Deepsky Beauties: March 2010

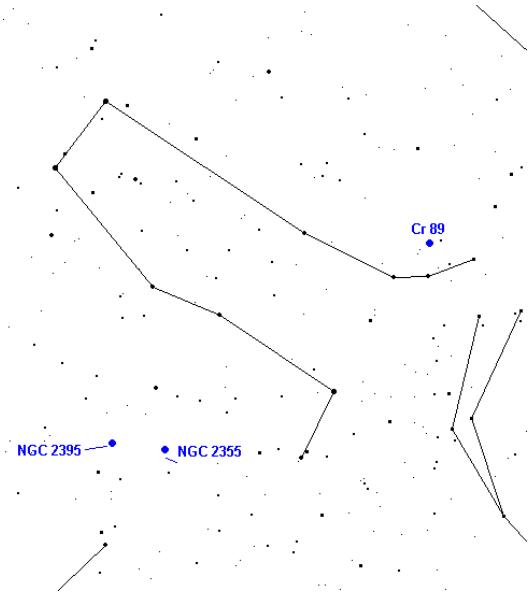
All objects in this article can be observed underneath a dark sky with telescopes with a maximum of 8 inch (20cm). Most objects can already be observed with smaller telescopes or binoculars.

This month we will discuss some nice open clusters.
Open clusters are groups of stars that are formed at the same time from a large cloud of dust and gas. Because of the gravity, the gas and dust collapses. This makes that new stars are born. Right after their birth, the stars are close to each other, but as time goes by, the stars will separate because of the influence of extern factors.
These factors disrupt the cluster which makes the stars travel in different directions with different speeds. An open cluster won't live very long for these reasons. After a billion years the cluster is totally resolved and the stars, which where once part of the same group, can now be found at different locations in the galaxy.
Our own sun was once part of an open cluster.

Let's start with three open clusters in the constellation Gemini.
NGC 2355 is located just ssw of a star of magnitude 8. The group, which exists of about 30 faint stars, is irregular and covers an area of 9 arc minutes. The open cluster is most concentrated in the south west. Through larger telescopes we see about 40 stars. We can see the vague shape of an 'S'.

Another nice cluster is **NGC 2395**. This object is relatively bright and counts about 40 bright stars of magnitude 9 and fainter. The group can be split into two separate sections. The first one can be found most north. It is the larger and most concentrated one. This irregular part of NGC 2395 is north / south oriented. A nice cluster to observe with small telescopes!

Collinder 89 is next on our list. This is a nice open cluster with an irregular shape. The cluster is easy to recognize. We see a lot of difference in brightness, especially at a group of stars which shapes a reversed '3'. The lower part of this '3' is brighter than the upper half. This large cluster is already a good target for binoculars.



We continue our tour at the night sky with **Collinder 107** in constellation Monoceros. This group is pretty bright and large. The cluster doesn't count much stars though. The brightest members of Collinder 107 form an obvious triangle that is 35 arc minutes large. The tip of this triangle points northwest. Here we find a star of magnitude 6.2. At the south east side we see a star of magnitude 7.1 and a star of magnitude 8 on the northeast side.

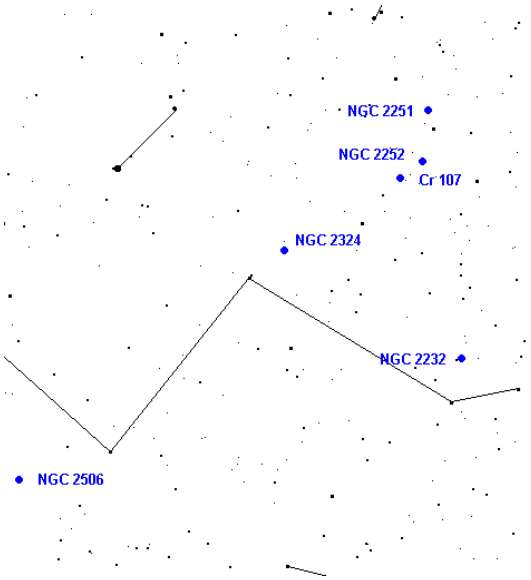
Next on our list is **NGC 2232**. This is a large, bright cluster that consists out of two parts. The first one is nnw oriented, the second one sse. This last one is the most concentrated and is fanning out in the south. The nnw group contains a curved line of stars with a magnitude of 7. The most northern star of this line is the star 9 Monocerotis with a magnitude of 6.5. This cluster is a nice and easy target for binoculars and small telescopes.

NGC 2251 is an irregular shaped cluster. We can find it at a distance of 3/4˚ of the star 14 Monocerotis. The cluster is pretty bright and large and a good object for small telescopes. Also with larger telescopes this object is really nice. With high magnifications we see some red stars among the forty members of this cluster.

A nice object for the larger telescopes is **NGC 2252**. We find it 3.4˚ northeast of NGC 2244. The cluster is easy to recognize because of its prominent shape of a Y. NGC 2252 is pretty large, irregular and loose. There are eight stars of magnitude 10 and 11. The majority of the stars have a magnitude of 11.5 or fainter.

NGC 2324 is a large, but pretty faint cluster. It's located in an area with a lot of faint little stars. Nevertheless the cluster is good to recognize and is a nice object to observe. Also in this cluster we see a "Y-shape", which consists of 7 stars of magnitude 9 to 9.5. This shape is located just northeast of the cluster itself. 22' north of the cluster we find the double star OΣΣ 82.

The last open cluster that we will observe this month in Monoceros is **NGC 2506**. This cluster is a really nice target in the middle sized and large telescopes. We see a rich, compact cluster. We see about 75 stars of magnitude 12 and fainter in a small area of 7 arc minutes. Some stars of magnitude 11 are prominent in this cluster.

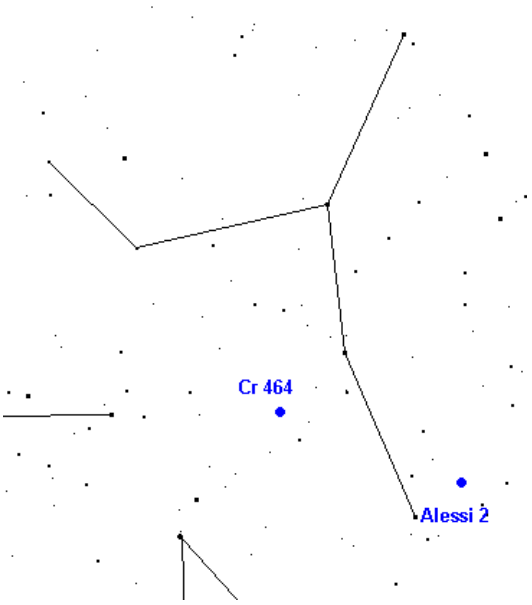


Than we continue with the constellation Camelopardalis. Here we find a more unusual open cluster: **Alessi 2**. It is a nice, rich cluster and definitely worth observing with telescopes. With a little fantasy you can recognize a doll in it.

Finally we'll discuss a real binocular target: **Collinder 464**. There are a lot of stars in this loose, irregular shaped cluster. Because of its size (120' x 120') it is best observed with binoculars or telescopes with a large field of view and a low magnification. The brightest star in this cluster has a magnitude of 5. Around that star there are four other stars of magnitude 6, eight stars of magnitude 7 and about 35 stars of magnitude 8 to 14.

That's it for this month.
Have fun observing these objects!

Demelza Ramakers (february, 28 2010)
http://www.everyoneweb.com/observingthenightsky/



Sterren-beeld	Object	Type	Magn.	Grootte/sep	RA	Dec.
Gemini	NGC 2355	Open cluster	8.7	9.0’ x 9.0’	07h16m59s	13°45'
Gemini	NGC 2395	Open cluster	8.0	12’ x 12’	07h27m13s	13°36'
Gemini	Cr 89	Open cluster	5.7	35’ x 35’	06h18m00s	23°38’
Monoceros	Cr 107	Open cluster	5.4	35’ x 35’	06h37m42s	04°45'
Monoceros	NGC 2232	Open cluster	3.9	30’ x 30’	06h28m01s	-04°51'
Monoceros	NGC 2251	Open cluster	7.3	10’ x 10’	06h34m38s	08°22
Monoceros	NGC 2252	Open cluster	7.7	20’ x 20’	06h34m43s	05°22’
Monoceros	NGC 2324	Open cluster	8.4	8’ x 8’	07h04m08s	01°03'
Monoceros	NGC 2506	Open cluster	7.6	7’ x 7’	08h00m02s	-10°46'
Camelop.	Alessi 2	Open cluster	7.0	30’ x 30’	04h46m02s	55°12'
Camelop.	Cr 464	Open cluster	4.2	120’ x 120’	05h22m24s	73°17'