

# 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. 22, No. 9 November 2010

This Month's Meeting...

Thursday, November 11<sup>th</sup>, 2010 at 8:00 PM
Phillips Auditorium
Harvard-Smithsonian Center for Astrophysics
Parking at the CfA is allowed for the duration of the meeting.

### The APOLLO Lunar Ranging Project

Laser range measurements between the earth and the moon have provided one of our best tests to date of general relativity and gravitational phenomenology. APOLLO (Apache Point Observatory Lunar Laser-ranging Operation) is now collecting range measurements at the unprecedented precision of one millimeter, which will produce order-of-magnitude improvements in a variety of gravitational tests. We will discuss how lunar ranging works, evidence for degradation of the reflectors, finding the lost Soviet Lunokhod 1 reflector, project status and science outlook.

Professor Tom Murphy grew up in Chattanooga, TN, where he was an active amateur astronomer and telescope builder. He studied physics at Georgia Tech, and pursued graduate work at Caltech. There he built an infrared integral field spectrograph for the Palomar 200-inch telescope, using it to study mergers between large gas-rich ultra-luminous infrared galaxies. As a post-doctoral researcher at the University of Washington, Murphy began design and construction of an apparatus to test gravity by bouncing laser pulses off the reflectors left on the lunar surface by American astronauts and Soviet rovers. In 2003, Murphy moved to the University of California, San Diego where he is an associate professor and continues to run the APOLLO project.

Please join us for a pre-meeting dinner discussion at <u>Changsho</u>, <u>1712 Mass Ave</u>, <u>Cambridge</u>, <u>MA</u> at 6:00pm before the meeting.

## President's Message...

The big astronomy news of the past month was discovery of the first exoplanet found not too near or not too far from its star-where temperatures are warm enough so that any water present should be at least partly liquid, but not so close that water would be close to the boiling point. This is a condition favorable for producing life, and so the announcement of this planet was hailed by a half-dozen impartial astronomers who had no personal stake in the discovery.

The planet, which circles around the star Gliese 581g, certainly does not have completely Earth-like conditions. It is tidally locked to its star with one side always pointing at it, making this region maybe too hot, unless there is good circulation of its atmosphere or oceans (if any) to spread the energy around the planet. But these issues aside, astronomers are excited about finding the first plausible candidate habitat for life outside the Solar System. And the general public continues to be intensely interested in finding out if we on Earth might have neighbors in the universe. One of the co-discoverers, Steven Vogt of the University of California, is so enthusiastic as to say that "chances for life on this planet are 100 percent". All of the nearly 500 other exoplanets found are either too hot or two cold to be realistically considered as places where life (at least as we think about it) could form.

The newly discovered planet is about 20 to 50 percent larger in diameter than Earth, so although its gravity is larger than ours, its still plausible that creatures could move about. The star is a dim red dwarf- one of the most plentiful types in our and other galaxies (about 10-30% of all stars)- so there are probably large numbers of planets like this one waiting to be discovered. Gliese 581g is visible with modest telescopes as a 10.6-magnitude star 20 light years away in Libra- maybe a good target for star parties? Stay tuned for more discoveries of "Goldilocks" planets.

Professor Tom Murphy, our speaker this month, will be describing other measurements of another satellite- only much closer to us- our Moon. In this case, the object is to try to verify the general theory of relativity by making ultra- precise measurements of the distance from Earth to Moon. How is it possible to make this measurement to the precision of almost a millimeter? How can it be that the general theory of relativity is involved in the Earth-Moon system dynamics- where gravitational forces are relatively puny compared to, say, those of black holes? We'll learn the answers to these apparent puzzles and more from Prof. Murphy at our November meeting.

Keep looking up..

~ Bernie Kosicki, President ~

## June Meeting Minutes . . .

Lecture: "Astronomy in a Small Nation"



Photograph by Al Takeda

The September meeting (827<sup>th</sup>) of the Amateur Telescope Makers of Boston featured amateur astronomer Julio Vannini, an amateur astronomer from Nicaragua, Central America. He's an active member of the Nicaraguan Amateur Astronomers Society. For two consecutive years he's been designated as national coordinator for Nicaragua at the Astronomy Education and Public Outreach Section for the Latin America Astronomy League and as national contact for Astronomers Without Borders. His main interest resides in variable stars and the Moon. Julio Vannini discussed the dawn, downfall, and rebirth of astronomy in his small Central American nation of Nicaragua. Interesting astronomical facts about Nicaragua: The country would fit twice in Olympus Mons, the mountain on Mars. The country is located at 12° North latitude, between Honduras and Costa Rica. From Nicaragua you can see 86 of the 88 constellations. The best observing season is November through April/May.

#### Rise and Fall of Astronomy in Nicaragua (1950's-1972):

The first astronomical society in Nicaragua began in the 1950's and grew to 100 members. This was one of the first astronomical societies in Central America. The only remaining astronomer from this time is Dr. Jaime Incer Barquero. It was also at this time that Nicaragua began relationships with other Latin American Countries and was a founding member of the Ibero-American Astronomy League (LIADA Liga Iberoamericana de Astronomía <a href="http://www.liada.net/">http://www.liada.net/</a>). This was to change, however, with changes in the Nicaraguan society resulting from the devastating magnitude 6.2 earthquake on December 23, 1972 (<a href="http://earthquake.usgs.gov/earthquakes/world/events/1972">http://earthquake.usgs.gov/earthquakes/world/events/1972</a> 12 2 3.php) and subsequent civil war "turned off the light of a shining nation," effectively reducing astronomical activity to near zero. What followed was a troubled time with basically 10 years of no access to education, libraries, etc.

#### Re-Birth of Astronomy in Nicaragua:

In recent years, astronomy has enjoyed a renaissance in Nicaragua. This started when Dr. Jaime Incer Barquero began looking for Amateur Astronomers in Nicaragua, willing rebuild astronomy in the country. The first steps were free basic lectures on astronomy which were open to the public. After a couple of years, the Nicaraguan Amateur Astronomers Society, ANASA (Asociación Nicaragüense de Astrónomos Aficionados) was founded. Given the lack of equipment and resources, the amateurs offer their equipments for the Society's work. ANASA currently has about 20-30 active members. They have more than 300 people registered on its mailing list, who participate "at a distance." The society provides courses on astronomy which are open to the public. It promotes astronomy by giving presentations at schools and other public places. Its teams also provide opportunities for the public to look through telescopes in parks and cites.

Nicaraguans interested in astronomy began to enroll in discussion groups on the Internet in Latin America (e.g. <a href="http://espanol.groups.yahoo.com/group/anasa/">http://espanol.groups.yahoo.com/group/anasa/</a> and <a href="http://anasa-carlsagan.blogspot.com/">http://espanol.groups.yahoo.com/group/anasa/</a> and <a href="http://anasa-carlsagan.blogspot.com/">http://anasa-carlsagan.blogspot.com/</a>) which are used very effectively. Nicaragua was reinstated in the LIADA group (<a href="http://www.liada.net/">http://www.liada.net/</a>) Julio was named as the National Coordinator for Public Outreach and Education For Astronomy. They began field work including outreach to Universities, public lectures, and public star parties/sidewalk astronomy.

Publications begin appearing, including "An Astronomer's Tale" which was published in Sky & Telescope Magazine. A Handbook of Astronomy (Manual de Astronomía) which summarizes the most important concepts and discoveries in the field of Astronomy was published in Spanish and written at a level understandable by the general public. The Amateur Astronomers took advantage of the International Year of Astronomy to further their public outreach. An Astronomical Calendar (Calandario Astronomico de Nicaragua 2009) was published and funded in partnership with CONICYT (Comisión Nacional de Investigación Científica y Tecnológica) and UNESCO (United Nations Educational, Scientific and Cultural Organization).

Additional partnerships have been made with the 100 Hours of Astronomy (3-5 April 2009), Astronomy without Boarders – "One People - One Sky" "When we look up, borders vanish" (AWB <a href="http://www.astronomerswithoutborders.org">http://www.astronomerswithoutborders.org</a>) which has provided the opportunity to create links and bridges with other astronomers around the world, and Sidewalk Astronomers "Bringing Astronomy to the Public"

(<a href="http://www.sidewalkastronomers.us">http://www.sidewalkastronomers.us</a>). The 100 Hours of Astronomy was particularly successful for Amateur Astronomy in Nicaragua. They had over 5,000 people look through telescopes in four cities.



Image Courtesy Julio Vannini

### Sidewalk Astronomy in Niceragua.

In July 2007, the National Observatory at the National Autonomous University of Nicaragua-Managua Campus is inaugurated as part of the School of Physics, initiating a new epoch for studies in Astronomy in Nicaragua. The University is the official member of the IAU in Nicaragua. The observatory houses an 8" Meade LX90 Schmidt-Cassegrain using an SBIG CCD ST-237 and a Meade DSI II for imaging. Current research is being conducted in variable stars. The Astronomical Observatory is dedicated to teaching and research in the field Astrophysics and Astronomy with the aim of contributing to science education students of the university and the general public. The three main focuses of the observatory are: The Teacher Training Project for primary and secondary teachers. Promotion of topics in Astrophysics and Astronomy to the general public, and Forums in Astrophysics and Astronomy for the University but open to amateur astronomers as well.

#### What's Next for Amateur Astronomy in Nicaragua?

Need a plan of action:

- Develop an amateur observatory
- Expand the local Astronomy Club network
- Messier Marathons open to the public both in person and internet-based.
- Other internet-based collaboration and imaging projects
- "Welcome to the Giant" Jupiter AWB Outreach Project (Oct 16, 2010)
- "Citizen Sky" Project with the AAVSO for teaching beginning variable star observing with 10 "southern gems." (http://www.citizensky.org/teams/southern-gems)
- Amateur Astronomers are invited to University lectures and training
- "One Star at a Time" Reclaiming the starry night sky by creating and protecting accessible public "star parks" to view the night sky (http://www.onestar-awb.org)
- Astro Garrobo distributing open source astronomy and planetarium applications by bootable CD to schools and new astronomers.
- Virtual Telescope Project photometry (TrES-3b) near real time and other online observation projects (http://www.virtualtelescope.eu)

Their goal – help the country recover from its history through sharing a love of the sky with Nicaraguans of all ages. "We are all made of stars."

Any help would be welcome (equipment, intermediate books, other):

Web: <a href="http://www.anasa.org.ni">http://www.anasa.org.ni</a>
E-mail: <a href="mailto:info@anasa.org.ni">info@anasa.org.ni</a>

Ing. Julio César Vannini Ramírez jvannini@anasa.org.ni

Blog: http://ungaman.wordpress.com

Note: Following the meeting, members took Julio on a tour of the Great Telescope, the 9" Clarke, and the plate stacks and digitizing project.

Gary Walker presented comet 103P/Hartley 2, a fast moving comet which he had imaged and created a short movie. Gary indicated that the comet is about magnitude 4.9. He also reiterated the request for volunteers over the winter at the Maria Mitchell Observatory.

Al Takeda also presented his photo of comet 103P/Hartley. P103/Comet Hartley 2 and the Double Cluster in Perseus. The comet brightened to approximately 6th magnitude as it passed the open clusters NGC 869 and NGC 884. The clusters are separated by a few hundred light years (ly) and are 7,000 ly away. Takahashi Epsilon-180, Canon 20D DSLR, 2 - 5 minute sub frames stretched to see background stars and the comet's halo. Chester, Vermont. 8 October 2010.



Photo by Al Takeda

Comet Hartley in Double Cluster

The business meeting was brought to order at about 8:56pm.

Bruce Tinkler provided the Secretary Report.

Nanette Benoit sent the Treasurer's report to Bernie, which he presented. It was noted that there was a spike in income due to membership renewals.

The Membership Report was given by Tom McDonagh. He noted that membership renewals are due and that magazine renewals are being processed so members should be able to ignore magazine notices.

The Newsletter Editor, Ross Barros-Smith, thanked those who have given compliments and pointed out errors in the newsletter. He also mentioned that the deadline for the next newsletter would be October 24<sup>th</sup>. He also requested photos from member activities throughout 2010 for a special December email edition of the newsletter.

The Observing Committee Report was given by Bruce Berger. Bruce indicated that there had been a meeting of the committee which covered the re-organization as well as discussions of new ideas and programs and ground rules. One idea would be the creation of observing achievement awards similar to the Astronomical League. He also mentioned the work on the new dome for the C14 and announced the next committee meeting. He

also noted the sale of some clubhouse tools at the meeting and availability of 100mw green lasers.

The Clubhouse Report was given by Dave Prowten. Dave mentioned that the mosquitoes are gone which seems to have lead to a surge in members at the clubhouse Saturday nights.

Club Event and Announcements were given by Bernie Kosicki. •Fridays, Sept 3-Oct 22: New perspectives on the Solar System. Clubhouse

- Star Parties
- -Oct 16, 2010 Star Party for Military Families- Hanscom
- -Oct 27, 2010 High Plain Elementary School- Andover
- -Oct 30, 2010 Boy & Girl Scouts Star Party- Windham Center School
- -Nov 10, 2010 King Amigo School Star Party- Cambridge
- -Nov 17, 2010 Swallow Union School- Dunstable
- •Oct 19-Board Meeting- Clubhouse
- •Oct 23-Clubhouse work party- Clubhouse
- •Maria Mitchell Observatory, Nantucket, Mass
- -Opportunity to be a resident winter observer
- -Learn CCD photography on their 24" RC
- -Contact Gary Walker (bailyhill@aol.com)

Bernie Volz announced the sale of 2011 calendars by the club.

The meeting concluded with the presentations given by Gary Walker and Al Takeda as reported above. Refreshments were provided by Steve Beckwith. The meeting was brought to a close at 9:21pm.

~ Bruce Tinkler, Secretary ~

## **Clubhouse Report...**

We had a successful work party at the ATMOB clubhouse on Saturday October 23. Significant progress was made in assembling and adding hardware to the new 10 ft. Home Dome. The dome assembly has been set up temporarily on a makeshift platform behind the Ed Knight observatory. A trench was dug between the roll off observatory and the new platform which will house the C-14 telescope in the Home Dome. Power lines will be installed before the onset of Winter.

Clapboards were replaced on the North side of the clubhouse, and a crew of three spent the entire day and part of the evening finishing the primer coat. One final coat will be applied within the next couple of weeks. This will complete the staining work at the clubhouse for this year.

The old machine shop was cleaned and the walls sanded in preparation for spackling and painting this Fall and Winter. The windows are being repaired and painted as well.

Electrical work continued in the metal shed located behind the clubhouse. An outlet was added on the outside of the shed to accommodate power equipment.

The snow fence was installed during this work session. Vehicle access to the observing field is possible through two wide openings in the fence.

The 20" telescope had a focuser modification added in order to bring the focal plane to a more convenient spot for a wider range of eyepieces. Work will begin shortly to rebuild parts of the telescope and Dob mount for greater stability and ease of use.

Lunch was served thanks to our hard working kitchen crew!

During the evening several members stayed and observed a shadow transit of Jupiter's moon Ganymede. Outstanding views were seen through our Dall-Kirkham telescope housed in the clamshell observatory.

We would like to thank the following members for their tremendous efforts during the work party: Sai Vallabha, Anna Hillier, Eileen Myers, Bruce Berger, Ed Boynton, Al Takeda, Art Swedlow, Dave Prowten, John Blomquist, Steve Clougherty, John Maher, Paul Cicchetti, Tom Wolf, Sergio Siminovic and new member Steve Callahan who arrived with his new 20" Starmaster Dobsonian.

- ~ Clubhouse Committee Directors ~
- ~ John Reed, Steve Clougherty and Dave Prowten ~

### **Clubhouse Saturday Schedule**

November 6	Panaswich	Siegrist	
November 13	Leacu	Rounseville	
November 20	Hopkinson + Small		
	Work Party #12		
November 27	Swedlow	Vallabha	
December 4	Clougherty	Takeda	
December 11	Jacobson	Johansson	
December 18	Cicchetti	Reed	
December 25	CLOSED		
	Christmas Day		

### Thoreau on Astronomy . . .

I climb Pine Hill just as the sun is setting, this cool evening. Sitting with my back to a thick oak sprout whose leaves still glow with life, Walden lies an oblong square endwise to, beneath me. Its surface is slightly rippled, and dusky prolonged reflections of trees extend wholly across its length, or half a mile. I sit high. The sun is once or twice its diameter above the horizon, and the mountains north of it stand out grand and distinct, a decided purple. But when I look critically, I distinguish a whitish mist such is the color of the denser air - about their lower parts, while the tops are dark-blue.

Journal, 4 November 1857

~ Submitted by Tom Calderwood ~

## Membership Report . . .

Membership count as of 10/26/2010 is at 238 individuals Same time last year: 237

The deadline for membership renewal is December 1st. Please send along your payment now. If you require a renewal form please contact me @ 617-966-5221.

The renewal process can be completed on-line using Paypal. No Paypal account is required. Follow the link below to renew now.

http://www.atmob.org/members/person.php?frid=renewals

Renewal checks may also be mailed:

ATMoB c/o Tom McDonagh 48 Mohawk Drive Acton, MA 01720

I will be available at November 11th club meeting in Cambridge if you wish to renew at that time. Drop me a line if you intend to do so. Special thanks to all of those that have renewed already. Don't delay, renew today!

If you wish to receive a new ATMoB nametag, please contact me via email with your name as you wish it to appear and the pickup location. I can drop off completed nametags at the clubhouse or the monthly Cambridge meeting.

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 when renewing your membership. Many companies make matching contributions at an employee's request. This is a simple way to make your donation go twice as far.

Please take the time to seek out and welcome our new and returning club members:

Jon Connor David Mittelman
Paul Courtemanche Tony Costanzo
Aaron Siegal

~ Tom McDonagh, Membership Secretary ~

## From the Observing Committee...

October was a busy month for the Observing Committee. We organized, came up with some great programming ideas, started work on our mission and charter, began work our work on a new home to the C14 and Paramount, and recruited new members with strong desires to share their knowledge of the sky and observing methods.

Neil Fleming recently had the honor of producing the featured photo on NASA's Astronomy Picture of the Day website, for the

fourth time! His stunning image of NGC 7822 has people gasping with awe the world over. And we're excited to announce that Neil has been nominated to serve as co-chair of the Observing Committee. Neil promises to bring some of his vast knowledge of astrophotography to our members using ATMoB's CCD cameras and observing platforms.

Many of you know Glen Chaple as the author of the popular "Sky Objects of the Month" article in this newsletter, but did you also know that Glen writes the "Observing Basics" articles featured monthly in "Astronomy Magazine?" We're honored to have Glen on our committee. He has some stellar ideas for enhancing our knowledge of the night sky. Glen is sorting out ideas now for an ATMoB Observing Award program that we hope will add even more excitement and purpose to your observing sessions.

And finally, we've been working closely with the Clubhouse Committee to complete the new ProDome assembly. We hope that by next summer the club's Paramount, C-14 and fast Maksutov-Newtonian will be scanning the heavens from inside this new observatory located on the Dennis Milon Observing Field.



Photo by Bruce Berger

Tom Wolf and John Maher taking a break inside the partially assembled dome during the October Work Party

Membership in the observing committee has but one requirement – the desire to increase the enjoyment of observing the heavens for you and others. If you're interested in lending a hand please contact one of the committee chairs.

~ Bruce Berger, Observing Committee Chair ~

## **Star Party Reports...**

UMass Boston – October 9

John Sheff and Ross Barros-Smith set up telescopes along the Harborwalk connecting the JFK Presidential Library and UMass Boston campus. Their guests included astronomy students, members of Ross' Youth Astronomy Apprenticeship group, and the chair of the physics of department.

The peninsula upon which the campus is situated turned out to be an exceptional city observing location. Looking over the waterfront, the guests enjoyed a mostly unobstructed view of the east and southern sky with the majority of city lights in the opposite direction and shielded by thick row of trees. John showed Uranus and Jupiter as one of its moons emerged from the disk, while Ross focused on deep sky objects. The star party was well received by the approximately 75 in total attendance.



Photo by Ross Barros-Smith

A first ever look through a telescope at UMass Boston. 30 second Exposure.

### Wilson Middle School – October 12

Star party volunteers Harry Drake, Joe Henry, John Maher, Scott Chizzo, and Ross Barros-Smith joined eighth graders and their families at the Wilson Middle School in Natick for a night of observing and indoor science activities.

While the weather appeared ominous all through the afternoon, the sky ultimately cooperated, sparing a middle school full of students from a dull evening of cloudgazing. Ross brought a portable Starlab planetarium and gave a series of shows over the evening, connecting to the objects seen through the telescopes outside.

This was the fourth annual star party with ATMoB at the Wilson MS. Despite poor weather for at least two of the school's previous events, the night has become popular among not only the students for whom it is intended, but also the faculty and staff.

### ~ Ross Barros-Smith ~



Photo by Julie Kaufmann / Processing by Al Takeda "During a visit to the Springfield Science Museum on October 16, trying to steal spare parts from the Saturn sculpture are: Marion Hochuli, Eileen Myers, Joan Presz (friend from The Conjunction in Northfield), and Al Takeda."

## Why Observe? . . .

The short answer is why not? The Universe is awesome, awe inspiring, full of surprises, and complete with more colors and beautiful objects than we can imagine.

Do you remember when you received your first telescope? What was it that motivated you to get a telescope? You looked up at the stars in the night sky and were captured by their beauty and majesty. It was emotion, not necessarily intellect, which initially captured your imagination about amateur astronomy. You could not wait for that first clear night and for "first light" for your new telescope. It did not matter that it was a small refractor or reflector. It did not matter that you had limited knowledge of the night sky. It did not matter that the images, in hindsight, were not crystal clear and perfectly sharp. What mattered was that you were mesmerized by the sky objects you viewed with your first scope. It was the little child in all of us (even if you purchased your first scope as an adult) that enabled you to catch the astronomy "fever."

As adults, we all have different (many of them technical) reasons for being amateur astronomers and observing the night sky: variable stars, doubles stars, the faint fuzzies (nebula, galaxies, clusters), the Moon, the planets, the Sun, spectroscopy, astrophotography, comets, etc. In my opinion, what we sometimes miss, or forget, is what attracted us to the night sky in the first place. At star parties I have attended, you hear words like cool, awesome, beautiful, and wow from children and adults alike. It reminds me of how I felt (and probably most of us felt) when we viewed the universe through our first telescope. I would suggest we should all re-visit that feeling from time-to-time.

Many years ago I taught the Astronomy merit badge for my older daughter's Girl Scout troop. I had an 8" Newtonian Reflector at the time. One evening we were in my backyard observing various objects, and at one point I had the scope on some stars. I cannot remember whether they were double stars, the Milky Way, or clusters. One at a time, the girls would look in the eyepiece

(briefly) and make a comment. Finally one girl approached the eyepiece and spent several minutes viewing the object. I almost interrupted her viewing and wanted to ask if she was having difficulty observing, but for once in my life I maintained silence. Finally, she looked up at me and commented, "They're pretty." For all of the sophisticated (i.e. adult) reasons we observe, for our never-ending quest for more knowledge, bigger telescopes, better eyepieces, etc., I believe that girl from my daughter's Girl Scout troop summed it up best. Why observe? – because "they're pretty."

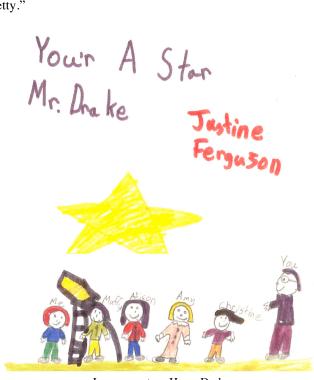


Image courtesy Harry Drake

~ Harry Drake~

## Sky Objects of the Month . . .

Sky Object (Project) of the Month – November 2010 The Great World Wide Star Count

Last March, I participated in the 2010 GLOBE at Night Campaign, sponsored by the University Corporation for Atmospheric Research and the National Center for Atmospheric Research (UCAR and NCAR). Globe at Night is a citizen-based project designed to help scientists around the world map light pollution.

The process was simple. I observed Orion and compared what I saw with a set of charts showing Orion's appearance at magnitude limits between 1 and 7. I emailed my finding (I got a magnitude limit of 5) to the Globe at Night website. Mine was one of 17,805 observations forwarded by individuals from 86 countries. The results, plus an overview of the Globe at Night Campaign can be found at www.globeatnight.org/.

If you missed the 2010 Globe at Night Campaign, you'll get another chance. Through the auspices of UCAR and NCAR, the National Earth Science Teachers Association will conduct the Great World Wide Star Count from October 29 to November 12. The format is the same as that of the Globe at Night Campaign. This time, Cygnus will serve as the light pollution barometer. The Great World Wide Star Count offers the backyard astronomer an opportunity to add some ammunition to the war on light pollution. Not only is this a worthwhile project for the individual; it makes a fine activity for teachers who want their students to learn about the night sky while involving them in science research. To find out more about this project and how to participate, go to

http://www.windows2universe.org/citizen\_science/starcount. By the way, the Windows to the Universe website is a valuable resource for educators. Check it out!

Your comments on this column are welcome. E-mail me at gchaple@hotmail.com.

### **Upcoming Newsletter Extra...**

I will attempt an experiment in producing a web-only newsletter extra at the end of December or beginning of January. The focus will be on the activities of the club and its members over the last year. My interest is in creating a strong visual record of what we've been up to, though this may also be an excellent venue for publishing long form pieces or other things that may not ordinarily fit in the regular monthly edition.

Please consider submitting your more exceptional photographs and writings from 2010. I'm interested in seeing your astrophotography, club activities, personal project writeups, poetry, crazy ramblings, and anything else that has not been thought of.

A deadline and more detailed set of guidelines will be posted on the "Announce" list. Early submissions and questions may be sent to newsletter@atmob.org.

~ Ross Barros-Smith, Newsletter Editor~

### For Sale ...

"10" LX200 Classic for sale mint condition. Includes field tripod and standard equipment (case, diagonal, a few eye pieces and a laptop computer). Moving up to a truss system. \$1600 or BO. Call Mike at 617-285-8608 or email at mikebova@verizon.net."

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November Star Fields <u>DEADLINE</u>
Noon, Sunday, November 21
Email articles to the newsletter editor at newsletter@atmob.org

Articles from members are always welcome.

### **POSTMASTER NOTE:** First Class Postage

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

#### **EXECUTIVE BOARD 2010-2011**

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Bruce Berger

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OBSERVING AND PUBLIC OUTREACH

STAR PARTY COORDINATOR:

Virginia Renehan <u>starparty@atmob.org</u>

## 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 listen to WBZ (1030 AM)

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.