



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. 13, No. 6 June 2002

This Month's Meeting...

Thursday, June 13th, 2002, at 8:00 PM
Phillips Auditorium, Harvard-Smithsonian
Center for Astrophysics

This Month's Speaker...

THIS MONTH'S speaker will be Frank Sienkiewicz, Educational Specialist in the Science Education Department of the Harvard-Smithsonian Center for Astrophysics. Frank is project engineer for the MicroObservatory Project, a robotic telescope network. The [MicroObservatory](#) Project, created by the Science Education group at the CfA, allows students and teachers across the nation to use CCD-based reflecting telescopes to take pictures of objects in the night sky. Access is via the Internet. The title of Frank's talk will be "MicroObservatory Online Telescopes for Science Education". Frank is planning for us to have a roof top visit to the control room for one of the MicroObservatory scopes.

Some club members might recognize Frank from BU, where for 13 years he was curator of the Judson B. Coit Observatory, located on the roof of BU's College of Arts & Sciences building (clear Wednesday nights are free public Open Nights). Frank also ran the public programs at BU for 15 years.

Join our speaker and us for dinner at 5:45 PM at the Changsho Restaurant located at 1712 Mass Ave. in our fair city, Cambridge.

President's Message...

WE ARE all keenly aware of how long it takes to complete our projects, especially the really fun projects that we have started a while ago and never have enough time to complete. These projects could be parabolizing a mirror, completing a tube assembly, making time to learn the night sky, finishing a backyard observatory, getting gear organized, logging Messier objects, etc. The fun things we revel in seem to take a back seat to the other important things in our life, like careers, family, parenting, college, and a whole range of social activities such as weddings, anniversaries, birthdays, family vacations, and reunions. Of course if you are a homeowner there is another long list of time-consuming chores

that need attention, of which the least is maintaining, mowing and raking.

In light of this, I want to bring your attention to the four guys who have consistently devoted much of their time to maintaining our clubhouse. At times it has been a heroic effort for them. They are no less busy than the rest of us, but yet over the last 10 to 12 years they have been there for us, planning, designing, building, repairing and maintaining our clubhouse. JOHN REED, PAUL CICCETTI, STEVE CLOUGHERTY and DAVE PROWTEN are a few of the people that make our club so special. Mega kudos men! When you see these guys at the next meeting, please thank them for their efforts. As humble as they are, I know they would appreciate some thanks.

I would also like to thank the executive board for supporting me during my two-year term. EILEEN MYERS has done a most remarkable job in elevating the quality of our newsletter. She has also spent innumerable hours on the phone planning and arranging what now has become an annual club tradition: our bus trip to New York City to visit the Rose Center. Eileen, along with JOHN REED, has organized our New Year's Eve parties and club picnics. She has also organized several observatory tours. Thank you Eileen, and I hope you continue the great job.

JOHN SMALL has done a fine job as the membership secretary. We will miss your organizational skills, John. Thanks. BERNIE VOLZ, you have done a fine job as usual as treasurer. Keep up the good work. I would like to thank member-at-large BRUCE BERGER for his efforts on behalf of the membership, as well as STEVE CLOUGHERTY for helping out on observing nights. Thank you MARIO MOTTA, who has just completed serving the last of his six years as a Past President on the executive board. Thank you club historian ANNA HILLIER, who continues to add to our club history, maintain the club library, and cook at work party lunches. Thank you PETER BEALO and JOSEPH ROTHCHILD, who will remain as Past Presidents on the Executive Board. Lastly, thank you Observing Chairman RICH NUGENT, wherever you are! We miss you and thank you for all of the work you've done over the years for the club.

One last thing I would like to mention. Our annual Baxter State Park Wilderness camping trip is approaching fast. There are still spots available, so come join us in the fun of all night observing and all day hiking. Sign up at the next meeting. The dates are July 3-14.

-Bob Collara, President-

Annual Meeting...

THE ANNUAL meeting of the Amateur Telescope Maker's of Boston, Inc. will be held Thursday, June 13, 2002. The election of the 2002-2003 Executive Board will take place at this meeting.

Executive Board Meeting Rescheduled...

DUE TO the unexpected absence of a quorum (six board members) at the June 2nd meeting, there will be an Executive Board meeting on Sunday, June 23 at the clubhouse at 6:00PM. Topics scheduled for discussion so far are: next year's budget, dues, the International Dark-Sky Association (IDA) meeting in the Fall, the purchase of a second Mosquito Magnet, joining the Astronomical League, and rules for operating the new observatory.

-Bob Collara, President-

May's Minutes...

PRESIDENT BOB COLLARA opened the 748th meeting of the Amateur Telescope Makers of Boston, including the Bond Astronomical Club. Our guest speaker was Brian Lula, whose topic, "An Odyssey In Telescope Making", drew a large crowd. Smiling broadly throughout his talk, Brian started by describing that as a school project he built a mirror grinding machine to grind a 12", and later bought a mount for \$20 from the school. He talked about the observatories, telescopes, and CCD cameras he has built since. Brian talked about CCD imaging and the types of problems he has encountered. His website www.heavensgloryobservatory.com has images and details of some of his more recent work.

At the business meeting club officers gave their reports. The Nominating Committee presented their slate of candidates for the 2002-2003 club officers. DICK KOOLISH showed photos of Astronomy Day. Comments were made that there was not nearly the number of visitors to the astronomy exhibits as in previous years due to the off-the beaten-track location.

-Eileen Myers, Secretary-

Candidates for 2002-2003...

THE NOMINATING COMMITTEE is offering the following slate as officers for the club for fiscal year 2002-2003:

President	Eileen Myers
Vice-President	Bruce Berger
Secretary	Mike Hill
Treasurer	Bernie Volz
Membership Secretary	Peter Psyhos
Member-At-Large	Dan Feldkhun
Member-At-Large	Lew Gramer

There will also be three Past Presidents serving on the Executive Board: Bob Collara, Joseph Rothchild, and Peter Bealo.

Members have the right to offer additional nominations from the floor during the annual meeting. A written notice containing the name(s) of the person(s) to be nominated, along with the signatures of at least seven members needs to be filed with the club Secretary not less than ten (10) days prior to the date of the annual meeting. The annual meeting will be on June 13th.

Humbly submitted by the Nominating Committee,

Chairman Bruce Berger, Mike Hill, and Peter Psyhos

Membership Report...

THIS WILL be my last month as Membership Secretary. I have done it all or in part since 1997 and it has been a lot of fun and very rewarding. I am continually amazed at the dedication of our membership to both the club and Amateur Astronomy. This is shown in the form of donations, work parties, star parties and on the boards.

As we start our new fiscal year we have a membership base of close to 350 members. As I step down I do so leaving the club with a strong membership base and to a replacement that I feel will do the club proud. Barring any revolution at the June meeting, PETER PSYHOS will be the new Membership Secretary. Peter joined the club in 1997 and has been very active since. He makes it a point to attend as many star parties and work parties as possible and still

manages to get some time to himself to observe. I will assist Peter in the renewal process this year and will make every effort to assist him with the transition. It has been a real pleasure serving you all.

We would like to welcome the following new members this month: TOM BERGMAN, Billerica; JAMES FRANCIS, Natick; DAVID HINDS, Billerica; KENNETH KENYON, Seekonk; TERRY MCGRATH, Marblehead; DAN PAIKOWSKY, Newton; LYNN PAIKOWSKY, Newton; ALWARD PINARD, Westford; SCOTT ROMANOWSKI, Billerica; DAVE SIMONICH, Pepperell.

-John Small, Membership Secretary-

Treasurer's Report...

FOR THE month of April we had \$188.58 in revenue and \$500.03 in expenses for a net loss of \$311.45 for the month.

As of April 30th, 2002 our assets were:

Checking Account - Regular	\$ 12,629.01
Investments	\$ 26,001.67
Total Current Assets	\$ 38,630.68

Of the total, \$2,641.21 is in the Land Fund and \$155.00 is for clubhouse key deposits. It looks like we'll have a net income of just over \$2,450.00 for the year. Unaudited final figures for the fiscal year will be available in the next Star Fields.

-Bernie Volz, Treasurer-

Clubhouse Report...

Clubhouse Saturday Schedule

June 8	Lew Gramer	John Reed
June 15	3 p.m. - midnight	ATMoB Picnic
June 15	Dan Feldkhun	Steve Herzberg
June 22	Paul Cicchetti	Eric Johannson
June 29	Jack Drobot	Phil Rounseville
July 6	John Panaswich	David Richardson
July 13	Steve Herzberg	Peter Psyhos
July 20	John Small	Jim Suslowicz
July 27	Paul Cicchetti	Dave Prowten

THIRTY MEMBERS attended mirror grinding over four Thursday evenings, and 70 members observed over 5 Saturday nights and 1 Red Light Friday night.

Through construction efforts on May 6, 19 and 23, the observatory entrance sonotube forms were set, concrete mixed and poured, J-bolts inserted, and framing installed and bolted in place. The ramp frame was constructed and attached to the deck frame with heavy-duty hinges. During the May 25 work party the deck and ramp were completed with flooring boards and the entrance is now in use. Following procedures perfected during the April work session, the team led by DAVE PROWTEN successfully installed the west rail and the set of 5 6" wheels under the rolloff roof's west box beam. This completed the structure necessary for roof movement; 2 persons then easily tested this system over a short distance. ED KNIGHT is now designing and fabricating four spring-loaded bumpers for installation at the ends of the rails. Thanks go to DAVE PROWTEN, BRUCE GERHARD, ANNA HILLIER, BRUCE BERGER, WELCOME BENDER, ED KNIGHT, STEVE CLOUGHERTY, STEVE MOCK, JOHN BLOMQUIST, MARION HOCHULI, AND GARY JACOBSON. Lunch was prepared by ANNA HILLIER, assisted by BRUCE

BERGER and STEVE CLOUGHERTY.

A new finder with 45° offset eyepiece was attached to the 17" Newtonian by STEVE CLOUGHERTY and BRUCE GERHARD, with a set of diving weights retrieved from King Neptune by Bruce G. installed as counterweights. The finder was purchased with coffee fund proceeds.

A big thank you to BERNIE KOSICKI of Acton for his donation of a large gas grill for the clubhouse porch. It was reassembled and fired up with the new propane tank. BOB COLLARA has volunteered to repair our "BERNIE VOLZ" grill.

The fiberglass roof covering effort will commence during the upcoming June 22 work party. *-John Reed, Clubhouse Director-*

Club Picnic...

COME TO socialize, observe, and tour at the Saturday, June 15 ATMob picnic, 3 p.m. until midnight. Club members, their families, and friends are invited. The picnic will be held at the clubhouse in Westford. In addition to solar and night sky observing, a tour of the MIT Haystack Observatory has been arranged for 5 p.m. RSVP to Eileen Myers at starleen@charter.net or 978-456-3937 if you want to go on the tour. You will be notified of the exact time to be "up the hill" at the observatory.

Please bring something tasty to share with others, such as a salad, main dish, or dessert. Bring a serving spoon too, and a soda or juice to share. **Also bring a folding chair or a blanket to sit on.** We will have the hamburgers, hot dogs, potato chips, ketchup, mustard, coffee, paper goods, and plastic cutlery. Bring your telescope too. Directions to the clubhouse can be found on the last page of *Star Fields*. *-Eileen Myers, Secretary-*

Astronomy Events Calendar 2002...

June 15	Club Picnic	Clubhouse
July 3 - 14	Maine Camping	Baxter State Park
July 12-14	Arunah Hill Days	Cummington MA
August 9-10	Stellafane	Springfield VT
September 6-8	Conn Star Party	Colebrook CT
September 6-8	Conjunction	Northfield MA
September 14	Club Picnic	Clubhouse
October 5	Astro Assembly	North Scituate RI
October 25-26	AAVSO / IDA	Boston MoS

Star Party Thank You's...

ASTRONOMY DAY AT THE BOSTON MUSEUM OF SCIENCE

ATMoB members who participated that day were: TOM CALDERWOOD, PAUL and VINCENT CICHETTI, KATHY CUNNINGHAM, GEORGE FOSTER, BRUCE GERHARD, ROGER GREENWOOD, SHAWANA KAUSAR, DICK KOOLISH, CHARLIE MCDONALD, EILEEN MYERS, TED POULOS, DARYL DAVIS, PETER PSYHOS, JOHN REED, TANIA RUIZ, DAVE SIEGRIST, ART SWEDLOW, SAI VALLABHA, TOM WOLF, ISHRAT N. ZAHID, and all the others whose names we could not remember as we sat at a table eating dinner in the Papa Razzi Restaurant writing down this list while waiting for the skies to clear for the evening star party.

A VERY successful star party was held at the Birch Meadow Elementary School in Reading. It had been postponed once, but this time the sky was beautiful. Lecturer Paul Manning, dressed in a jumpsuit, gave a general talk on astronomy to the more than 200 attendees. Thanks go to the following who brought telescopes: BOB COHEN, DARYL DAVIS, JACK DROBOT, CHARLIE MCDONALD, PETER PSYHOS, JERRY SKALA, JIM STONE, and TOM WOLF. *-Charlie McDonald-*

CHELMSFORD LIBRARY ASTRONOMY MONTH EVENTS ORGANIZED BY BRUCE BERGER AND GARY JACOBSON: May 4 Solar Observing: JACK DROBOT, KELLY and CHERYL BEATTY, MIKE HILL (who brought his Spectroheliroscope), GARY JACOBSON, EILEEN MYERS, and STEVE SARGENT.

May 16 Star Party: KELLY and CHERYL BEATTY, BRUCE BERGER, TOM BERGMAN, JOHN BLOMQUIST, CHUCK EVANS, JOAO GEADA, GARY JACOBSON, BERNIE KOSICKI, GLEN MEURER, EILEEN MYERS, PETER PSYHOS, KEVIN SNELL, and AL TAKEDA. Also notable was JOHN COSTA, who says he is a former member of ATMob. Perhaps some folks know him. *-Gary Jacobson-*



Photo by Bruce Berger

Solar viewing with Steve Sargent

THE TOWN OF Harvard Star party was cancelled twice for cloudy skies. The first time KATHY CUNNINGHAM and JACK DROBOT stopped by to help. As soon as they left, 15 cars with at least 4 people in each arrived to view the night sky. Clouds? They never thought to look up. The next attempt was with JOHN BLOMQUIST, CARL HEIN, ED KNIGHT, and ANDY WARNER. Once again clouds and rain chased everyone away. Two hours after the scheduled start time the skies cleared and a few townsfolk returned. John, who waited out the weather, wowed them with the Moon and the planets, and a tiny group stayed to observe until midnight. *-Eileen Myers-*

THANK YOU to everyone who brought telescopes out to our CfA Friday night and Saturday morning events, May 10 and 11. Dave, John H., John S., Kathy, Steve, Peter, Rich, Mike, and anyone else I missed -- we couldn't have done it without your help! There were

about 400-500 people at Hopkinton State Park, and we were surprised that more than 200 people came to Cambridge for our 3 a.m. viewing. (Those doughnuts went fast!) A good time was had by all. And I'll never forget my view of M13 through a 20-inch Dobsonian -- thanks, Rich!

-Christine Lafon, Public Affairs, CFA-

Upcoming Star Party...

Friday, June 21 – A Solstice Star Party for the Town of Harvard will be held at the Depot Rd. soccer field 9:00-11:00p.m. Yes, folks, I am going to try it again! The phase of the Moon will be waxing gibbous with 87% of the Moon's visible disk illuminated. Venus will be visible; Jupiter and Mars will be low. Please contact me if you can help out at starleen@charter.net or 978-456-3937.

-Eileen Myers-

Other News...

MARIO MOTTA still needs volunteers to help out at the International Dark Sky (IDA) / New England Light Pollution Advisory Group (NELPAG) meeting at the Boston Museum of Science on October 25. Please email Mario at mmotta@massmed.org

THIRTY-TWO ATMob members took advantage of the two opportunities to tour the Oak Ridge Observatory in Harvard, MA. Thank you Joe Caruso for explaining the history and use of the different telescopes in the facility.

THE ATMob CLUBHOUSE, as well as John Reed and John Small, were featured in a May 5, 2002 Sunday *Boston Globe* Travel Section article written by Tom Haines and subtitled STARGAZING GROUPS LIKE TO BE LEFT OUT IN THE DARK.

THE NEXT ATMob bus trip to the Hayden Planetarium and Rose Center in NYC is tentatively Saturday, October 19. The new planetarium show is "The Search For Life... Are We Alone?", narrated by Harrison Ford. They will "...whisk you...to newly discovered planets on a quest for worlds that might support life."

AN ATMob member has made a donation of nine subscriptions to the magazine *Odyssey, Adventures in Science*, to the public schools of Reading. The donations carry the club's name. Two books from the Astronomical Society of the Pacific catalog were donated as well.

Solar Faculae...

WHILE OBSERVING the Sun at the Chelmsford Library last month, one of the more notable features, seen initially by Eileen Myers, was a number of bright patchy areas visible primarily near the limb. The question arose as to what the features were.

These features are known as Faculae, which is Latin for "little torches". They are caused by concentrations of magnetic field lines coming in and out of the Sun's surface, similar to those that cause sunspots, but with a much lower density. They appear only near the limb due to the effect of limb darkening, providing greater contrast.

Faculae are often confused with Plages. These too are white patchy areas, but are seen only in the red light of H-Alpha. Both are actually caused by the same magnetic field lines, but one is a photospheric phenomenon (Faculae) and the other is a chromospheric phenomenon (Plages). Plage, by the way, is French for the word "beach".

Much work has been done in the past concerning the Solar Constant, which is the varying brightness of the Sun. Although it only varies by $\pm 0.1\%$, the Sun is in fact a variable star. It was originally thought that the Sun would be dimmer during solar maximum due to the increased area of the Sun being covered by the cooler, darker sunspots. It turns out, however, that the Sun is brighter during solar max due to the faculae. While both features vary over the 11-year cycle, the faculae appear all over the Sun's surface, whereas sunspots only occur in limited latitudinal ranges. The overall brightening of the faculae wins out over the darkening by the spots. This is more evident in the H-Alpha view where the plages are found to be visible across the entire disk of the Sun.

Want to do some research? Well here are some questions for thought. Do all spots have facular areas surrounding them? Which comes first: the faculae or the spots? Any white light solar telescope could be used to investigate these questions. How closely do plages correspond to faculae? If you're lucky enough to have an H-Alpha filter and a white light scope, this might be an interesting thing to look into as well.

-Mike Hill-

Red Planet Mars – Bah, Humbug...

THE RED PLANET is actually butterscotch. An exhaustive review of 17,500 Mars Pathfinder images taken in 1997 reveal that the planet is not red but yellowish brown. Its sky is yellowish brown. So is the dirt. The spectrum of the colors on the planet really range from a more reddish yellow-brown to a rather bluish yellow-brown.

Of course, the Hubble Space Telescope had shown Mars to be red. Further study found that Hubble was colorblind and needed to be recalibrated, according to Justin Maki, the study's lead author and an imaging scientist at NASA's Jet Propulsion Lab in Pasadena, Calif.

Viking probes in the 1970s indicated Mars was yellowish-brown, but the public insisted on the more romantic sounding red Mars. Maki hopes to change Mars to the Butterscotch Planet, or perhaps the Goldenrod Planet.

So why does everyone else on Earth think that Mars is red? Apparently yellow-brown is hard to see from afar. Our eyes see the nearest easy-to-spot color, red, according to Peter H. Smith of the University of Arizona. It looks red to the eye when you look from the ground, but just when you get there it's not red anymore.

-Charlie McDonald-

**July *Star Fields* deadline is
SUNDAY, June 30th
Email articles to**

new

Star Fields Editor / ATMob Secretary

Mike Hill at noatak@aol.com

**Articles from members are always
welcome**

POSTMASTER NOTE: First Class Postage Mailed June 7, 2002

Amateur Telescope Makers of Boston, Inc.
c/o John Small, Membership Secretary
9 Bear Hill Terrace
Westford MA 01886-4225

FIRST CLASS

EXECUTIVE BOARD 2001-2002

PRESIDENT: Bob Collara day (978) 284-5812
eve (781) 275-9482
VICE PRES: Steve Herzberg (617) 965-2858
SECRETARY: Eileen Myers day (978) 461-1450 x0
eve (978) 456-3937
MEMBERSHIP: John Small day (617) 484-2780 x119
eve (978) 692-8938
TREASURER: Bernie Volz (508) 881-3614
MEMBERS AT LARGE:
Bruce Berger (978) 256-9208
Steve Clougherty (781) 784-3024
PAST PRESIDENTS:
1998-00 Joseph Rothchild (617) 964-6626
1996-98 Peter Bealo (603) 382-7039
1994-96 Mario Motta (781) 334-3648

COMMITTEES

CLUBHOUSE DIRS: Paul Cicchetti (978) 433-9215
John Reed (781) 861-8031
Steven Clougherty (781) 784-3024
HISTORIAN: Anna Hillier (781) 861-8338
OBSERVING: Richard Nugent (508) 879-3498

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.

Heads Up For June...

To calculate Eastern Daylight Time (EDT) from Universal Time (UT) subtract 4 from UT.

Keep watching the pairing of Jupiter and Venus. Mars is to the lower right.

Wed, June 12 - Mars 0.9° S of Moon

Thurs, June 13 - Jupiter 2°S of Moon, Venus 1.5°S of Moon

Fri, June 14 – Earliest sunrise (approx. 5:09 a.m.)

Thurs, June 20 – M44 Beehive Cluster to the lower left of Venus

Fri, June 21 - Solstice (longest day, shortest night) 9:24 a.m. EDT

June 27 – Latest sunset approx. 8:28 p.m.

On New Moon Monday, June 10 an annular solar eclipse will be visible from Indonesia to southern Mexico.