

Observing Notes for the DSTS 2006 Small Scope Observing List **

Object	Notes
NGC 188	One of the oldest open clusters known. It's age is estimated to be around 9 billion years. Fairly faint so this might be tough in small scopes. This cluster is about 5000 ly away
NGC 7789	Said to be a major omission in Messier's catalog. This cluster is around 5900 ly away. There are several hundred 11th mag or fainter stars spread over a half a degree.
Iota Cas	A lovely triple star with white primary and yellow and blue companions. The closer pair is separated by 2.7" and has an orbital period of 840 years. The triple is about 140 ly away from us.
NGC 581	M 103 is a triangular wedge of stars about 8500 ly away. This is one of the most remote clusters in Messier's catalog.
NGC 650-1	The "Little Dumbbell" is one of the dimmest objects in Messier's catalog. Each lobe of this object has its own NGC number. Like most planetaries, its distance is uncertain with estimates ranging between 1,700 and 15,000 ly.
Eta Per	This double shows a beautiful color contrast of gold and blue. The two stars are separated by 28.3" and lie about 1300 ly from us.
30 Tau	This double is an unequally bright pair of bluish-white and reddish stars. They are around 570 ly away from us.
NGC 1333	NGC 1333 is a small reflection nebula in Perseus. There is a bright star at its NE tip. To the north and south of the nebula are the dark dust clouds Barnard 1 & 2.
NGC 1502	This nice cluster stands at the end of a chain of 8th magnitude stars known as Kemble's Cascade. The star chain is best viewed with binoculars. The cluster is about 3200 ly away.
NGC 1501	This planetary in Camelopardalis is bright, large and round. It is somewhat reminiscent of the Eskimo Nebula in Gemini. Its distance is believed to be around 4900 ly.
NGC 1857	This nice small cluster of about 3 dozen stars lies about 6200 ly away. This would place it in the outer Perseus arm almost directly opposite the center of the galaxy.
Sigma Ori	Sigma is a quadruple star with a white primary and three bluish companions. The two brighter companions are not physically associated with the primary.
NGC 2158	This cluster is in the same low power field as M 35. However, it is 13,000 ly away, making it 6 times farther than M 35 and one of the most remote clusters visible in small scopes. It may even be in the outermost arm of our galaxy.
NGC 2169	This is the "37" cluster, so named because the brightest stars spell out the number 37. It lies 3700 ly from us.
Beta Mon	Beta Monocerotis is a magnificent triple of three almost equally bright blue-white stars. The system is around 700 ly away.
NGC 2237-39	The Rosette nebula is an emission nebula surrounding the open cluster NGC 2244. This one is best viewed at low power with a nebula filter in place. It is over 1 degree in diameter and is estimated to be 4900 ly from us.
NGC 2264	This cluster is easily seen in small scopes. Called the "Christmas Tree" cluster because of its triangular shape with a bright star at its base. The Cone nebula lies just south of the Tree's tip but is visible only as a star poor region. 2500 ly away.
NGC 2266	This is a highly compressed grouping of around 50 stars arranged in a triangular shape. It is an old cluster (> 1 billion yrs) and is also very far away at a distance of 11,000 ly.
NGC 2301	NGC 2301 consists of around 80 stars aligned in a predominately north/south direction. Best estimates are that it lies about 2,500 ly from us.
h3945	This double star in Canis Major has been called the "Winter Alberio" because of the intense orange and blue colors of its components. This beautiful double is over 300 ly away from us.

** Information for these notes was gleaned from the *Night Sky Observers Guide* by Kempfle and Sanner, *Star Clusters* by Archinal and Hynes, and the *SEDS* web site.

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NGC 2362	This nice little cluster is just south of the double star h3945 mentioned above. The grouping surrounds the 4th magnitude star Tau Canis Majoris. This cluster is very young with an estimated age of around 1 million years. It is about 5,100 ly away.
NGC 2392	What cruise down the winter Milky Way would be complete without looking at the Eskimo nebula. Note the bright round, bluish disk surrounding the conspicuous 10.5 magnitude central star. Its distance is unknown, but sometimes estimated at 3000 ly.
Alpha Gem	Castor, the second brightest star in Gemini, is a double with the components separated by 4". The orbital period is around 400 years. A 8.8 magnitude red dwarf 73" from the bright pair also seems to be a part of the system and is designated Castor C.
NGC 2438	This planetary nebula appears embedded in the M 46 open cluster. However it is a foreground object with distance 3,300 light years to M46's 5,000. You'll need around 100x to see the planetary as a disk rather than an a fuzzy star.
NGC 2451	NGC 2451 is a bright, coarse cluster of perhaps 30 stars surrounding c Puppis. It is one of the nearest open clusters at only 710 ly. Its nearness explains how coarse it looks.
NGC 2477	The most southerly object on our list, NGC 2477 needs a location like DSTS to be seen well. It consists of around 100 stars in an elongated N/S configuration. It is believed to be about 4,200 ly away from us.
NGC 2539	This large, bright and rich cluster consists of around 100 stars, magnitude 9 or fainter. The bright star 19 Puppis on the SE edge is not a true member of the cluster. The grouping is around 4,000 ly away.

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