
Skyguide

2020 - IV

created by:

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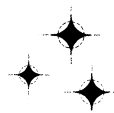
www.faint-fuzzies.de

in cooperation with:

Rene Merting

www.freunde-der-nacht.net

FACHGRUPPE



DEEP-SKY

Vereinigung der Sternfreunde e.V.

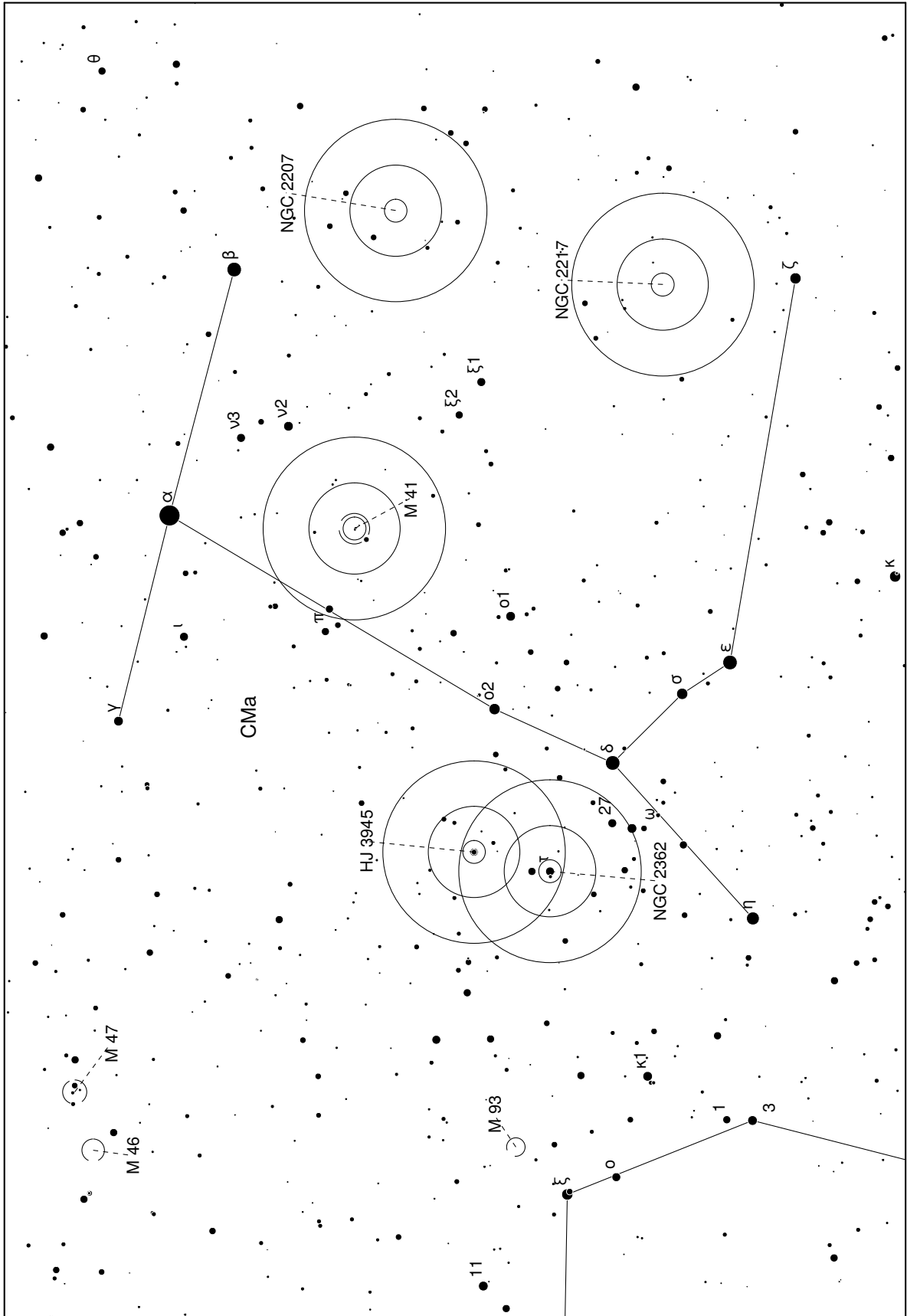
www.deepsky.vdsastro.de

www.vds-astro.de

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.

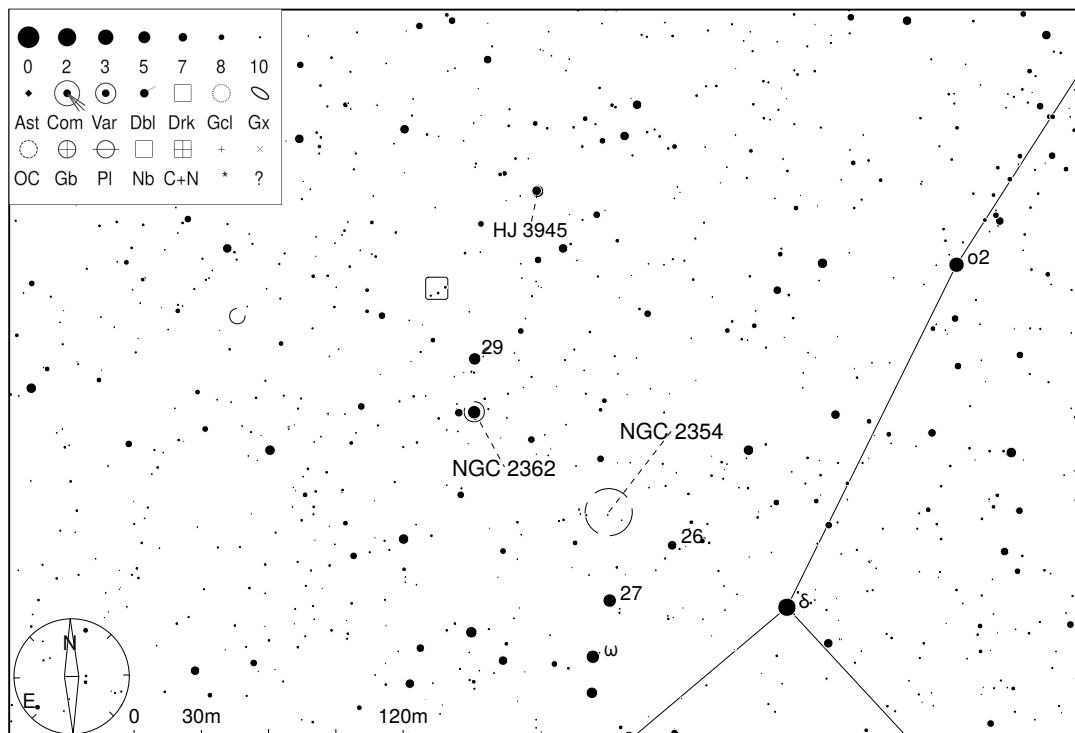
For each object the most important information are given and if applicable a [DSS](#) image (Digitized Sky Survey). In addition you will find a chart, created by the free software [Cartes du Ciel](#) (Skychart), to get an overview of where the object is located. This chart shows stars down to a magnitude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



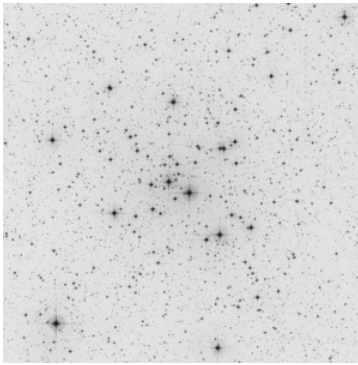
HJ 3945 (145 CMa, Winter Albireo)

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Constellation	CMa
Coordinates	07h16m36.84s / -23°18'56.10"
Brightness	5.0 mag / 5.8 mag
Angular Distance	26.8"
Position Angle	50°
Year	2015

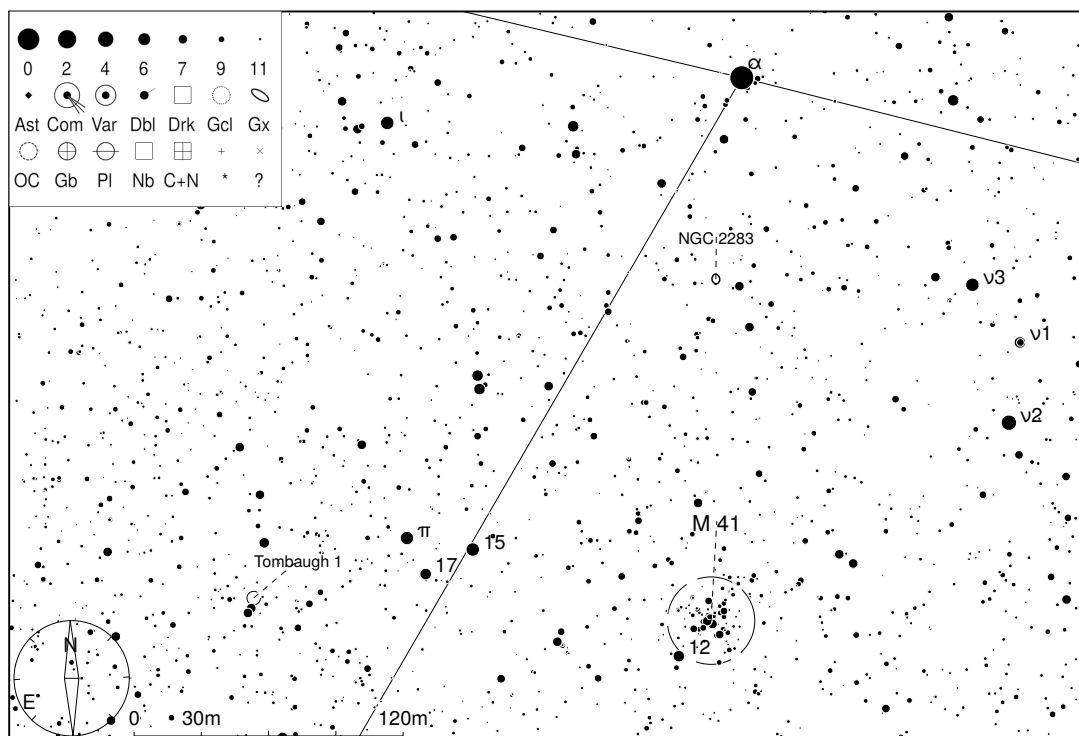


In summer most of us will probably observe Albireo in Cygnus at some time, which attracts attention mainly by its color contrast and is already easily visible with binoculars. HJ 3945 presents itself similarly, so it is often described as Albireo of the winter. Under suburban conditions it should already be visible with the naked eye, making it easy to find. In small binoculars, at least the primary component shows up colored and is often described as yellowish or orange. In larger binoculars or small telescopes then also the companion shines in an attractive blue. Only the low declination could cause problems for some urban observers in northern latitudes. A sufficiently good horizon view is necessary. This is also true for the other objects suggested here. But it is worthwhile and maybe you will look for a rural observing site.



Constellation CMa
Coordinates 06h46m01.00s / -20°45'24.00"
Brightness 4.5 mag
Size 38.0×38.0'

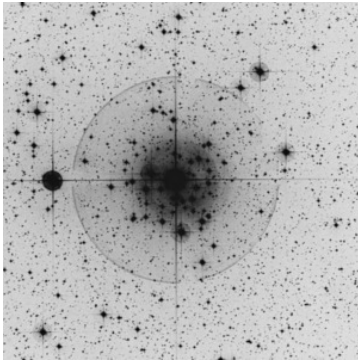
DSS II (red) - 40.0×40.0'



One of the brighter Messier objects is without doubt Messier 41, which was probably already known to Aristoteles 300 years before Christ. The star cluster consists of about 100 members, which are located in a distance of about 2300 light years. The actual extension is about 25 light years. Among the members are also some red giants, which are visually conspicuous by their orange coloring. Already with binoculars the cluster can be observed well and stands out nicely from its surroundings. With increasing telescope aperture fainter stars become visible and also the star colors are more apparent.

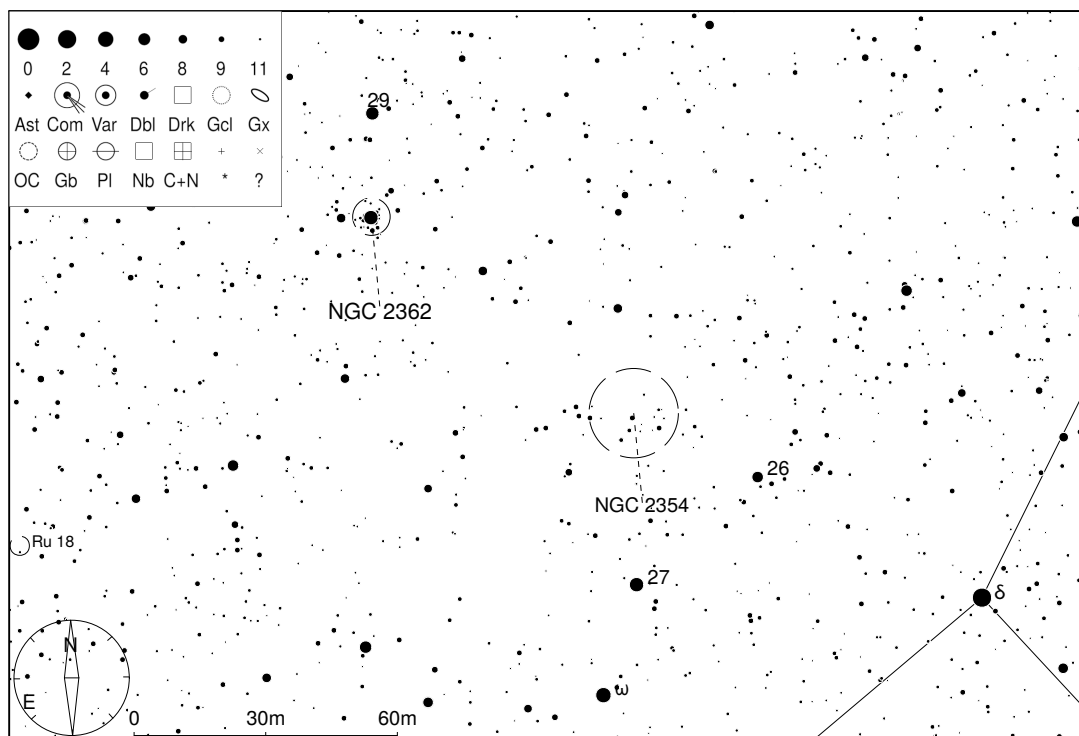
NGC 2362 (Caldwell 64, Tau Canis Majoris Cluster)

OC

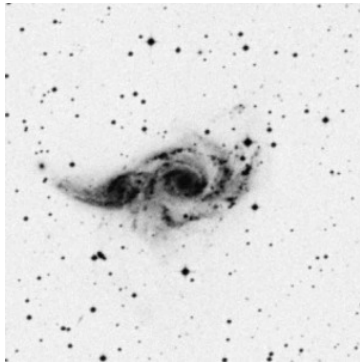


DSS I - 20.0×20.0'

Constellation CMa
Coordinates 07h18m41.00s / -24°57'18.00"
Brightness 4.1 mag
Size 8.0×8.0'

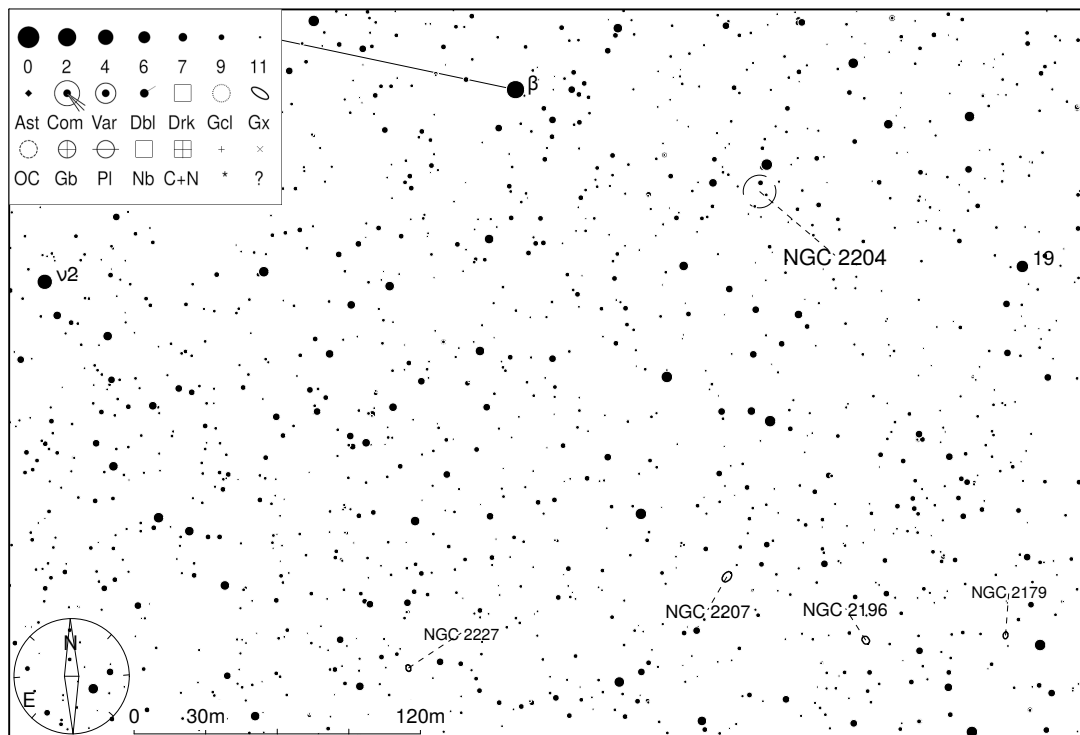


A very interesting cluster is NGC 2362, whose members are densely distributed around the 4m4 bright star Tau CMA which is also a member of the cluster. Tau CMA dominates the cluster as a super giant (spectral class O). The cluster was discovered in 1654 by the Italian naturalist and priest astronomer Giovanni Battista Hodierna. Because of the rather small size a higher magnification is useful. Under dark skies the star cluster is only indicated in large binoculars. With 8 inch telescope aperture the compact star cluster already reveals some fainter members.

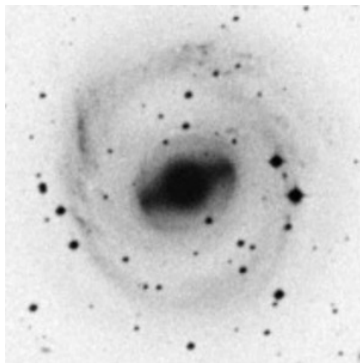


Constellation CMa
Coordinates 06h16m22.09s / -21°22'21.80"
Brightness 10.65 mag
Size 4.2×2.6'

DSS I - 8.0×8.0'

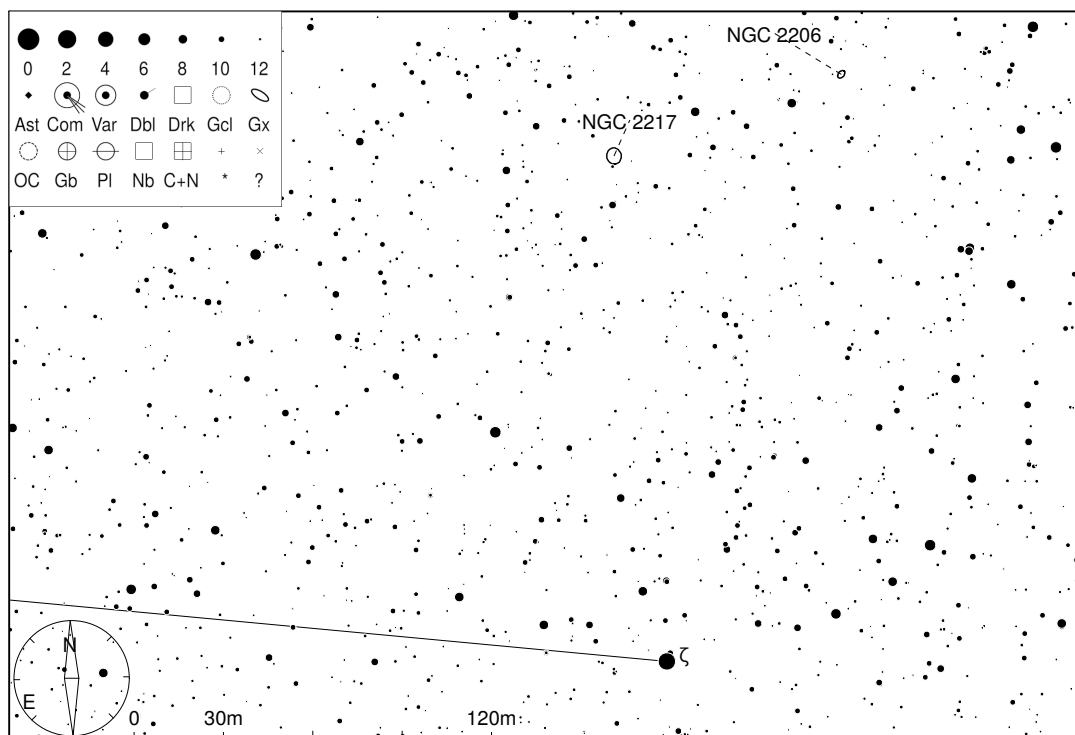


An example for the merger of two galaxies is NGC 2207 and IC 2163 (11m7). The much smaller galaxy IC 2163 is attracted by the gravitation of NGC 2207. After an estimation of one billion years a larger galaxy is formed. From the two original galaxies nothing is to be seen then. The galaxies are in a distance of about 115 million light years. What can be seen of this cosmic spectacle visually with which telescope aperture? Interesting details would be the spiral arms of NGC 2207 and the tidal tail of IC 2163.



Constellation CMa
Coordinates 06h21m39.75s / -27°14'01.66"
Brightness 10.7 mag
Size 4.7×4.3'

DSS I - 5.0×5.0'



Typical ring galaxies are a rare form of galaxies, which are usually formed by the interaction of two galaxies. Usually a spiral galaxy is collided with another galaxy close to its center. A typical example of a ring galaxy is Hoag's object (PGC 54559). In the case of NGC 2217, it is a lenticular barred spiral whose spiral arms wind almost annularly around the center. Visually the bright center as well as the bar should be well observable. For the faint spiral arms probably dark sky and sufficient aperture is necessary.