

# Deepsky Beauties: November 2009

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

Wintertime has started and announces the start of a new observing season. The nights will last longer and starts earlier, so we have more time for observing the nightly sky. This month we will highlight some nice objects in the constellations Andromeda, Triangulum and Perseus.

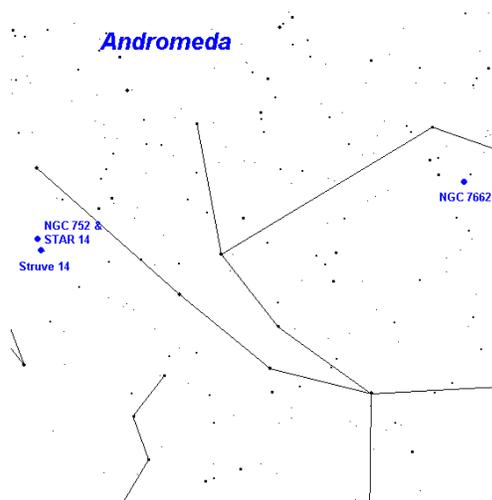
Let's start with a nice optical double star in Andromeda: **Struve 14**. This is a wide pair southwest of the open cluster NGC 752. Both stars have a beautiful golden colour. The main star is located at a distance of 360 light years from earth, its companion at 1.200 light years.

We continue with a special asterism, named **The Golf Putter**, or STAR 14. The Golf Putter looks a bit like Kemble's Cascade. You'll see a long line of stars with a cluster on its end. The wreath ends with a bow. The open cluster NGC 752 forms the golf ball. Because this is a relatively large asterism, its best observed with binoculars or telescopes with a large field of view.

Draw a line between the stars  $\alpha$  in Triangulum and  $\gamma$  in Andromeda. At about  $1/3^\circ$  distance of this line (counted from Almach) you'll find NGC 752, the golf ball.

Then we aim our scopes at the cluster **NGC 752**, the golf ball of the Golf Putter. The irregular shaped open star cluster stands out nicely from its background. Apart from a few stars, the cluster exists namely out of sixty faint stars. Within NGC 752 there are a lot of double stars and condensations of stars. NNE of the cluster the double star Struve 14 is located. The cluster is best observed with binoculars. You can capture the three objects (Struve 14, STAR 14 and NGC 752) in one field of view.

The last gem in Andromeda that we will discuss this month is the beautiful **Blue Snowball**, NGC 7662. Small telescopes reveal a star with a fuzzy glow around it. A 15cm telescope with a magnification of about 100x will show a round nebula with a bluish glow. Can't see the blue colour? Then try a UHC- or OIII-filter. You'll see a bright blue nebula.



Let's continue with the constellation Perseus. Here we find a nice double star that reminds a lot of observers of a fainter Albireo: **Struve 307** (Eta Persei). The main star has a magnitude of 3.8 while its companion has a magnitude of 8.5 so it has a nice contrast. But not only in brightness, also the colour of the stars are different. The system exists of an orange coloured star and a blue one. The pair can already be split in small telescopes.

We'll move on with the reflection nebula **NGC 1333**. This nebula is located at a distance of 1.000 light years from earth, on the edge of a molecular cloud where new stars are born.

Through the middle sized telescopes there is a star of magnitude 10 visible with an oval shaped nebula around it. The brightest part of the nebula is south west of the star. North and South of the nebula we find the irregular shaped dark nebulae **Barnard 1 & 2**. All three nebulae are best seen with telescopes with an opening of 15cm or larger.

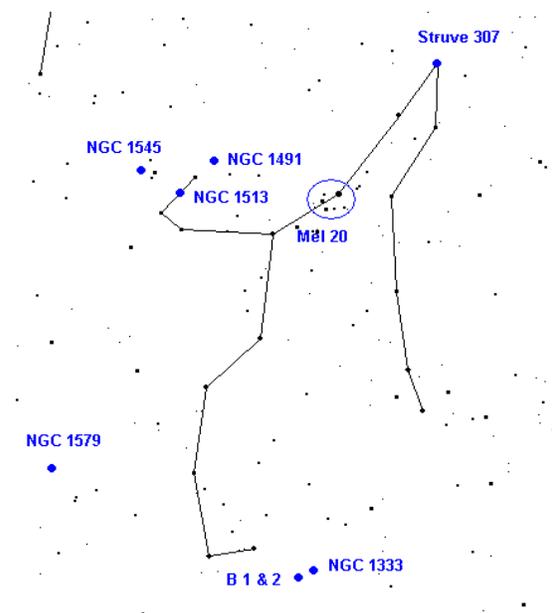
Another nice nebula is NGC 1579, nicknamed **The Northern Trifid**. This bright nebula is best observed through the some larger telescopes. East of a magnitude 7 star we'll see the irregular shaped nebula with a bright core. This nebula looks like the more famous Trifid Nebula (M20).

We continue our tour through Perseus with the well known open cluster **Melotte 20** (Collinder 39), also known as The Alpha Persei Group. This large open cluster is already visible with the naked eye, but is best observed with binoculars or through the smaller telescopes with a large field of view. Through 10x50 binoculars there are about 40 stars visible in the shape of a large 'S'. The cluster contains the stars Alpha, Delta, Epsilon, Psi, 29, 30, 34 and 48 Persei. Definitely a 'must see' in the autumn sky!

**NGC 1513** is a faint, but rich open cluster. Through the smaller telescopes there are a dozen stars visible. The stars in this cluster are sticking close to each other and with a little fantasy, you'll glimpse the number 9 (or 6 of course). Through the larger telescopes there are more loose stars visible, but the cluster remains relatively faint. Nevertheless it is a nice object to look for!

We move on to another open star cluster: **NGC 1545**. This object is also relatively faint. Through small telescopes there is an obvious triangle visible. Around this triangle there are lots of faint stars that sparkle nicely. At higher magnifications there are much more faint stars visible. Stephen O' Meara calls this cluster in his book 'Hidden Treasures' also the Running Man Cluster. I couldn't spot the figure. Can you?

The last object in Perseus this month that we're going to observe is the emission nebula **NGC 1491**. Underneath a good, dark sky, this nebula is already visible through the small telescopes as a fuzzy area. Just east of the nebula we find an 11<sup>th</sup> magnitude star. Through larger telescopes you'll see that the nebula is irregular shaped and has the shape of a fan. With an OIII- or UHC-filter the nebula is much better visible and looks triangular.

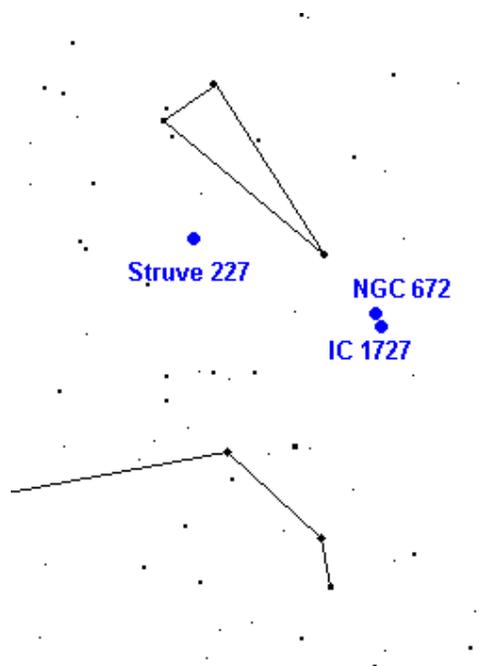


We'll move on to the constellation Triangulum. In first sight, this constellation maybe looks uninteresting if it comes to deep sky, but think again.

Let's aim our telescopes to the beautiful, narrow double star **Struve 227** (Iota Trianguli). Through the small scopes we see at first a golden star. With higher magnifications the star can be split into two components of which the primary is a magnitude 5.3 star and its companion is of magnitude 6.7. The last called star has a lovely blue/green colour.

Another nice deep sky target in Triangulum is the galaxy **NGC 672**. From dark observing sites we see with a middle sized telescope a grayish, oval cloud with a bright, large, oval shaped core. The edges of the galaxy appear diffuse.

Only 8' southwest of NGC 672, we find the fainter galaxy **IC 1727**. This galaxy has also an elongated shape. The SWS side points in the direction of its brighter neighbour NGC 672. Both galaxies can be seen in one field of view.



We'll, that's it for this month. I hope you'll enjoy this Deepsky Beauties and have fun observing these deep sky treasures!

Demelza Ramakers (30 oktober 2009)

Const.	Object	Type	Magnitude	Size/sep	RA	Dec.
Andromeda	Struve 14	Double star	5.7 en 5.9	190"	01h56m00s	37°15'
Andromeda	STAR 14	Asterism		95' x 25'	01h52m00s	37°30'
Andromeda	NGC 752	Open cluster	5.7	50' x 50'	01h57m42s	37°47'
Andromeda	NGC 7662	Plan. nebula	9.4	17" x 17"	23h25m54s	42°32'
Perseus	Struve 307	Double star	3.8 en 8.5	28"	02h51m00s	55°54'
Perseus	NGC 1333	Refl. nebula		60' x 20'	03h29m00s	31°25'
Perseus	Barnard 1 & 2	Dark nebula		160'	03h32m06s	31°10'
Perseus	NGC 1579	Refl. nebula		3.0' x 1.0'	04h30m12s	35°16'
Perseus	Melotte 20	Open cluster	2.3	185' x 185'	03h22m06s	48°37'
Perseus	NGC 1513	Open cluster	8.4	9.0' x 9.0'	04h09m55s	49°31'
Perseus	NGC 1545	Open cluster	6.2	18' x 18'	04h20m56s	50°15'
Perseus	NGC 1491	Nebula		18' x 12'	04h03m12s	51°20'
Triangulum	Struve 227	Double star	5.3 & 6.7	4 "	02h12m00s	30°18'
Triangulum	NGC 672	Galaxy	10.6	7.5' x 2.6'	01h47m54s	27°26'
Triangulum	IC 1727	Galaxy	11.4	7.1' x 2.8'	01h47m30s	27°20'