



Observing Special Interest Group Session 8 – March 17, 2021

INTRODUCTION

Welcome everybody to the TAS March Observer's Special Interest Group meeting. We hope you are well and have been able to do some astronomy lately. I am still stuck in the house but have had my first COVID shot, so if the skies would just clear up I'm anxious to get out. The weather is warming and galaxies and globular clusters will soon appear. This month we have a full program for you so let's get started.

Are there any questions that have come up about observing that we could answer for you? Have any of you observed objects that you would like to share with the group.

I would like to recognize a member who has completed the honorary Messier certificate. Kathy Wideman took her time but in the end, after many years, she has finished the job and we are all very proud of you. Note there are no time limits on these programs so start one and work on it when you get time.

Now it is time for the "Chaz". ¿Waz Up hombre?

March Observing Objects. This month I have chosen Gemini, which is very well placed in the sky at this time and has a number of beautiful objects. It would be helpful if you would print out this list so you can follow along better with the discussion. If you have questions as we proceed, use the Zoom chat or raise hand and we will try to answer them.

Best Regards,

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MARCH OBJECTS IN GEMINI

First of all, March is the Messier Marathon month. This year the moon interferes with the marathon. Normally, the last weekend of March is the time for the marathon, but for this month, that is exactly the time of the full moon. It will greatly affect viewing. The history of the Messier Marathon is interesting, as is the biography of Charles Messier. So, this would make for some interesting reading on cloudy nights.

Messier 35 is a fantastic open cluster in Gemini. This cluster is the optical definition of an open cluster. Bright at mag 5.1 it can almost be seen with the naked eye at a very dark site. The cluster contains over 100 stars brighter than 14th magnitude, in an area of 30 arc minutes and can be seen clearly in telescopes as small as 3 inches. Groups, chains and loops abound in this beautiful object. Look for it above the toes of the western twin. RA 06h 10m 13s/DEC +24° 20'. While you're there, look for a glow of light just to the SSW. This is another open cluster NGC2158 that is more than five times further away than M35. If you have a larger scope, see if you can resolve some of these faint stars.

While we are in the neighborhood let's take a quick look at **6 Gem/HR2197**. This is a reddish variable star that is 5.6 mag and can dim to as little as 8.1. Its period is unknown so maybe, if you're patient, you could help determine its cycle. 6 Gem is a very red supergiant, temperature 3495° K, 39% cooler than the sun and is 618 times bigger than our sun. It has a total of 16 solar masses and I believe that it is a carbon class star.

Next, let's move to the **Eskimo Nebula, NGC 2392** or Caldwell 39. Located at RA 07h30m 27s/DEC +20°51'53" which is about 2&1/2° east of Delta Gem in the eastern leg of the twins. This object is a 9.2 mag planetary nebula that appears turquoise in small scopes at low power and bluish in large scopes. At 150x in a 6" SCT one can see the 10th mag. center white dwarf star HD59088 and some mottling which suggests lots of structure. In large scopes of 18" and more, one can see concentric rings and what appears to be a fuzzy collar.

Castor/ Alpha Gem is a 1st mag star that makes up the west shoulder of the twins. Castor is one of the most complex stars in the sky. Not only is it a bright double but is actually six inter-related stars, three sets of doubles, all orbiting one another. The three primary stars here are Castor A, B, & C, (which is also, designated YY). All three of these stars can be seen easily but their secondary stars are all much too close to be detected visually. From Castor A, to Castor B is only 5" to the NE. B is also very bright at 2.97 magnitude. Both of these look white without other noticeable features. Castor C or YY Gem is quite different. "This star is a "red dwarf" lying 73" to the south. The primary of this pair is 9.8 mag and will appear more orange than red.

One last note for this month, **Pollux**, the other 1st magnitude star in Gemini, is still the only naked eye star to have exoplanet as far as I know. So when you look at Pollux, imagine the super sized Jupiter that orbits it.

There are many other interesting objects and stars in Gemini. Get yourself a chart and start tracking them down.

eAtlas, eChart, eObservingList and other resources for observers of the Night Sky - Gary J. Carter

Atlases

- <http://takitoshimi.starfree.jp/atlas/atlas.htm>
- <http://www.deepskywatch.com/deep-sky-hunter-atlas.html>
- https://ia902605.us.archive.org/25/items/Mag_7_Star_Atlas/Mag_7_Star_Atlas.pdf

Charts

- <https://freestarcharts.com>
- <https://sherwood-observatory.org.uk/astronomy/finder-charts/messier-finders>
- <https://sherwood-observatory.org.uk/astronomy/finder-charts/caldwell-finders>
- <https://sherwood-observatory.org.uk/astronomy/finder-charts/misc-deep-sky-finders>

Double Stars

- <http://users.compaqnet.be/doublestars/>
- <https://www.stelledoppie.it/index2.php>
- <https://astro.catshill.com/top-500-binary-stars/>

Resources

- <http://stars.astro.illinois.edu/sow/sowlist.html>
- <https://sherwood-observatory.org.uk>
- <http://takitoshimi.starfree.jp>
- <http://www.custerobservatory.org/resources.html>
- <http://www.deepskywatch.com/deepsky-guide.html>
- http://www.astrosurf.com/mmorin/finest_ngc_en.html
- <http://faintfuzzies.com/DownloadableObservingGuides2.htm>