Skyguide

2016 - II

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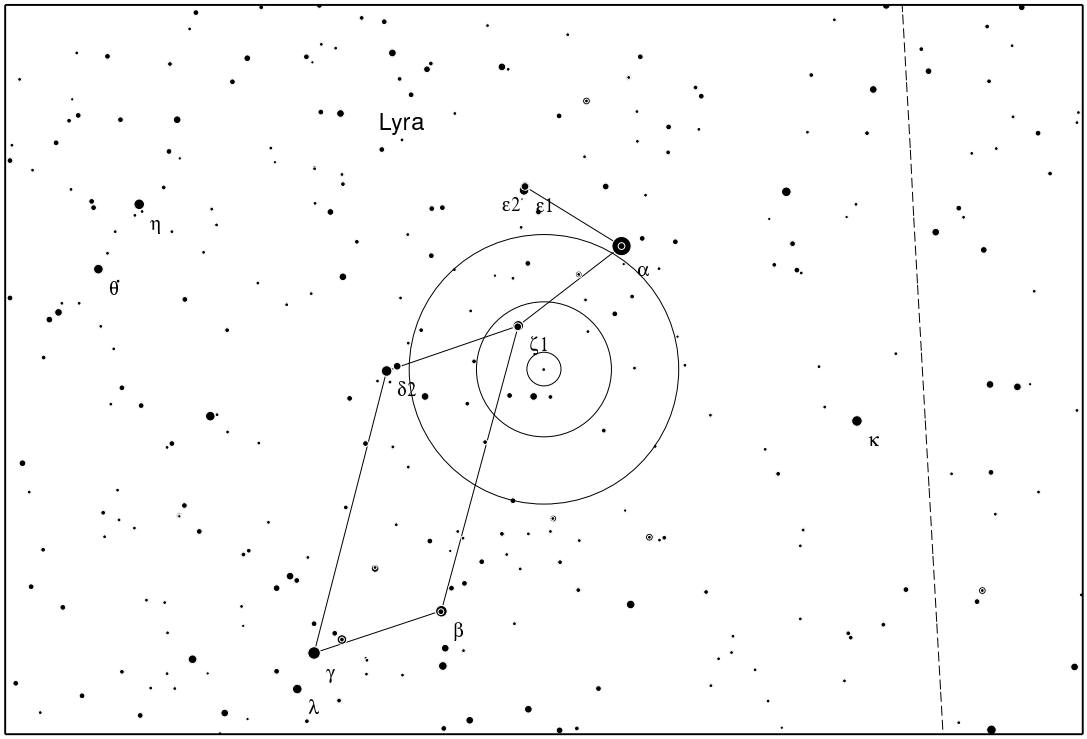
Skyguide - A Short Introduction

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.

HK Lyr C*

Constellation	Lyr
Coordinates	18h42m50.00s / +36°57'30.90''
Brightness	7.5-8.4 mag
Period	186d



With a spectral type of C5 HK Lyr is another carbon and semiregular variable star. Semiregular variable stars are typically giants or supergiants of intermediate and late spectral type. The periods range between 30 and several thousands days. Also the magnitude can vary from hundredths to several magnitudes. In this case the amplitude is rather low which makes visual observation easier. Based on own observations this carbon star is not the reddest one but with an aperture of about 4 inch still conspicuous due to its deep orange coloring.

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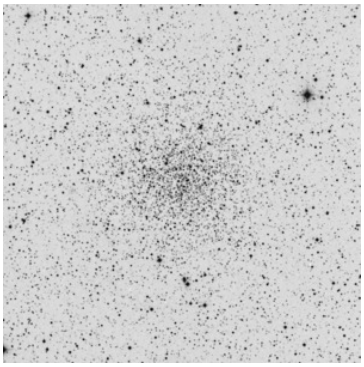
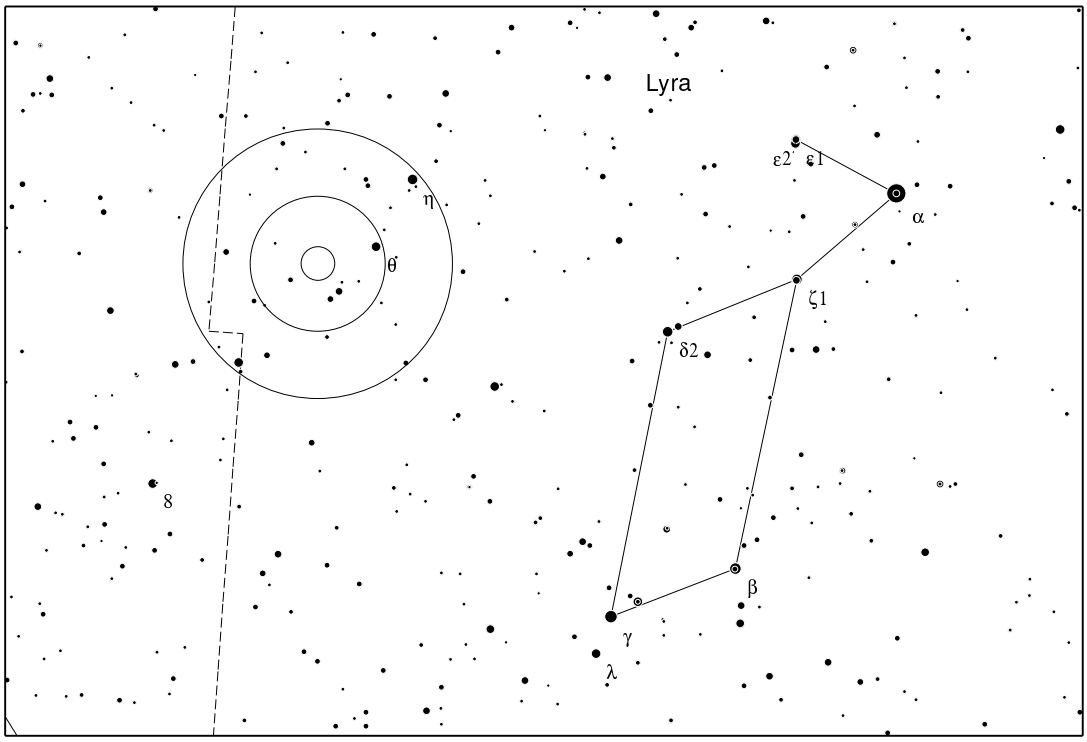
NGC 6791 OC



DSS I - 25.0×25.0'

Constellation	Lyr
Coordinates	19h20m53.00s / +37°46'18.00''
Brightness	9.5 mag
Size	16.0×16.0'



NGC 6791 is a quite old cluster with an age of about 8 billion years. It was discovered by the German astronomer Friedrich August Theodor Winnecke in 1853. Due to his measurements of binary stars the optical double star Messier 40 (UMa) got its sobriquet Winnecke 4. NGC 6791 is a comparatively faint but rich cluster. A dark location is recommended. Smaller telescopes with an aperture of about 4 inch are basically sufficient for successful observations. Individual stars are surely visible with 8 inch aperture but the background will stay nebulous. At the northwestern edge of the cluster there is the vividly colored carbon star U Lyr.

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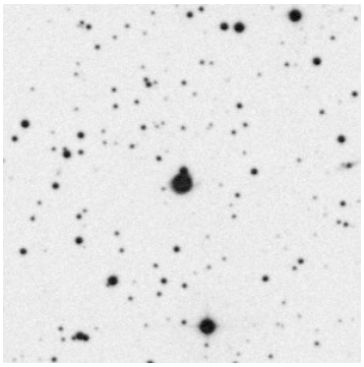
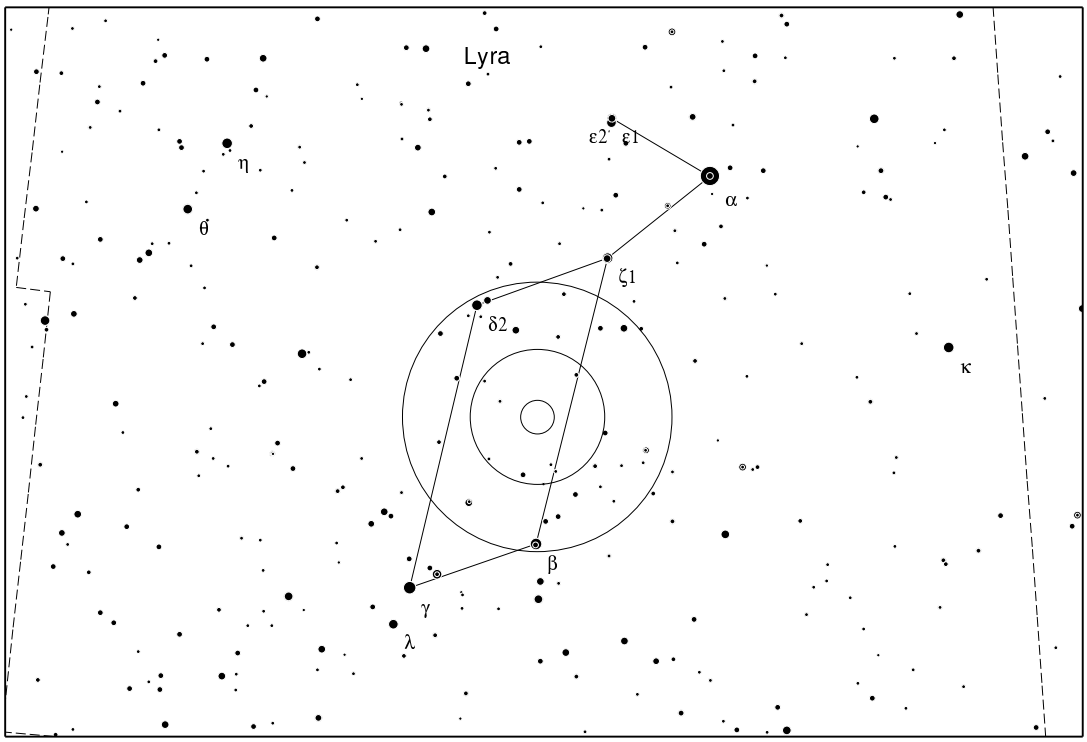
Minkowski 1-64 (PK 64+15.1) PN



DSS II (blue) - 5.0×5.0'

Constellation	Lyr
Coordinates	18h50m02.09s / +35°14'36.10''
Brightness	13.3 mag
Size	0.4×0.4'



The Minkowski catalogue consists of overall 66 planetary nebula splitted into 4 parts. The name of the catalogue is based on Rudolph Leo Bernhard Minkowski, who discovered several planetaries. He was also leader of the Palomar Observatory Sky Survey (POSS), a photographic atlas of the northern hemisphere. Minkowski 1-64 is probably not so well known, but nevertheless a pretty bright nebula within the constellation Lyra. The nebula is quite easily visible with 8 inch aperture under rural skies at medium power without any filter but appears rather compact. Higher magnification shows a round, homogenous disc. With larger aperture also the ring structure can be seen.

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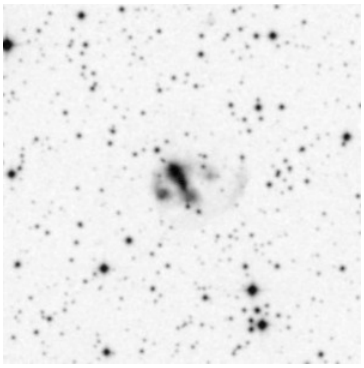
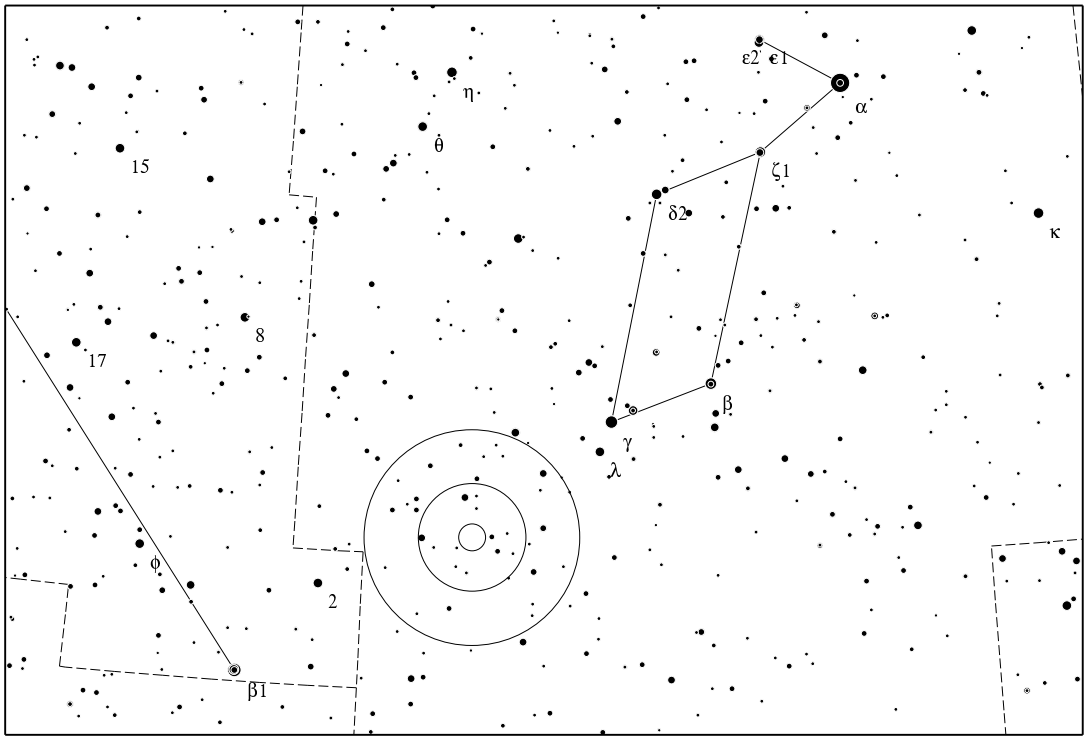
NGC 6765 (PK 62+9.1) PN



DSS II (blue) - 5.0×5.0'

Constellation	Lyr
Coordinates	19h11m06.46s / +30°32'42.50''
Brightness	12.9 mag
Size	0.7×0.7'



Another planetary nebula is NGC 6765 near the well known globular cluster Messier 56. It seems to be a bit more difficult than Minkowski 1-64. At least a nebula filter like [OIII] or UHC is recommendable. With 8 inch and [OIII] filter the nebula is visible with averted vision at medium power but just an unstructured brightening. With an aperture of 12 inch the irregular shape is visible and the nebula appears more elongated. Indeed a quite interesting planetary that might offer some details in larger telescopes.

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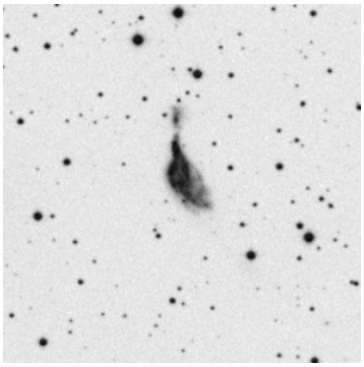
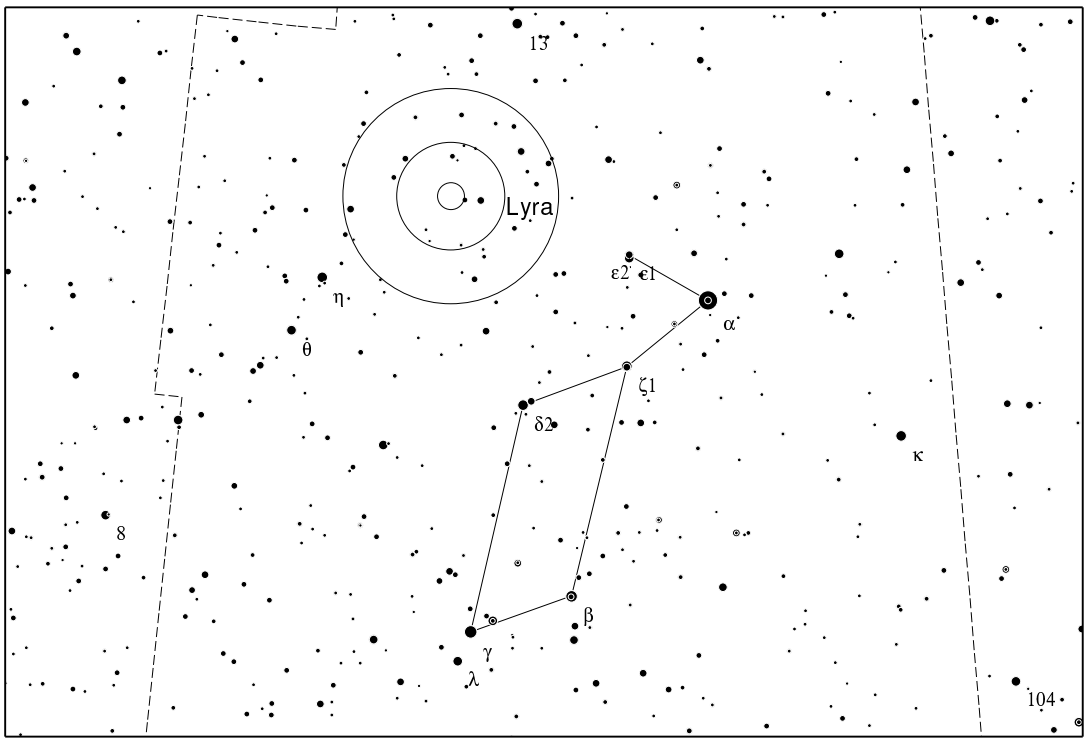
NGC 6745 (UGC 11391) GLX



DSS II (blue) - 5.0×5.0'

Constellation	Lyr
Coordinates	19h01m41.62s / +40°44'37.20''
Brightness	13.3 mag
Size	1.3×0.5'



NGC 6745 is an irregular galaxy with a distance of over 200 million light years. The shape is based on a collision with a smaller galaxy, which can be found on the DSS image northern of NGC 6745 as a faint, elongated glow. With that this galaxy is also interesting for photographs. Visually with 8 inch aperture under rural skies at 100x the galaxy appeared elongated (N-S) with an axis ratio of about 1:3 and was quite well visible with averted vision. Larger aperture and therefore higher magnification might show this spectacle of a collision of two galaxies more clearly.

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