



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. 28, No. 3 March 2016

This Month's Meeting . . .

Thursday, March 10th, 2016 at 8:00 PM
Phillips Auditorium

Harvard-Smithsonian Center for Astrophysics

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

The New Hampshire Astronomical Society Library Telescope Program



Copyright *Sky & Telescope*, Kelly Beatty

Our guest speaker this month is Marc Stowbridge, of the New Hampshire Astronomical Society (NHAS). The New Hampshire Astronomical Society Library Telescope Program (NHAS LTP), the brainchild of our guest speaker Marc Stowbridge, is an outreach effort to supply user-friendly loaner telescopes to local libraries. What began in 2008 as a single effort to provide a loanable telescope for his local library evolved into the NHAS Library Telescope Program, a club-driven enterprise that has now

placed telescopes in over 100 libraries in New Hampshire. The NHAS LTP has become the blueprint for similar programs around the country, including those maintained by the Kalamazoo, MI, Astronomical Society, St. Louis Astronomical Society, Northwest Florida Astronomy Association, and the nearby Aldrich Astronomical Society. Besides relating the history of the NHAS LTP, Stowbridge will explain how each telescope (an Orion 4.5-inch Starblast) is modified and maintained for public use. His talk should prove valuable to any ATMob member interested in providing a loaner telescope for his or her local library.

In his own words, Marc Stowbridge became interested in astronomy as a child “when Sputnik flew and science became the weapon to turn back the Red Menace.” He began building large solid-fuel rockets in his basement. “After having blown a few holes in various driveways in my attempt to join the space race,” he notes, “I decided it might be safer to get into observational astronomy.”

A lifelong interest in amateur astronomy led to his joining the NHAS in 1999. A grandfather now, he doesn't spend much time observing by himself, preferring instead to show “what's up” at public sky-watches and star parties. As a volunteer NASA/JPL Solar System Ambassador, Stowbridge also speaks to groups interested in space missions and the discoveries they provide.

Please join us for a pre-meeting dinner discussion at [Changsho](#), 1712 Mass Ave, Cambridge, MA at 6:00pm before the meeting.

President's Message . . .

Because I'm primarily a backyard astronomer, I don't usually get excited about astronomical news involving things I cannot view with my own telescope. Nevertheless, I was captivated by word of the recent detection of gravitational waves, as presented by our own Bob Naeye – former Editor-in-Chief at *Sky and Telescope* - at the February ATMob meeting. Imagine –a whole new window on the universe! At our June meeting, Bob will give an update on the discovery and its ramifications for astronomical research.

March is traditionally Messier Marathon month, with the peak weekend occurring this year on Friday/Saturday evening, March 11/12, and Saturday/Sunday evening, March 12/13. Hopefully, one of these nights will offer clear skies. If the weather gods cooperate, we'll be out in force at the observing field near the ATMob clubhouse in Westford, Mass. Don't be put off by the idea of an all-night session. Many of us observe from sunset until a little after midnight, nabbing a lion's share of Messier objects in the process. I'll be attempting the first-ever March Double Star Marathon (details to be presented at the March meeting) and invite anyone looking for an alternative to the Messier Marathon to join me.

Clear Skies!

~ Glenn Chaple – President ~

February Meeting Minutes . . .



Babak Tafreshi *

Minutes of the ATMoB meeting held on February 11, 2016 in the Phillips Auditorium at the Harvard –Smithsonian Center for Astrophysics. President Glenn Chaple started the meeting at 8:00 pm.

- Phil Levine gave the Secretary's report
- Glenn Chaple gave the Treasurer's report
- Tom McDonagh gave the Membership report
- Glenn Chaple gave the Observing report:
There will be a Messier Marathon and Double Star Marathon at the Clubhouse on the night of March 12/13.

[Jupiter will be at opposition](#) on March 8th in the constellation of Leo.

The Sue French Fan Club [Object of the Month is NGC 2017/h3780](#).

The Las Vegas Astronomical Society [Object of the Month is NGC 2237](#).

Glenn mentioned an astronomy-themed Wikipedia edit-a-thon event planned for Feb 18th at the Center for Astrophysics in Cambridge, MA. The goal of the event is to improve existing astronomy and astrophysics articles and to add images to the pages of Wikipedia and Wikimedia Commons. https://en.wikipedia.org/wiki/Wikipedia:Meetup/Seamless_Astronomy_Edit-a-thon_Center_for_Astrophysics

Steve Clougherty gave the Clubhouse report. Steve said that 20 club members volunteered at the Jan 23 work party. Snow was removed from the Clubhouse entrances, driveway, parking lot, and from 6 observing pads. Bruce Berger mentioned that with club approval, the ATMoB Research and Imaging Observatory (ARIO) will undergo the addition of another ring and installation of a heating system to prevent ice dam buildup.

- Announcements:

Gary Walker informed the membership about an upcoming Star Party to be held at the [Loines Observatory](#) on Nantucket on Saturday, April 2nd, at 8:00 pm. There will be a tour of the historic [Maria Mitchell Observatories](#), with access to an 8-inch Clark refractor, [17-inch Corrected Dall-Kirkham \(CDK\)](#), and a 24-inch Ritchey-Chrétien telescope.

Dorm style accommodations are available for \$25/night for 2 days before and after the April 8th event. Housing is free the night of the event. Attendees are strongly encouraged to use the ferry and bring their "grab and go" scopes. Space is limited, so email Gary Walker for reservations: bailyhill14@gmail.com

A Boston University grad student, Ana Aceves, indicated that she is interested in telescope making, and would like to interview anyone currently making a telescope at the Westford Clubhouse.

A husband and wife team, Kristin Peterson and Dr. Jason Young, made a short presentation on an upcoming tour event in Arizona on June 2-7, "Astronomy Through the Ages". <http://discoveryexpeditions.org/index.php/upcomin/azastro>

Member at Large Bruce Tinkler provided refreshments for the evening.

- Old Business:

Glenn mentioned the upcoming Club officer vacancy positions of vice-president and membership secretary. Volunteers are also needed for the nominating committee. Club members interested in those positions or participating on the nominating committee should touch base with Glenn.

- New Business:

The ATMoB Club Website is going to be evaluated for design changes. Other astronomy club websites will be studied for possible ideas. Anyone interested in website design or participating on the committee is encouraged to contact Glenn Chaple.

Glenn introduced Babak Tafreshi as the guest speaker for this month. He is the founder and director of The World At Night (TWAN) <http://www.twanight.org/newTWAN/index.asp>. TWAN is an international organization which seeks to increase public awareness of the importance of the dark sky-human connection, which is at risk due to increased light pollution. Babak presented stunning photographs and time-lapse videos of the night sky, taken against some of the most unique natural landmarks around the globe. We were treated to a beautiful visual presentation which included striking views of the Milky Way, and the Aurora Borealis. <http://www.twanight.org/newTWAN/gallery.asp?Gallery=Aurora&page=1>

Bob Naeye gave a surprise presentation on the discovery of gravity waves, which was just announced in the news on Feb 11th. The Laser Interferometer Gravitational Wave Observatory (LIGO) issued a press release which indicated confirmation of

gravitational waves rippling from a distant merger of two black holes.

“For the first time, scientists have observed ripples in the fabric of space-time called gravitational waves, arriving at the earth from a cataclysmic event in the distant universe. This confirms a major prediction of Albert Einstein’s 1915 general theory of relativity and opens an unprecedented new window onto the cosmos. Gravitational waves carry information about their dramatic origins and about the nature of gravity that cannot otherwise be obtained. Physicists have concluded that the detected gravitational waves were produced during the final fraction of a second of the merger of two black holes to produce a single, more massive spinning black hole. This collision of two black holes had been predicted but never observed.”

<https://www.ligo.caltech.edu/news/ligo20160211>

Glenn Chaple adjourned the meeting at 10:45 pm.

~ *Phil Levine - Secretary* ~

Clubhouse Report . . .



Steve Clougherty inspecting the 17-inch Hutch *

February 2016 Clubhouse Report

Our monthly ATMob Clubhouse work session was held on Saturday, February 20th, with a total of 15 people attending. The weather was pleasant and we were spared having to remove any snow.

Our primary goal was to make sure that each one of our observatories and telescopes are in good operating condition.

John Maher and Barbara Bosworth checked out the 10-inch Schmidt-Cassegrain telescope (SCT) in the clamshell dome and determined that everything is currently in good working order.

Dave Prowten and Steve Clougherty checked out the 17-inch Dobsonian and found that the door on the hutch was broken. Dave cut and installed new lumber to stabilize the door and frame. Al Takeda added a new 12 volt supply to power the dew control heaters. The scope and hutch are now usable.

The Ed Knight roll off observatory was opened and both the Schupman and 25-inch Dobsonian were found to be in excellent working order. Dave took measurements and drew up plans to install new roller bearings for the Dob which will markedly improve the ease with which the scope can be moved.

Thanks to Mario Motta for donating a Parks 18-inch diameter fiberglass tube. Steve C. donated a 1.25-inch focuser for the club telescope upgrading project.

Al Takeda performed a telescope clinic and repair on Julie Sage's 60mm Meade ETX refractor.

Lunch was prepared by John Reed, Dan Sage, Christina Sage and Art Swedlow! Cleanup was done by John Reed and Al Takeda.

We would like to thank the following volunteers for their help during this latest session: John Blomquist, Barbara Bosworth, Paul Cicchetti, Steve Clougherty, John Reed, Vladislav Mlch, Mario Motta, Mike Mattei, Art Swedlow, John Maher, Phil Rounseville, Dan Sage, Christina Sage, Julie Sage and Al Takeda.

Our next work session will take place on Saturday, March 26.

~ *Clubhouse Committee Chairs* ~

~ *Steve Clougherty, John Reed and Dave Prowten* ~

Clubhouse Saturday Schedule		
Mar 5	Nina Craven and Rich Nugent MESSIER MARATHON #1	
Mar 12	Karl Dean	Mike Hill
Mar 19	George Paquin	Tom Wolf
Mar 26	WORK PARTY # 3 No Duty Scheduled **	
Apr 2	Glenn Chaple	Sai Vallabha
Apr 9	Eric Johansson and Bill Toomey NorthEast Astronomical Forum MESSIER MARATHON #2	

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

Clubhouse Evening Schedule	
Thursday Night Mirror Making	7:00 pm - #
Friday Night Educational Videos	7:00 pm - 10:30 pm #
Saturday Night Observing	7:00 pm - ##
# Closing time is determined by the organizers	
## Closing time is determined by the "A" members on duty	
Note: The Clubhouse is closed on the 2nd Thursday of the month for our monthly meeting in Cambridge.	
Due to inclement weather or cloudy 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.	

Membership Report . . .

Membership count as of February 22, 2016 is at a healthy 286 individuals. At the same time last year, membership was calculated to be 300 members in good standing.

Please seek out and welcome our new and returning members:
David Bourassa, Hilary Hayes, Fraser Sinclair, Fred Jones and Chester Freeman.

Please, also remember to sign up for the atmob-announce, atmob-newsletter and atmob-discuss mailing list for up to date information on club openings and interesting astronomy related discussions. Please follow the link below to sign up:

<http://www.atmob.org/library/maillinglists.php>

Contact me with questions regarding this option at: membership@atmob.org.

The Starfields Newsletter can be found on the library page of the ATMoB website dating back to the year 2000. Point your browser to the following URL to download past issues.

<http://www.atmob.org/library/clubnewsletters.php>

If you are having problems with *Sky & Telescope* or *Astronomy Magazine* subscriptions, feel free to contact them directly for a prompt response. Please see the contact information below:

S&T Magazine 800-253-0245 (US & Canada)
386-597-4387 (International)

Astronomy Magazine 800-533-6644

The Amateur Telescope Makers of Boston, Inc. is a 501(c)3 organization. Donations are gladly accepted and are tax deductible to the fullest extent allowed by law. Consider making a tax-deductible contribution to the club during your estate and tax planning this year. Many companies make matching contributions at an employee's request. This is a simple way to make your donation go twice as far.

~ Tom McDonagh – Membership Secretary ~

2017 Total Solar Eclipse Trip Update . . .

The Eclipse is now just 18 months away. We now have 130 people registered and are "full". Additional registrations will be "wait listed".

Sometime about June this year, you will receive a survey about hotel space requirements in Columbia, MO so we can work with the hotel to adjust the room block to accommodate all. So, you may want to start thinking about your plans. More details in the summer on when and how you will be able to book rooms directly from the hotel (from the block).

~ Submitted by Bernie Volz and Mario Motta ~

Sky Object of the Month . . .

March 2016

Courtesy LVAS Observer's Challenge*

NGC 2392 "Eskimo Nebula" – Planetary Nebula in Gemini
(Magnitude – 9.2, Dimensions – 47' X 43')

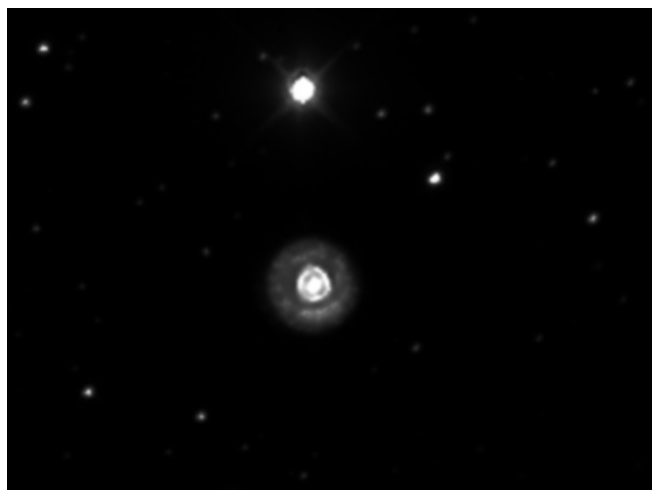
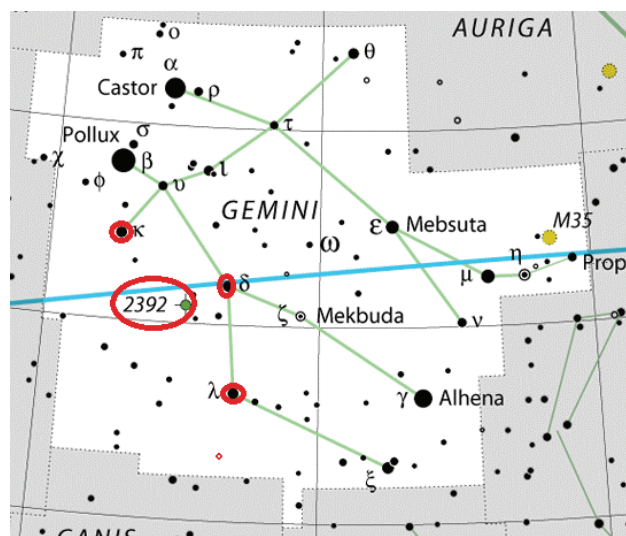


Image by Mario Motta, M.D.

NGC 2392, the Eskimo Nebula, is a bright planetary nebula located in Gemini halfway between the stars Kappa (κ) and Lambda (λ) Geminorum and near the 4th magnitude star Wasat (Delta [δ] Geminorum). It pairs with an 8th magnitude star located 100 arc-seconds away. The nickname comes from the nebula's appearance, when viewed with medium to large-aperture scopes, to a person's face surrounded by a fur-lined parka.



constellation-guide.com (IAU and Sky & Telescope magazine)

The Eskimo Nebula was discovered by William Herschel in 1787. Estimates of its distance vary – one source suggests a distance of 2900 light years, which corresponds to a true diameter of .68 light years. If a NASA figure of 5000 light years is correct, the Eskimo Nebula is over one light year across.

*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 about the LVAS Observer's Challenge or access past reports, log on to lvastronomy.com/observing-challenge.

~ Glenn Chaple – Observing Committee ~

2016 NEAF Convention . . .



NEAF 2009 *

Northeast Astronomy Forum (NEAF) Presented by the Rockland Astronomy Club

Saturday, April 9, 2016 through Sunday, April 10, 2015

SUNY Rockland Community College
145 College Road
Suffern, New York 10901

Highlights: Vendors of telescopes and accessories from all over the world, exhibits, solar observing with all kinds of equipment, lectures, raffle prizes

Also **Northeast Astro-Imaging Conference**
Thursday, April 7 & Friday, April 8, 2016
<http://www.rocklandastronomy.com/neaf.html>



PHOTOGRAPHICA 85 . . .



The [Photographic Historical Society of New England \(PHSNE\)](http://phsne.org) is sponsoring the popular Photographica Show and Sale at the American Legion Post #440 Hall in Newton, MA on April 2, 2016. The Photographica Show offers members and the public an opportunity to browse and buy images, antique and usable cameras, equipment and ephemera.

Admission:
Adults - \$5.00
Seniors - \$4.00
PHSNE Members - Free
Students and Active Duty Military with current valid ID - Free

American Legion Post #440 Hall
295 California Street, Newton, MA 02458

Early Bird Admission- 7:00 AM - \$20
Public Admission - 9:00 AM
Photographica Show ends - 4:00 PM
Auction - 4:00 - 6:00 PM

Details at <http://phsne.org/shows.html>

~ Submitted by Dick Koolish ~

Editor: * Photos by Al Takeda unless otherwise noted.

April Star Fields DEADLINE
Sunday, March 27th

Email articles to Al Takeda at
newsletter@atmob.org

Articles from members are always welcome.

POSTMASTER NOTE: First Class Postage Mailed March 5, 2016

Amateur Telescope Makers of Boston, Inc.
c/o Tom McDonagh, Membership Secretary
48 Mohawk Drive
Acton, MA 01720
FIRST CLASS

EXECUTIVE BOARD 2015-2016

PRESIDENT: Glenn Chaple (978) 597-8465

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Al Takeda (508) 494-7877

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2014 - 15 Neil Fleming

2012 - 14 Mike Hill (508) 485-0230

2010 - 12 Bernie Kosicki (978) 263-2812

2006 - 08 Virginia Renahan (978) 283-0862

COMMITTEES

CLUBHOUSE: John Reed (781) 861-8031

Steve Clougherty (781) 784-3024

David Prowten (978) 369-1596

OBSERVING: Bruce Berger (978) 387-4189

NEWSLETTER Al Takeda newsletter@atmob.org

PUBLIC OUTREACH

STAR PARTY COORDINATOR:

Virginia Renahan 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 (EST) from Universal Time (UT) subtract 5 from UT.

Mar 8 New Moon

Mar 13 Daylight Saving Time begins (EDT = Subtract 4 from UT)

Mar 15 First Quarter Moon (Moonset at midnight)

Mar 20 Vernal Equinox

Mar 23 Full Moon

Mar 31 Last Quarter Moon (Moonrise at midnight)

Apr 7 New Moon

Apr 13 First Quarter Moon (Moonset at midnight)