

SPACEWATCH

the newsletter of the Abingdon Astronomical Society

December 2002

“The Glory of Star Clusters”

by Guy Hurst (The Astronomer & BAA)

The Earth is the closest it gets to the Sun on January 4th. Bear that in mind if you are out in the cold that day. The solstice occurs on 22nd December at 01hr 14 min UT and the nights start getting shorter again, so make the most of any clear ones.

The Night Sky this Month

The Planets:

Venus and Mars

Both are still in the morning sky but the late sunrise at this time of year means many of you are up and about before it gets light. Look towards the south east and you will see a very bright -4.5 magnitude 'star' and that is Venus. Close to it, but much fainter (but still fairly easily visible if the sky is still dark) is another, reddish, 'star' and that is Mars. Try and have a look on the morning of 30th December as the crescent Moon will be very close to Mars and Venus which should be an excellent sight.

Jupiter and Saturn

Both of these bright planets are moving into the evening sky now, Saturn in Taurus and Jupiter in Cancer/Leo. A particularly unusual event occurs during early January involving Saturn and the Crab Nebula. On the night of January 4th/5th, Saturn actually crosses over M1, the Crab Nebula. The planet will be very close to the Crab for the weeks before, and the week after, the night of the 4th/5th. It will probably be very difficult to see the Crab as Saturn passes over it because Saturn's bright light will drown out the nebula. The challenge will be to find out how much of the nebula you can see. The Crab will be hard to see even as Saturn approaches it because of the glare, but have a go and see what is visible. This is a rare event so do try to make the effort to see it during the fortnight.

Meteors:

Geminids - this bright and active shower is visible from December 7th to 16th, and maximum night is on December 13th/14th. Unfortunately, there is a bright Moon until about 2.00am so the best views will not be until the early hours of the 14th. A few bright meteors (and the Geminids usually has a high proportion of bright meteors) may be visible against the moonlight on the evening of the 13th.

Quadrantids - This is another active shower visible from January 1st to 6th. Maximum is on the night of the 3rd/4th but it is really an early morning shower as very few will appear in the evening sky. They tend to be faint meteors but the rates do often approach 100 an hour. There is no Moon to spoil the show but wrap up warm if you give it a try as a clear January night will almost certainly be cold and frosty by dawn.

Lunar Occultations:

There are two interesting lunar occultations to watch out for this session. The first is on 20th December at 17hr 29 min when the bright star Epsilon Gemini (mag 3.1) will reappear from behind the Moon at PA 284 degrees. The second is the next day (21st) at 18hr 36 min when another bright star, mag 3.6 Kappa Gemini also reappears from behind the Moon's dark limb at PA 274 degrees. Watching for stars reappearing from behind the Moon is a little bit harder than watching them disappear, but these two events involve bright stars so the task is much easier. If you have never watched reappearances, then these are ideal opportunities to give it a go. Incidentally, the Moon will be very low on both days so you will need a good clear eastern horizon. Oh yes, and a clear sky. [What's that? Ed.]

Moon Phases:

New: 4th Dec.; First Qrtr: 11th Dec.; Full: 19th Dec.; Last Qrtr: 27th Dec.; New: 2nd Jan.

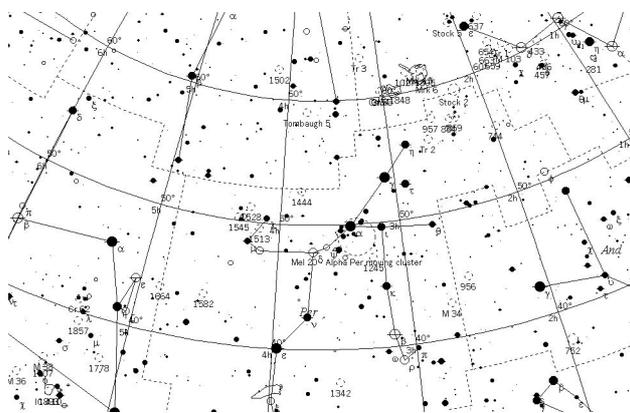
This month's Deep Sky Object

By Paul Warren

This month's DSO is an open cluster in Perseus, but it isn't M34 as you might expect it to be, instead it is NGC-1528. Open clusters abound at this time of year, and despite this cluster not being in Charles Messier's famous catalogue, yet this is a fine open cluster indeed, surpassing quite a few of the rather better known clusters in the Messier catalogue.

I make it a point to “explore” constellations whenever I go out observing. Now, by exploring, I mean that I consult a guide book, a star chart or whatever and look out for anything that I think I have a chance of spotting with my telescope. I stumbled across NGC-1528 in precisely this manner.

If you consult Burnham’s Celestial Handbook, you will find an entry for this cluster, but you won’t find any descriptive text or commentary on it. This a first impression might be that it’s nothing to get excited over. But you won’t know until you go out and look for yourself. This is the exploring, or discovering, that I like so much.



It’s fairly straightforward to find, and is fairly obvious in binoculars. If you look at the diagram for it, you’ll see that it is located in the area that reminds me of the tail or sting of Scorpius. Alternatively, locate γ Per in your finderscope, and then move in Right Ascension to the general area of the cluster. It shows up very easily in a finderscope.

NGC-1528 consists of about 80 stars, with a total magnitude of about 6. The individual stars themselves are magnitude 7 and fainter. The cluster is estimated to be about 2,500 light-years away.

When it comes to observing open clusters, I sometimes associate them with a particular shape by “joining the dots” in my mind. With this cluster, I very definitely see a grazing dinosaur. The dinosaur has a sail on its back and has a longish neck. It’s not so obvious to see when you look at a photograph, so I have included a sketch that I made of the cluster on Wednesday evening. The head is on the right hand side, and the legs and tail on the left hand side. There are a few more stars in the cluster, and the reason why I haven’t shown them is that it’s impossible to sketch when your fingers have frozen solid! Still, I hope that the sketch conveys my impression of it.



What surprises me a little is why I haven’t seen the nickname of “The Dinosaur Cluster” before. Astronomers are usually fairly good at giving nicknames to deep sky objects.

So here’s a little job for those of you with telescopes: on the next clear night, go out and track down this cluster and see what shape you see in it. I’ll be very interested to know how you perceive this lovely cluster to be.

FURTHER DISCUSSION

The society’s e-mailing list is used by members to comment on all things astronomical, as well as other related and not-so-related subjects.

The list is also used to publicise “first-clear-night” observing evenings and for alerting members to hot observing news.

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DATES FOR YOUR DIARY

16th Dec.: 8pm. Beginners’ Meeting in the Perry Room.

13th Jan.: 8pm. “Stellar Evolution” by Dr Pam Spence (Ed. Encyclopedia of Astronomy&Astrophysics).

20th Jan.: 8pm. Beginners’ Meeting in the Perry Room.

The editor of “SpaceWatch” is Andrew Ramsey, who would very much appreciate your help and contributions. Please send any news, observations, photos, etc. to:
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