



STAR FIELDS

Newsletter of the
Amateur Telescope Makers of Boston
Including the Bond Astronomical Club
Established in 1934
In the Interest of Telescope Making & Using

Vol. 30, No. 1 January 2018

This Month's Meeting . . .

Thursday, January 11th, 2018 at 8:00 PM
Phillips Auditorium

Harvard-Smithsonian Center for Astrophysics

Parking at the CfA is allowed for the duration of the meeting

Observing Satellites



ISS Pass. August 11, 2013. Image by Al Takeda.

At our January meeting, Richard Nugent will present "Observing Satellites". Every astronomer has from time to time noticed satellites crossing the night skies. From the dawn of the Space Age until now, low earth orbit has become quite cluttered with these easily observable and fascinating objects. Whether you are a beginner or a more seasoned amateur astronomer, this talk offers something for everyone. Topics include: observing basics, oldies but goodies, the ISS, the more challenging geostationary satellites, and Apps and web sites to make observing satellites fun and exciting.

Rich needs no introduction, especially if you're a regular at ATMoB observing sessions at the Clubhouse observing field in Westford where he is a regular participant. He has been an avid stargazer for the last 50 years. Growing up in the 60's made it easy to become interested in astronomy and the space program.

By the time Rich was in high school, he was a member of the Aldrich Astronomical Society and could be found observing nightly with his 8-inch reflecting telescope. He still has that telescope (and many others) but is now more likely to be scanning the skies with his 20-inch Dobsonian. Rich has been a member of the Amateur Telescope Makers of Boston for 25 years and is now devoting much of his retirement time (from teaching astronomy and chemistry at Framingham High School) to his beloved astronomy.

Please join us for a pre-meeting dinner discussion at House of Chang, 282 Concord Ave., Cambridge, MA. at 6:00 pm before the meeting.

President's Message . . .

Happy New Year! We experience a lot of emotions at this time of year – some, unfortunately, on the negative side. First is the disquieting realization that another year has flown by – far faster than we'd like. Looking ahead to a new year may be daunting. What worldwide or national crises will we have to deal with? Will we suffer setbacks in our health or financial situations? What about family and friends?

Back in my younger days, I asked a rather sprightly octogenarian how he navigated through the travails of life – particularly old age. His response was simple and straightforward. Have something positive to look forward to. Instead of dwelling on past and future bumps in the road, anticipate the good things that lie ahead. As astronomy enthusiasts, we have plenty of those in the bank.

Last month, I mentioned some noteworthy astronomical events we can anticipate in 2018. The New Year may bring some unexpected cosmic surprises. It's been a long time since the last bright naked eye comet graced our skies. Will this be the year? Will a bright nova or (dare we hope) supernova erupt in our galaxy? What astounding astronomical discoveries will excite the armchair astronomer in all of us?

As ATMoB members, we can add numerous on-the-ground astronomy-related happenings. We'll have 11 monthly meetings where we can get together to catch up on things and hear about the latest astronomical news. The backyard astronomers in our ranks can count on regularly scheduled group observing sessions at the Clubhouse field. A Saturday mirror-grinding session at the club workshop is something to look forward to. And don't forget our annual ATMoB picnic and New Year's parties.

Outside of ATMoB activities there are annual astronomy conventions. To that end I've already circled August 9-12 (Stellafane!!!) on my calendar. We also have NEAF, the Astronomer's Conjunction, and AstroAssembly to look forward to.

Don't fret over the cloudy nights 2018 may bring. If you're an astronomy enthusiast and ATMoB member, you have a lot of positive things to look forward to.

Clear Skies in 2018,

~ Glenn Chaple – President ~

December Meeting Minutes . . .



Peter Scherff *

Summary of the ATMoB meeting held on December 14, 2017 at the Harvard-Smithsonian Center for Astrophysics in the Phillips Auditorium. Club President Glenn Chaple called the meeting to order at 8:00 pm.

- Phil Levine read the Secretary's Report
- Eileen Myers presented the Treasurer's Report
- Chris Elledge presented the Membership Report
- Glenn Chaple presented the Observing Report.
The Geminid meteor shower peaks during December 13-14

December 30 the Moon occults Aldebaran

January 7 Jupiter and Mars will appear 0.2 degrees apart in the morning sky

January 11 a waning crescent Moon joins Jupiter and Mars.

Glenn and Richard Nugent discussed the path of asteroid 3200 Phaethon

The LVAS Challenge object of the month is NGC 925

The Sue French object of the month is NGC 457

The ATMoB Member Picks of the Month from Maria Batista are M81, M82

- Steve Clougherty presented the Clubhouse Report outlining the many accomplishments at our recent Clubhouse work parties.
- Announcements:
Stella Kafka, President of the AAVSO, made a surprise award presentation to ATMoB member Mario Motto. Mario was presented with a beautiful plaque as the recipient of the AAVSO's William Tyler Olcott Award. This award is presented to a member of the AAVSO organization for

outstanding contributions in mentoring/promoting variable star astronomy.

<https://www.aavso.org/william-tyler-olcott-distinguished-service-award>



AAVSO Award Presentation. (L-R) Stella Kafka and Mario Motta *

Phil Levine informed the membership about a new binocular book by accomplished optical author William J. Cook, entitled *Binoculars: Fallacy & Fact*. It is available at Amazon.

Chris Elledge mentioned that Tim Leonard is conducting an Intro. to Astronomy Course at the Prescott Community Center in Groton this Spring. Tim is seeking ATMoB member assistance to have observing sessions at the Westford Clubhouse to complement his teaching course.

Chris also informed the membership that he is making copies available, for \$1 each, of the video recording of the September total solar eclipse ATMoB meeting. Contact Chris if you are interested.

Eileen Myers discussed the upcoming ATMoB New Year's Eve Party. She indicated that volunteers are needed to help setup and decorate the Clubhouse. As always, a festive event is planned with good food, merriment, fiddle playing, line dancing, and hourly New Year's celebrations.

Eileen also mentioned that a Star Party is to be held at her synagogue in Acton on Saturday, January 6th. This event will be attended by many children of various ages. Volunteers are welcome. (*Editor: This event has been postponed to March.*)

The next ATMoB Executive Board Meeting will be held at the Westford Clubhouse on January 18th starting at 7 pm.

- Old Business:
Eileen Myers mentioned that two ATMoB members who ordered RASC Observers Handbooks still have not picked them up.
- New Business:
John Reed informed the membership that many 2017 total eclipse patches are available for purchase at \$6 each. See John if you would like to purchase one.

The guest speaker for the evening was Peter Scherff. His talk was entitled "Meteorites 101: What They Are, Where They Come From and How We Find Them". A number of different meteorite samples were on display at the front of the Phillips Auditorium. Peter began by covering meteor origin, composition and terminology. He explained an extraterrestrial object in space over 10 meters is considered an asteroid, an object less than 10 meters making landfall is a meteorite. Of 100 tons of extraterrestrial material falling on the earth each day, only 100 pounds of fresh meteorites are found each year. Most extraterrestrial matter falling on the earth either burns up, falls in the ocean, or falls in obscure terrain, making discovery problematic.

Peter showed a number of photos displaying different meteorite types, their compositions and distinctive patterns. Interesting stories were presented documenting notable meteorite discoveries, including the case of a woman struck by a meteorite while inside her house. In 2011 a small black meteorite was found, which was determined to have come from Mars.

During an observing session in 2008, astronomer Richard Kowalski detected an asteroid in space, which was given designation 2008 TC3. He reported his observation to the Minor Planet Center in Cambridge, MA, which calculated the trajectory path and determined that the asteroid was going to impact Earth the next day. Richard's detection and notification allowed a photograph to be made documenting the asteroid breaking up as it entered the atmosphere.

In 2013 a very large asteroid, designated as 2012 DA14, had a near miss with the Earth. It passed within 17,000 miles, within the orbits of our geosynchronous satellites.

Peter mentioned that New England is an unlikely area to find meteorites, due to cycles of frost which break down materials, and its forested terrain. He indicated that the best areas to hunt for meteorites are in the desert or on ice covered areas of the world.

Refreshments for the evening were provided by Phil Levine

Glenn Chaple adjourned the meeting at 9:30 pm

~ *Phil Levine - Secretary* ~

Meeting Recordings . . .

The recording of ATMob meeting #904 is available on YouTube: <https://youtu.be/fOFg79dQQDk>

I would like to thank Peter Scherff for allowing us to record his presentation.

This link is to the publicly available cut of the meeting recording. To view the original version of the meetings, please see the Announce Forum on the ATMob Website <http://www.atmob.org>.

~ *Chris Elledge - Membership Secretary* ~

Membership Report . . .

I am pleased to welcome our newest members Mark Bohlman, Annie Braudy, Georgios Lordos, Peter Scherff, and Jason Adam and Family.

As of December 25th, 2017 we have 297 memberships covering 367 members. This is broken down as follows:

- 155 Regular Members
- 96 Senior Members
- 8 Student Members
- 34 Family Memberships covering 104 Members
- 4 Guest Members

Please contact me if you need any help with your membership or logging into the website.

~ *Chris Elledge - Membership Secretary* ~

Clubhouse Report . . .



Maria Batista working on the 2nd floor hallway ceiling. *

December 2017 Clubhouse Report

Seventeen members met on Saturday, Dec 2nd, under partly cloudy skies with a crisp temperature of 35 degrees F. to participate in Work Session #12. Thanks go to the following for making this work effort possible: Maria Batista, John Blomquist, Mike Bloom, Jim Gettys, Barry Jensen, Eric Johansson, Dick Koolish, John Maher, Vladislav Mlch, Eileen Myers, Dave Prowten, Joseph Rothchild, Ken Steeves, Art Swedlow, Al Takeda, Bill Toomey, & Sai Vallabha. Fewer daylight hours did not reduce their accomplishments.

Bill T. finished scraping the porch and outside walls. Afterwards Barry J. and Joseph R. completed the last of this season's outside painting

Maria B. scraped, prepared and painted the entire 2nd floor hallway ceiling.

Ken S. scrubbed and cleaned the grinding and polishing room sinks into mint condition.

John M. spent hours fabricating a new counter balance assembly for the "Bentley" donated Meade 16-inch Schmidt-Cassegrain telescope.

Dave P. repaired the 2nd floor Electronics room, South window. He replaced the original sash with a storm window.

With Sai V. on spaghetti sauce and fried chicken preparation, Eileen M. on salad detail and supervision, and setup assistance from Art S., Eric J., and Dick K., our group was presented with the first Bailey Hill spaghetti lunch of the season. Cleanup was performed by Al T., Eric J. and Sai V. Thanks to Eileen for purchasing our "vittles".

Every free hand contributes to the work party effort and teamwork allows us to complete each task.

The evening started with discussions about sunsets with answers being sought in reference journals, Google, and each other. John M. continued working in the machine shop.

As the temperature dropped we closed the Clubhouse at 10:35 pm.

Mirror grinding/polishing is available on Saturday afternoons at 1:00 pm. Watch for messages from Mike Mattei on the Announce email. On a work party Saturday this means that mirror work will potentially take place alongside of work party efforts. It is recommended that you cease fine grinding or polishing if a work effort is creating a dusty environment. Mirror grinding can safely resume after the work is completed.

Important Notice: Mirror making sessions will now take place on **Saturday afternoons beginning at 1:00 pm. Other times may be scheduled. Check your email on the ATMob-ANNOUNCE list.**

~ *Clubhouse Committee Chairs* ~
~ *Steve Clougherty, John Reed and Dave Prowten* ~

Clubhouse Saturday Schedule		
January 6	WORK PARTY # 1 ** Al Takeda	
January 13	Steve Clougherty	Joe Henry
January 20	Paul Cicchetti	John Reed
January 27	Phil Rounseville	Joe Wolfe
February 3	WORK PARTY # 2 ** John Stodieck	
February 10	John Panaswich	Jim Gettys
February 17	Bruce Berger	Glenn Meurer
February 24	George Paquin	Tom Wolf
March 3	WORK PARTY # 3 ** Dave Prowten	
March 10	Eileen Myers	Rich Nugent

** Closing time for the Clubhouse is determined by the work crew

Clubhouse Evening Schedule	
Friday Night Educational Videos	7:00 pm - 10:30 pm #
Saturday Afternoon Mirror Making	1:00 pm - ##
Saturday Night Observing	7:00 pm - ##
# Closing time is determined by the organizers	
## Closing time is determined by the "A" members on duty.	
Saturday afternoon mirror making schedules will be posted to the ATMOb-ANNOUNCE email.	
Note: The Clubhouse is closed on the 2nd Thursday of the month for our monthly meeting in Cambridge.	
Due to inclement weather conditions on Saturday evenings, the "A" members on duty may elect to close the Clubhouse. Please call the Clubhouse at (978) 692-8708 or check for messages posted to ATMOb-ANNOUNCE.	

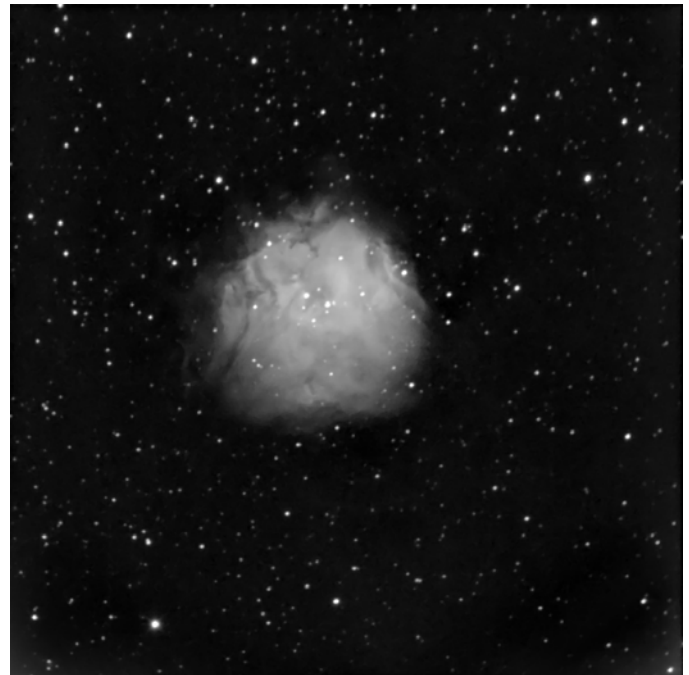
Sky Object of the Month . . .

January 2018

Courtesy LVAS Observer's Challenge***

NGC 1624 - Cluster/Nebula in Perseus

Mag. 10.4; Size 3.0'



NGC 1624. Image by Mario Motta, MD

If you like two-for-one bargains, you'll appreciate this month's LVAS Observer's Challenge. On December 28, 1790, William Herschel's all-sky survey brought him to "6 or 7 small stars, with faint nebosity between them, of considerable extent, and of an irregular figure." He duly catalogued it as H V-49 – his 49th Class V (very large nebulae) object. What Herschel had discovered was a small open star cluster embedded in an emission nebula.

NGC 1624 is located 5 degrees east of magnitude 4.3 Lambda (λ) Persei in the far northeastern corner of Perseus. If your scope is equipped with GoTo technology, dial in the coordinates RA 04h40m25.4s, Dec +50°26'49", and you're on your way. If you prefer star-hopping, the finder chart below will help you plot a

path from Lambda. A third method, described by Sky and Telescope's late "Deep Sky Wonders" columnist Walter Scott Houston, might be worth a try, as long as you're the patient sort. Scotty's "sky-drift" method involves training your scope on a bright star located due west of the target and letting the earth's rotation bring it into view. The rule is to wait 4 minutes for every degree of sky drift. In the case of NGC 1624, train your scope on Lambda and relax with a cup of hot chocolate for 20 minutes (actually, I'd start looking after 16).

The visibility of NGC 1624 is open to debate. One observer recommends a minimum aperture of 6 inches under dark skies. Yet current "Deep Sky Wonders" columnist Sue French writes, "Through my 105mm scope at 28X, it's an obvious little fuzzlet centered on one faint star. A magnification of 127X unveils five faint stars caught in a filmy net about 4' across." Also debatable is this cluster/nebula's visual magnitude. Some sources suggest a magnitude of 11.8, but this may refer to the brightest star in the cluster. The fact that Sue French was able to capture NGC 1624 in a 105mm scope might suggest another published visual magnitude of 10.4. An O-III filter will enhance the visibility of the nebula.

NGC 1624 is a young cluster with an estimated age of less than 4 million years. It lies 20,000 light years away, give or take a few thousand.



astronomy.com

***The purpose of the LVAS Observer's Challenge is to encourage the pursuit of visual observing. It is open to everyone who is interested, and if you are able to contribute notes, drawings, or photographs, the LVAS will be happy to include them in their monthly summary. If you would like to contribute material, submit your observing notes, sketches, and/or images to either [Roger Ivester \(rogerivester@me.com\)](mailto:rogerivester@me.com) or [Fred Rayworth \(fred@fredrayworth.com\)](mailto:fred@fredrayworth.com). To find out more, click on the following links: [LVAS Observer's Challenge past reports](#) and/or visit the [Las Vegas Astronomical Society website](#).

~ Glenn Chapple for the LVASS ~

New Year's Eve Party Decorators . . .

Thank you to those who volunteered to help put up decorations at the Clubhouse for the New Year's Eve celebration at a special work party on Saturday, December 30th. Thanks to John Blomquist, Paul Cicchetti, Dick Koolish, Nkosi Muhangi, Eileen Myers, John Reed, Monique Reed, John Stodieck, Art Swedlow, Barry Jensen, Al Takeda and Sai Vallabha.



Eileen Myers decorating. *

We wish a Happy and Healthy New Year to all ATMob members and friends near and far.



(L-R) John Stodieck and Barry Jensen hanging decorations. *

~ New Year's Eve Party Organizers:

Eileen Myers, Al Takeda, John and Monique Reed and Julie Kaufmann ~

Editor: * Photos by Al Takeda unless otherwise noted.

February Star Fields DEADLINE
Sunday, January 21st

Email articles to Al Takeda at
newsletter@atmob.org

Articles from members are always welcome.

POSTMASTER NOTE: First Class Postage Mailed January 8, 2018

Amateur Telescope Makers of Boston, Inc.
c/o Chris Elledge, Membership Secretary
99 College Ave
Arlington, MA 02474
FIRST CLASS

EXECUTIVE BOARD 2017-2018

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	David Prowten	(978) 369-1596
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NEWSLETTER	Al Takeda	newsletter@atmob.org

PUBLIC OUTREACH

STAR PARTY COORDINATOR:
Virginia Renehan starparty@atmob.org

How to Find Us...

Web Page www.atmob.org

MEETINGS: Held the second Thursday of each month (September to July) at 8:00PM in the Phillips Auditorium, Harvard-Smithsonian Center for Astrophysics, 60 Garden St., Cambridge MA. For INCLEMENT WEATHER CANCELLATION see www.atmob.org and check your email on the ATMOB-ANNOUNCE list.

CLUBHOUSE: **Latitude 42° 36.5' N Longitude 71° 29.8' W**

The Tom Britton Clubhouse is open every Saturday from 7 p.m. to late evening. It is the white farmhouse on the grounds of MIT's Haystack Observatory in Westford, MA. Take Rt. 3 North from Rt. 128 or Rt. 495 to Exit 33 and proceed West on Rt. 40 for five miles. Turn right at the MIT Lincoln Lab, Haystack Observatory at the Groton town line. Proceed to the farmhouse on left side of the road. Clubhouse attendance varies with the weather. It is wise to call in advance: (978) 692-8708.

Heads Up For The Month . . .

To calculate Eastern Standard Time (EDT) from Universal Time (UT) subtract 5 from UT.

Jan 1 Full Moon. New Year's Day
Jan 3 Quadrantid meteors peak, 20:00 UT (15:00 EST)
Jan 6 Mars 0.2 deg. S. of Jupiter
Jan 8 Last Quarter Moon (Moonrise at midnight)
Jan 16 New Moon
Jan 24 First Quarter Moon (Moonset at midnight)
Jan 31 Full Moon, Total Lunar Eclipse (Eclipse at Moonset)
Jan 31 Last Quarter Moon (Moonrise at midnight)