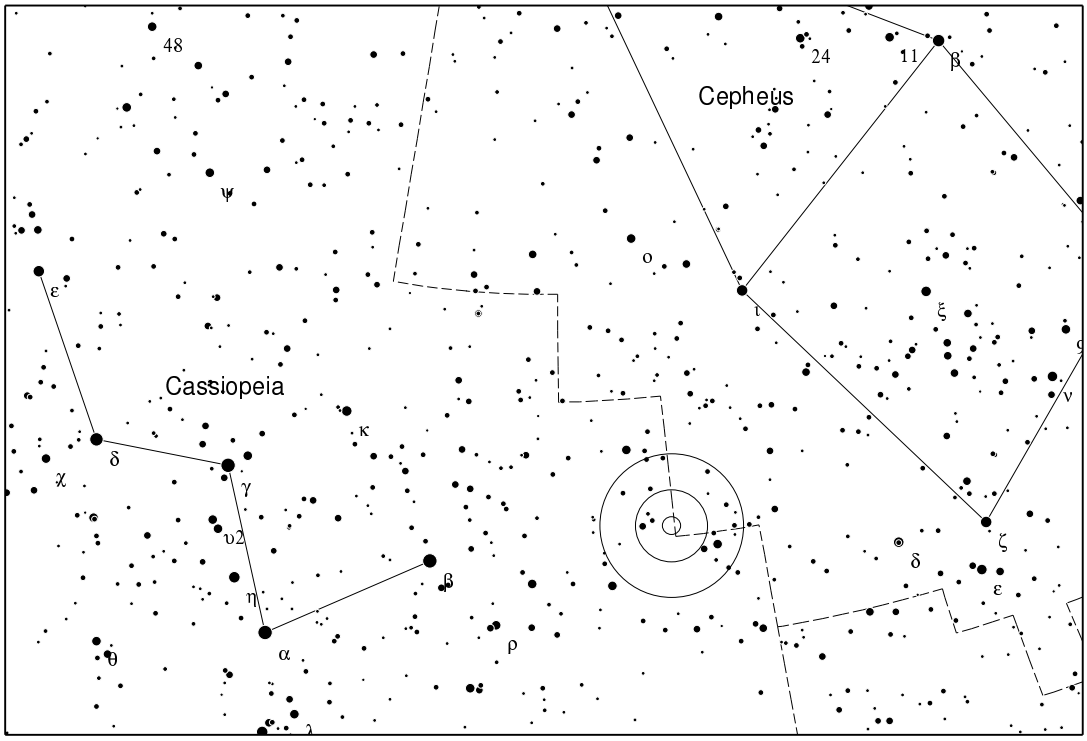
Sh2-157 (LBN 537, The Claw Nebula) BN



DSS II (red) - 80.0×80.0'

Constellation Cas
Coordinates 23h15m30.00s / +60°10'00.00''
Size 60.0×50.0'



This quite large emission nebula is located at the border between Cassiopeia and Cepheus. Its name is probably based on the particular appearance. The nebula lies just 1° southwest of the famous Bubble Nebula NGC 7635. Due to its angular size a small magnification is recommended. Filter will help detecting. Rural skies and an 8 inch telescope will show at 37x and UHC filter a pretty large, irregular, diffuse brightening with brighter branches. Within the nebula many star chains are visible. The nebula couldn't clearly separated from the surroundings due to fading borders. A HBeta filter shows additional details.

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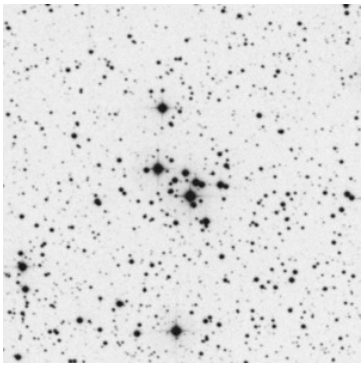
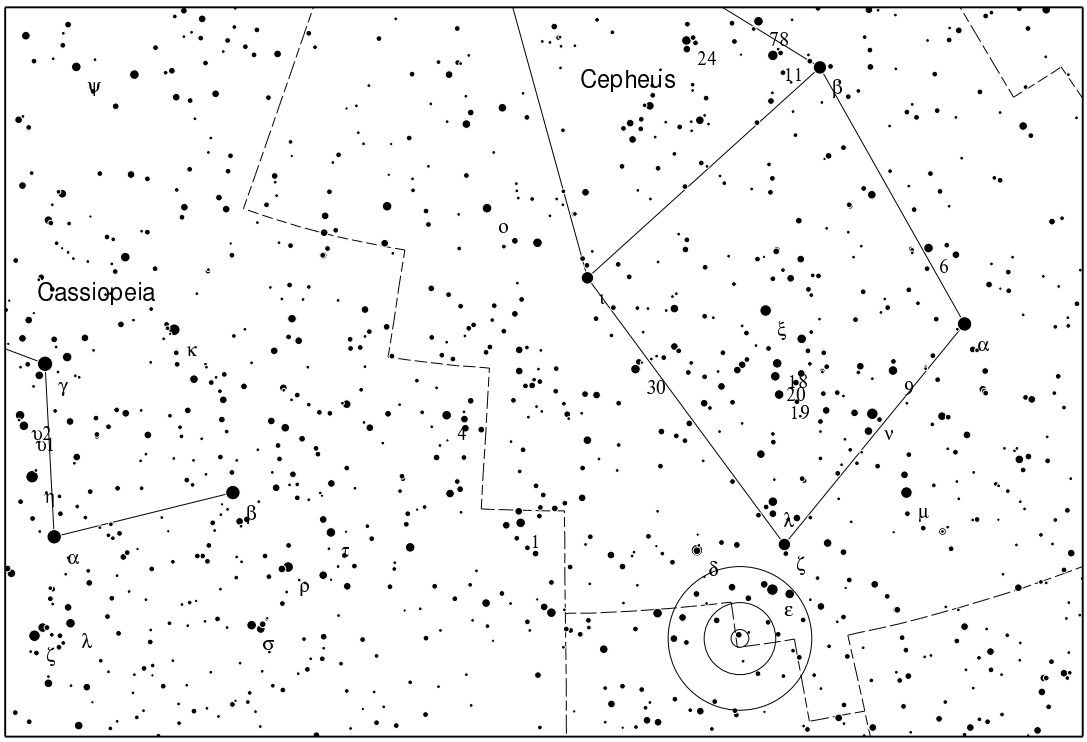
Berkeley 94 OC



DSS II (blue) - 8.0×8.0'

Constellation	Cep
Coordinates	22h22m54.00s / +55°52'30.00''
Brightness	8.7 mag
Size	4.0×4.0'



The Berkeley catalogue contains in all 104 open clusters, whereby most of them were discovered by the 'University of California at Berkeley' for the first time. A pretty interesting catalogue with visually rather less observed clusters. Berkeley 94 is a quite compact cluster and could be successfully observed with 80mm aperture. I saw a curved chain of three stars with a brightened background. With 8 inch aperture and medium power many more fainter members become visible on a small area.

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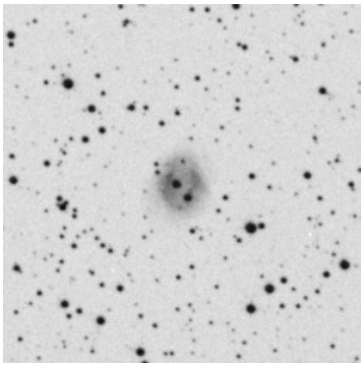
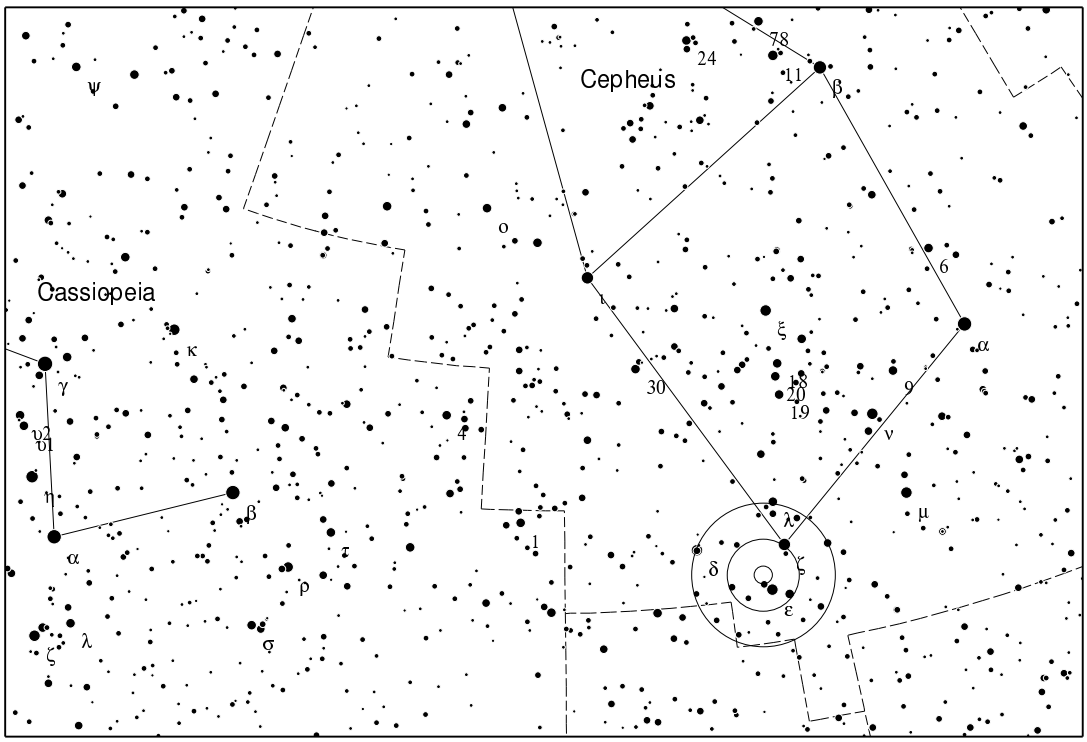
Minkowski 2-51 (PK 103+0.1) PN



DSS II (blue) - 5.0×5.0'

Constellation	Cep
Coordinates	22h16m03.89s / +57°28'33.80''
Brightness	13.5 mag
Size	1.2×1.2'



There are many, fairly bright planetary nebulas, that have found their way to the New General Catalogue (NGC) and most of them are more or less well known. Besides the NGC there a many more planetaries that are worth a visit. This should include also Minkowski 2-51, located about 0.5° away from the bright open cluster NGC 7234. Despite the given visual magnitude of about 13.5 mag this planetary nebula is well observable with 8 inch aperture under rural skies. Filter helps, but the nebula is also visible at medium power as small, round brightening. The edge appeared more fading. At 150x a stellar brightening within the nebula could be glimpsed. It was probably the 13.3 mag bright star northeast of the middle.

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