

CONSTELLATION *addendum . . .*

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Scott Petersen, editor © BMAA 2 016

Observing Report

The Iconic Horse Head Nebula . . .

– *by Igor Peshenko*



February 5, 2016 Lake Nockamixon, PA

Orion ED80T CF Triplet Apochromatic Refractor with Astro-Tech AT2FF field flattener; Astronomik UHC filter + Baader UV/IR cut filter, Celestron AVX mount, Canon EOS 1100D (Digital Rebel T3) full spectrum, cooled - EXIF temperature -5 to -11C, 29 x 5 min ISO 800. Processing: IRIS v. 5.59 and Photoshop CS2

Regards, Igor

- *BMAA member Igor Peshenko is an active astrophotographer [-ed]*

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February Observing Challenge

- by *Bernie Kosher*

Jupiter is now rising in mid evening. Tonight it rises about 7:50p and at 10:00p the GRS transits while Jupiter is 25 degrees high. Have you seen it yet? Give it a try. Please let me know your results, even if not seen. You will probably not see it on first glance. Try for several minutes.

Challenge one.....when will the GRS transit the next night? How about the second night following?

Two.....find and draw, as Dwight demonstrated so well last meeting, M78. Tell me your initial impression of its appearance.

Three...." " " etc M79. What instrument and what do you see?

Thanks and enjoy.....

PS: GRS= Great Red Spot. With a good scope on a decent night I would classify it as moderately difficult but well within reach of a good 80mm refractor. My 8" Newt shows it easily. Try about 150x. If the night will stand the magnification you will see more detail than you can draw. Really.

- *BMAA member Bernie Kosher occasionally provides these challenges* [-ed]

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Bucks-Mont Astronomical Association, Inc

General Meeting Minutes

February 2016

Location: Upper Dublin Lutheran Church, 411 Susquehanna Road, Ambler PA 19002

Meeting called to order by Dwight Dulsky at 7:30p. In attendance: 10 members, 3 guests

Officers present: Dwight Dulsky (co-president), Robert Mittel-Carey (secretary)

- Robert discussed the Thank You Letter received from Jarrett Nature Center regarding the telescope donated by the club.
- Dwight announced that the 2016 Star Watch schedule is almost complete. Including the planned May 9th Mercury Transit to be viewed from Lower Nike Park. Several other locations were discussed for possible star watches.
- Dwight also discussed the Astronomy 101 program he is running at Wesley Enhanced Living in Doylestown, and the May 10th Intro to Astronomy at the Ambler Library.
- Annual club picnic/star watch set for July 30th.
- Additional announcements: Kutztown Univ Planetarium Programs, NEAF April 9-10.

➤ **Main topic: Astronomical Sketching**

Presentation and discussion, with slide show, presented by Dwight followed by hands-on workshop sketching several astronomical objects from photographs.

Respectfully submitted,
Robert Mittel-Carey, secretary

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March Observing Challenge

- by *Bernie Kosher*

1. Jupiter is currently about 44 arc seconds in size. What is the size of Earth from Jupiter? Of Earth's moon? Of the moon separation at maximum? Approximations are fine.
2. Observe M35 and M38 on a clear dark night with at least an 8". Sweep around them very carefully. What did you see? Please make a simple sketch if possible.
3. Try tracing the Winter Milky Way. Don't look at a chart first. Learn by observing.
4. What constellations are rising at sundown?
5. One of the least observed galaxies bright and large enough to be a fine Messier object is in Camelopardalis. It is now at its highest. What is its NGC number and try to observe it.

- *BMAA member Bernie Kosher occasionally provides these challenges* [-ed]

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Bucks-Mont Astronomical Association, Inc **General Meeting Minutes** **March 2016**

Location: Upper Dublin Lutheran Church, 411 Susquehanna Road, Ambler PA 19002

Meeting called to order by Gary Sprague at 7:30p. In attendance: 27 members and guests

Officers present: Gary Sprague and Dwight Dulsky (co-presidents), Lee Zager (vice-president), Robert Mittel-Carey (secretary)

- Presented on projector: calendar of events March – May, star watches May – September
- Dwight and Lee briefly discussed outreach programs.
- Dwight detailed solar filter project.
- Highlighted Igor's photos of the Horsehead Nebula, and M44(Beehive)
- Igor presented additional photos of the Bubble Nebula (2), the California Nebula, and the Flaming Star Nebula.
- Bernie discussed his February and March observing challenges.

➤ **Main topic: Remote Observing/Viewing**

Howard detailed his remote roll-top observatory with an excellent supporting slide show.

Respectfully submitted,
Robert Mittel-Carey, secretary

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The Closest New Stars To Earth

- by *Ethan Siegel*

When you think about the new stars forming in the Milky Way, you probably think of the giant star-forming regions like the Orion Nebula, containing thousands of new stars with light so bright it's visible to the naked eye. At over 400 parsecs (1,300 light years) distant, it's one of the most spectacular sights in the night sky, and the vast majority of the light from galaxies originates from nebulae like this one. But its great luminosity and relative proximity makes it easy to overlook the fact that there are a slew of much closer star-forming regions than the Orion Nebula; they're just much, much fainter.

If you get a collapsing molecular cloud many hundreds of thousands (or more) times the mass of our sun, you'll get a nebula like Orion. But if your cloud is only a few thousand times the sun's mass, it's going to be much fainter. In most instances, the clumps of matter within will grow slowly, the neutral matter will block more light than it reflects or emits, and only a tiny fraction of the stars that form will be visible at all. Between just 400 and 500 light years away are the closest such regions to Earth: the molecular clouds in the constellations of Chamaeleon and Corona Australis. Along with the Lupus molecular clouds (about 600 light years distant), these dark, light-blocking patches are virtually unknown to most sky watchers in the northern hemisphere, as they're all southern hemisphere objects.

In visible light, these clouds appear predominantly as dark patches, obscuring and reddening the light of background stars. In the infrared, though, the gas glows brilliantly as it forms new stars inside. Combined near-infrared and visible light observations, such as those taken by the Hubble Space Telescope, can reveal the structure of the clouds as well as the young stars inside. In the Chameleon cloud, for example, there are between 200 and 300 new stars, including over 100 X-ray sources (between the Chamaeleon I and II clouds), approximately 50 T-Tauri stars and just a couple of massive, B-class stars. There's a third dark, molecular cloud (Chamaeleon III) that has not yet formed stars at all.

While the majority of new stars form in large molecular clouds, the closest new stars form in much smaller, more abundant ones. As we reach out to the most distant quasars and galaxies in the universe, remember that there are still star-forming mysteries to be solved right here in our own backyard.



Image credit: NASA and ESA Hubble Space Telescope. Acknowledgements: Kevin Luhman (Pennsylvania State University), and Judy Schmidt, of the Chamaeleon cloud and a newly-forming star within it—HH 909A—emitting narrow streams of gas from its poles.

– *Space Place is provided to local astronomy clubs by NASA [-ed]*

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