

# The Focal Point

The Atlanta Astronomy Club  
Established 1947  
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Editor: Tom Faber

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## January AAC Meeting

### (Note Meeting Date Change to 3rd Saturday!)

Please join us for the next meeting of the Atlanta Astronomy Club, to be held on Saturday, January 16th at 3PM at the Fernbank Science Center. (Note that out meetings are now held on the 3rd Saturday of the month). A short beginner's program will be presented at 2PM. Our featured speaker will be Dr. Richard W. Schmude, Jr of Gordon State College. Richard is a professor of Chemistry at Gordon.

After the talk upcoming club events and programs will be announced by the club officers.

### The Talk

Dr. Richard Schmude will present a talk about is recent brightness measurements of the Planet Mercury.

### Speaker Bio

Richard W. Schmude, Jr. was born in Washington. C. He attended public schools near or in Washington DC, Los Angeles, California and Houston, Texas. After graduating from Klein High School in 1976, he attended North Harris County College and Texas A&M University. He received his Doctorate in Physical Chemistry from Texas A&M University in 1994. Since September 1994 he has



been employed at Gordon State College as a professor of Chemistry. He is a member of the Kingston Centre of the Royal Astronomical Society - Kingston is also the city where his paternal grandmother graduated from High School. He is also a member of the Association of Lunar and Planetary Observers and the British Astronomical Society. Richard has focused much of his research on measuring the brightness of the planets in visible wavelengths. In 2014, he began carrying out J and H band (near-infrared) brightness measurements of the brighter planets.



Mercury in color taken by the MESSENGER spacecraft. NASA/Johns Hopkins University Applied Physics Laboratory/Carnegie Institution of Washington.

## From the President's Desk

By Mark Banks, AAC President

\*The elections procedure in the club by-laws has been change by a vote of the members at the December meeting. Article 6 Section 3 now reads: The May elections will be done via email. Each member will receive a ballot via email on May 1st. Members will have until May 31st to vote via return email. It is important to all members to be sure your information in the club directory is up to date so you will be able to vote.

\*Telescope Clinic: This year it will be on Jan. 16th, 10AM till 1PM at Fernbank. As usual, we need all the help we can get. We will be helping people with their newly acquired Astronomical instrument. Helping out new Astronomers with assembly and operation of their scope will go a long way in encouraging a lifetime of enjoyment of the night sky. Please come early and help if you can.

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\*The Georgia Science Teachers annual conference will be held Feb. 4th – 6th at the Stone Mountain Conference center. We will be doing a viewing event on Feb. 4th. We may also be having a discussion panel at some time during the day. This is a great opportunity for our club to connect with all of the Science teacher in Georgia. I want to donate books & magazines for the teachers. If you have any books or magazines (no older than 3 years) that you can donate please bring them to the January meeting.

\*The Planetary Society is having a Congressional lobbying blitz on Feb. 21st – 23rd in Washington D.C. This would be a great opportunity to talk to your elected representatives about how important space exploration and related science's is to the future of our country. They will provide training and make arrangement for you to meet you congressman. Please contact me for more information.

\*Other upcoming major events are Anachrocon on Feb. 26th-28th and the Atlanta Science festival March 16th thru 26th. We also have many other public events that need your help so please check the club calendar & volunteer. Please keep in mind that you don't need to be an expert because you already know much more than the general public.

## December AAC Meeting & Potluck

Photos by Tom Faber.

This month's general meeting and Holiday Potluck dinner was held on Saturday, December 12th at the Math and Science Building on the Emory University campus. There were about 50 members and guests present for the meeting.

The Holiday dinner began around 6:30PM. The Club provided turkey, ham, soft drinks, tea, and coffee. The attendees provided many tasty appetizers, side dishes, and deserts. Then around 7:45PM we went up to

the planetarium for an very entertaining talk by Jerry Armstrong about his many astronomical observations including a discovery of a supernova in M51 and a fragment of Comet P/Machholz 2, both discoveries occurring in 1994.

After the talk, there were club announcements by Club officers about upcoming events and activities.



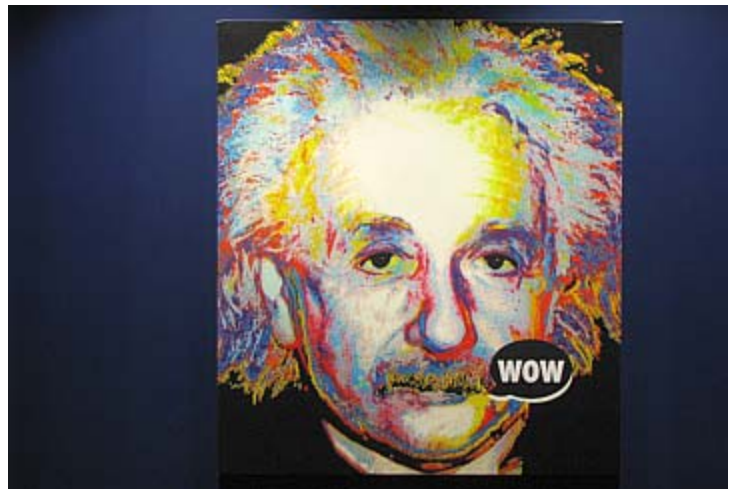
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*Our speaker, Jerry Armstrong, appears in the right column 2nd photo (left) and 3rd photo (right).*

*Even AI was impressed with Jerry's talk!*



## The Next Charlie Elliott Meeting

The next meeting of the Charlie Elliott Chapter will be held on Saturday January, 9, 2016 at 4 pm in the DINING HALL. (This is the very last building of the Charlie Elliott Conference Center complex, at the end of Elliott Trail.) Dan Llewellyn will be the featured speaker, presenting information about the new Sony A7S camera.

There will also be two astrophotography workshops on January 9th – one before and one after our meeting. For those interested in learning more about processing astro images with PixInsight, Van Macatee will hold a PixInsight workshop at 2:30 pm, prior to the meeting in the DINING HALL. On the field after the meeting, Van will hold a field workshop on auto-guiding your telescope. The equipment list for this workshop is posted on our Astrophotography page, <http://ceastronomy.org/blog/astrophotography>

At sunset we will head over to Jon Wood Astronomy Field (33.468865, -83.735319) for a night of observing, weather permitting. All are welcome. Bring your scopes, binoculars, or just bring yourself – we enjoy sharing the night sky with our guests! Be sure to arrive before 10 pm, as that is when the security gate on Elliott Trail locks to new entry.

**Minutes and Handouts:** The minutes, handouts, and presentations from past meetings of Charlie Elliott Astronomy are available for download on our Past Events web page, <http://ceastronomy.org/blog/events>. Monthly sky maps are available from [skymaps.com](http://skymaps.com).

**2016 Meeting Schedule:** January 9, February 6, March 12 (potluck), April 9, May 7, June 4 (potluck), July 9, August 6, September 10 (potluck), October 29, November 19, December 10 (potluck)

## The December Charlie Elliott Meeting

By Valorie Whalen, Charlie Elliott Chapter Recording Secretary

The December monthly meeting for the Charlie Elliott Chapter of the Atlanta Astronomy Club was held on 12/12/15 in the Campbell Aquatic Building at the Charlie Elliott Wildlife Management property in Mansfield, Georgia. There were twenty-five members and guests in attendance. This meeting was a quarterly potluck dinner event, and we enjoyed several dishes donated by members.

Jack Fitzmier, Chapter Director, called the meeting to order and welcomed everyone. Dan Thoman, Outreach Co-ordinator, mentioned several upcoming dates for outreach events, and asked for volunteers to please RSVP on the NSN website. If you would like to help out with any of these events, please be sure to note that on the events calendar.



Marie Lott, Program Chair, gave a rundown of the speakers for the next few meetings. Jack Fitzmier presented one Astronomical League program pin and certificate for completion of the Hydrogen Alpha Observing Program to David Whalen.

Van Macatee, Co-Chair for the Astrophotography Committee, gave a summary of the photography workshop that will begin after the meeting. He is hosting a series of photography workshops each meeting on the Jon Wood Observing Field. This month's workshop will be about polar alignment for equatorial mounts. Steve Siedentop also mentioned a smartphone app called "Theodolite" that will assist in locating true magnetic north. Tim Geib also mentioned the app "Scope Help" which can assist with finding true north as well. This month's astrophotography targets are: Beginners - M45, the Pleiades cluster in Taurus, and Advanced - IC405, the Flaming Star nebula in Auriga.

David Whalen, Observing Director, treated us to another energetic "All of the Above", which gives a run-down of what you can expect to see in the sky in the coming weeks. It included current weather conditions for the Jon Wood Astronomy Field, relative location of each of the planets, along



with the sun and moon, and each of their respective rise and set times. He included H-alpha photos of the Sun as of 12/12/15. Also discussed were several deep-sky targets in the categories of "Relaxing", "Intriguing", "Taxing" and a Challenge Object. The full list of targets for the month of December is available on the website.

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After David's talk, we enjoyed a holiday gift swap. Members brought wrapped astronomical related gifts to trade. After selecting your gift, you could either keep it or trade with someone else who had previously opened a gift. Great fun was had chasing a metal case with pluck foam as the sought after gift!

After the meeting, Van Macatee also gave the second in his series of photography workshops, complete with an equatorially mounted scope, and a globe for visual reference of our goal of correct polar alignment. He then collected images of the Pleiades cluster to illustrate tracking after good alignment. Attendance on the observing field was approximately 20 members and guests.

Upcoming Events:

CE Meeting: January 9th at 4:00 p.m. in the Conference Center Building.

## Images by Chuck Painter

Chuck Painter captured these images from his home near Alpharetta, GA during December 2015. These images explore some of the fainter star forming regions Auriga, about a degree and a half west of M36 and south of M38. Attached are separate images of IC417 and NGC1931, as well as a mosaic of the two objects. Each image comprises 41 X 5 minute images totaling 3 hours 25 minutes.

The equipment used was an Astrotek 8" Ritchey-Chretien on Atlas EQ-G mount, Orion Starshoot Pro one shot color camera, guided with Orion Starshoot autoguider through an Orion Short Tube 80. Image was processed with Pixinsight.



*Emission & Reflection Nebula NGC 1931*

*Bottom Left: Emission Nebula IC 417*

*Below: Mosaic of IC 417 and NGC 1931*



## Caught in the Act: Hubble Captures First-Ever Predicted Exploding Star

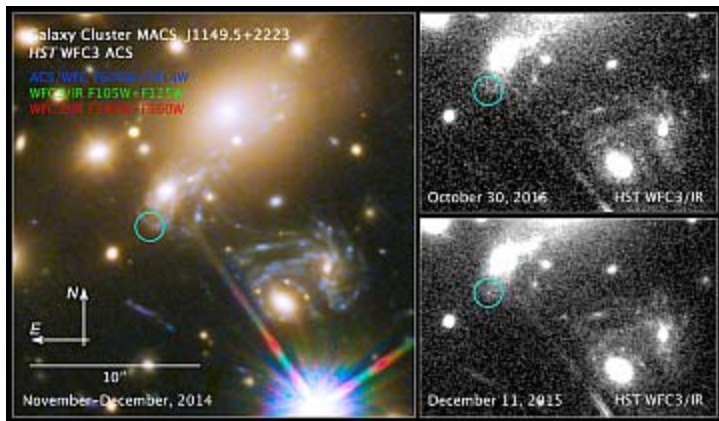
News Release Number: STScI-2015-46

December 16, 2015: Hubble has captured an image of the first-ever predicted supernova explosion. The reappearance of the supernova dubbed "Refsdal" was calculated by different mass models of a galaxy cluster whose immense gravity is warping the supernova's light as the light travels toward Earth. The supernova was previously seen in November 2014 behind the galaxy cluster MACS J1149.5+2223, part of Hubble's Frontier Fields program. Astronomers spotted four separate images of the supernova in a rare arrangement known as an Einstein Cross. This pattern was seen around a galaxy within MACS J1149.5+2223. While the light from the cluster has taken about five billion years to reach us, the supernova itself exploded much earlier, nearly 10 billion light years ago.

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The detection of Refsdal's reappearance served as a unique opportunity for astronomers to test their models of how mass — especially that of mysterious dark matter — is distributed within this galaxy cluster.

For more images and information, visit <http://www.spacetelescope.org/news/heic1525>.



Credit: NASA, ESA, and P. Kelly (University of California, Berkeley)

Acknowledgment: NASA, ESA, and S. Rodney (University of South Carolina) and the FrontierSN team; T. Treu (UCLA), P. Kelly (UC Berkeley) and the GLASS team; J. Lotz (STScI) and the Frontier Fields team; M. Postman (STScI) and the CLASH team; and Z. Levay (STScI)

Release Date: December 15, 2015

Colors: These images are composites of separate exposures acquired by the ACS and WFC3 instruments on the Hubble Space Telescope. Several filters were used to sample broad wavelength ranges. The color results from assigning different hues (colors) to each monochromatic (grayscale) image associated with an individual filter. In this case, the assigned colors are:

ACS/WFC F606W+F814W blue  
 WFC3/IR F105W+F125W green  
 WFC3/IR F140W+F160W red  
 WFC3/IR F125W+F160W grayscale

The **Atlanta Astronomy Club, Inc.**, one of the South's largest and oldest astronomical society, meets at **3:00 P.M.** on the 2nd Saturday of each month at the Fernbank Science Center in Decatur, or occasionally at other locations or times. Membership fees are **\$30** for a family or single person membership. College Students membership fee is **\$15**. These fees are for a one year membership.

Magazine subscriptions to *Sky & Telescope* or *Astronomy* can be purchased through the club for a reduced rate. The fees are **\$33** for Sky & Telescope and **\$34** for Astronomy. Renewal forms will be sent to you by the magazines. Send the renewal form along with your check to the Atlanta Astronomy Club treasurer.

**The Club address:** Atlanta Astronomy Club, Inc., P.O. Box 76155, Atlanta, GA 30358-1155. AAC Web Page: <http://www.AtlantaAstronomy.org>. Send suggestions, comments, or ideas about the website to [webmaster@AtlantaAstronomy.org](mailto:webmaster@AtlantaAstronomy.org). Also send information on upcoming observing events, meetings, and other events to the webmaster.

## Atlanta Astronomy Club Online

While this newsletter is the official information source for the Atlanta Astronomy Club, it is only up to date the day it is posted. So if you want more up to date information, go to our club's website. The website contains pictures, directions, membership applications, events updates and other information. <http://www.atlantaastronomy.org> You can also follow the AAC on Facebook by joining the AAC group, and on Twitter at <http://twitter.com/atlastro>.

### AAC Officers and Contacts

**President:** Mark Banks [President@AtlantaAstronomy.org](mailto:President@AtlantaAstronomy.org)  
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**Sidewalk Astronomy:** Brad Isley  
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**AAC Webmaster:** Daniel Herron  
[Observing@AtlantaAstronomy.org](mailto:Observing@AtlantaAstronomy.org)

# Calendar by Tom Faber (Times EDT/EST unless noted)

## AAC Events are listed in BOLD

- Jan 2nd, Saturday: Moon Last Quarter. Earth at Perihelion.
- Jan 3rd, Sunday: Quadrantid Meteors.
- Jan 4th, Monday: Latest Sunrise in Atlanta: ~7:42 AM.
- Jan 6th, Wednesday: Pluto conjunction with Sun. Moon near Venus.
- Jan 9th, Saturday: New Moon. Venus & Saturn <0.5° apart. **CE Chapter Meeting.**
- Jan 14th, Thursday: Mercury at inferior conjunction.
- Jan 16th, Saturday: Moon First Quarter. **AAC Mtg at Fernbank Science Center 3:00PM.**
- Jan 23th, Saturday: Full Moon.
- Jan 31st, Sunday: Moon Last Quarter.
- Feb 6th, Saturday: **CE Chapter Meeting.** Moon near Mercury & Venus.
- Feb 7th, Sunday: Mercury at Greatest Western Elongation. Mars at Western Quadrature.
- Feb 8th, Monday: New Moon.
- Feb 15th, Monday: Moon First Quarter.
- Feb 20th, Saturday: **AAC Mtg at Fernbank Science Center 3:00PM.**
- Feb 22nd, Monday: Full Moon.
- Feb 23rd, Tuesday: Moon near Jupiter.
- Feb 28th, Sunday: Neptune Conjunction with Sun.
- Feb 29th, Monday: Leap Year Day.
- Mar 1st, Tuesday: Moon Last Quarter.
- Mar 8th, Tuesday: New Moon. Jupiter at Opposition.
- Mar 12th, Saturday: **CE Chapter Meeting & Potluck.**
- Mar 15th, Tuesday: Moon First Quarter.
- Mar 19th, Saturday: **AAC Mtg at Fernbank Science Center 3:00PM.**
- Mar 23rd, Wednesday: Full Moon.

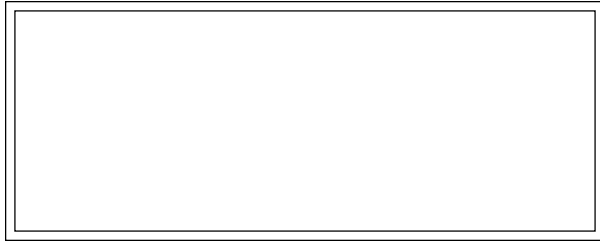
For more event listings see the calendar at [www.atlantaastronomy.org](http://www.atlantaastronomy.org)

## Atlanta Astronomy Club Listserv

Subscribe to the Atlanta Astronomy Club Mailing List: The name of the list is: AstroAtlanta. The address for messages is: [AstroAtlanta@yahoogroups.com](mailto:AstroAtlanta@yahoogroups.com) . To add a subscription, send a message to: [AstroAtlanta-subscribe@yahoogroups.com](mailto:AstroAtlanta-subscribe@yahoogroups.com) .

## Focal Point Deadline and Submission Information

Please send articles, pictures, and drawings in electronic format on anything astronomy, space, or sky related to Tom Faber at [focalpoint@atlantaastronomy.org](mailto:focalpoint@atlantaastronomy.org). Please send images separate from articles, not embedded in them. Articles are preferred as plain text files but Word documents or PDFs are okay. You can submit articles anytime up to the deadline. **The deadline for February is Saturday, January 23. Submissions after the deadline will go in the following issue.**



FIRST CLASS



[www.betagg.com](http://www.betagg.com)



We're here to help! Here's how to reach us:

Newsletter of The Atlanta Astronomy Club, Inc.



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