ATM BOSTON inc.

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. 14, No. 4 April 2003

This Month's Meeting…

Thursday, April 10th, 2003 at 8:00 PM

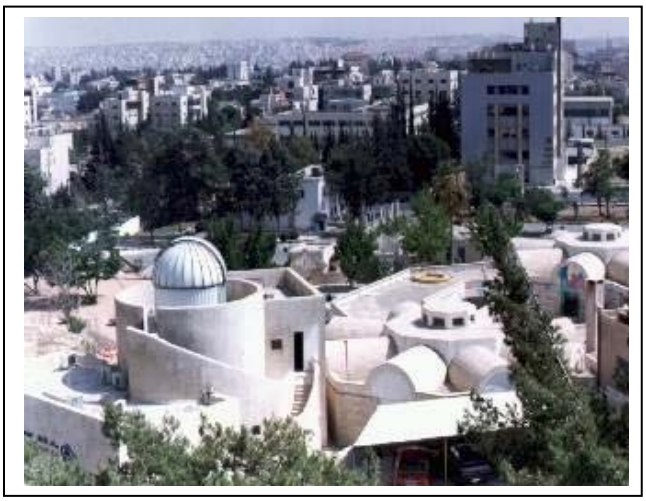
Phillips Auditorium
Harvard-Smithsonian Center for Astrophysics

This month's speaker will be Joe Caruso of Oak Ridge Observatory in Harvard, MA. Joe runs the 61-inch Wyeth Reflector telescope located there and has also given hundreds of tours of the facility and of the night sky. Joe studied Astrometry (stellar positions, parallaxes, proper motions) at Wesleyan University in Connecticut, and at one time worked with Winifred Cameron at NASA Goddard Space Flight Center in Virginia, world expert in Lunar Transient Phenomenon (LTP). The title of Joe's talk will be "The Geologic History of the Moon". Come and learn something about the Moon – it is way more interesting than you think.

Please join us at 5:45 PM for dinner at the Changsho Restaurant located at 1712 Mass Ave. in our fair city, Cambridge. ***-Eileen Myers, President-***

President's Message…

Like many of you I have been watching TV and listening to the radio, following the events in Iraq. I decided to spend a few hours searching the Internet for any information on amateur astronomy in Iraq. There are a few small astronomical clubs & planetariums in "youth ministry", and occasionally specials on TV. There are courses on astronomy and astrophysics in most of the Iraqi universities, while at the University of Baghdad (College of Science), there is an astronomy department, established in 1998, for undergraduate and postgraduate studies. Its Al-Battani Observatory contains a 40-cm reflector and a 20-cm refractor, purchased from the Japanese GOTO company. The observatory is located in Tarmia, about 50km from Baghdad. The University of Babel in Southern Iraq has an agreement for scientific cooperation with the Jordan Astronomical Society (previously the Jordanian Amateur Astronomers Society), so I checked out the JAS website. The JAS reports having 50 active members, and in January 2000 *Sky & Telescope* published an article about them. Their website contains some useful bits of information. Arabic and Islamic craters-names on the Moon can be found at http://www.jas.org.jo/cra.html and Arabic Star Names are listed at http://www.jas.org.jo/star.html I already knew that most star-names in European languages are in Arabic but I realized that a number of technical terms such as "azimuth" (al- sumut), "nadir" (nazir), and "zenith" (al-samt) are also of Arabic etymology. ***-Eileen Myers-***



Meeting place of the JAS in Amman, Jordan

March Meeting Minutes . . .

Eileen Myers opened the 757th meeting of the Amateur Telescope Makers of Boston with a short except from the history of the club recalling the time when the Test Tunnel used for optical testing was first installed, of all places, under the HCO 15" telescope building.
Eileen then introduced our speaker Dr. Supriya Chakrabarti of the Center for Space Physics at Boston University. Dr. Chakrabarti spoke on his work with one of NASAs Small Explorer Mission (SMEX) satellites called SPIDR. This stands for the Spectroscopy and Photometry of the Intergalactic mediums Diffuse Radiations. In other words, dark matter. This dark matter however is in the form of very hot gas that has evolved into huge filamentary structures making up the "cosmic web". The ultimate goal of course is to answer fundamental question on the structure and evolution of the universe.
Dr Chakrabarti outlined the science objectives of the project, the measurement approaches used, and the difficulties involved. These are mainly due to the very weak signal that they are measuring in the UV region of the spectrum and the effects of background noise both terrestrial and in the interplanetary medium. Much of the noise is eliminated by the nature of the satellites' orbit and the clever scheduling of measurement and data downloading during the course of this orbit.
The hardware for this mission is being built locally at Draper labs which will include hardware developed at MIT. Mission control is to be located right here at BU. Some of the instruments were described and included some complex optics such as a torroidal diffraction grating as part of the primary spectroscope. Operational details are too complex to describe here but the net effect is to sample large sections of the sky at Doppler shifted sections of the UV spectrum that represent varying distance from earth. These are built up like a medical CAT scan to give a three dimensional view of that part of the universe. Visit the website of this mission at www.bu.edu/spidr for lots more details.
The talk was followed by a short business session including the reports by the board members. Eileen announced that on April 5, there will be special Ladies Only observing session up at the clubhouse. Other star parties were announced as well. See the listings later for details. Eileen announced that 3 people had responded to our new Astro-Buddy system desiring assistance from other local members. Hopefully some members will respond to these requests. Finally Eileen accepted another set of books from Tal Mentall donated to the club for our library. Thank you Tal from all of us. ***- Michael Hill -***

Treasurer's Report . . .

For the month of February, we had $176.62 in revenue and $270.47 in expenses for a net loss of $93.85 for the month.

As of February 28th, 2003 our assets were:

Checking Account - Regular $ 13,841.07
Investments $ 30,428.92
Total Current Assets $ 44,269.99

Of this $44,269.99, $2,804.31 is in the Land Fund and $155.00 is for clubhouse key deposits.

For the first 9 months of the fiscal year, we've had $13,496.74 in income (compared to $14,571.25 last year) and $7,636.54 in expenses(compared to $11,339.30 last year) for net income of $5,860.20 (compared to $3,231.95 last year). ***- Bernie Volz -***

Membership Report…

This month we welcome two new members, both of whom were referred to us by Boston Telescope. They are GLENN BENSON of Newton MA, and PAUL TRAVERS of Lincoln MA. We have gotten a number of inquiries recently by email and phone. There is a lot of interest out there in what we do. Keep up the good work, and welcome to the club Glenn and Paul.***- Peter Psyhos -***

Clubhouse Report

Unfortunately, only two committee members came help out at the last work party, but some work was accomplished. Mainly, the row of trees\brushes along the road were trimmed in order to increase the observing view in the Milon Observing field. Also, some prep work was started in order to build the new set of stairs that will lead up to the barn attic. Thanks to Steve Cloughtery and Bruce Gerhard. Change of schedule due the upcoming Starconn convention; the next work party will now be on the 12th of April instead of the 19th.
– Paul Cicchetti

Clubhouse Saturday Schedule

April 5	Jack Drobot	Steve Herzberg
April 12	Ed Budreau	Eileen Myers
April 19	Rick Burrier	Dave Prowten
	Work Party at Clubhouse	
	StarConn – (www.asgh.org)	
April 26	Lew Gramer	Brian Maerz
May 3	Steve Mock	Steve Clougherty

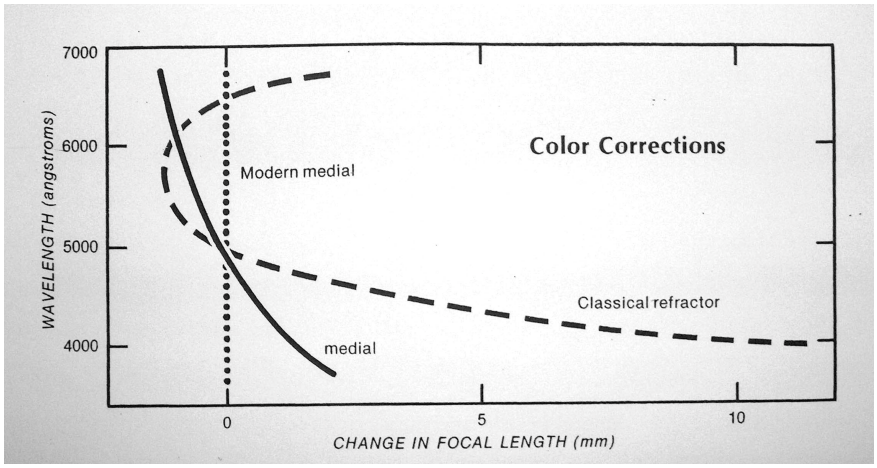
How Good is That Schupmann ??

I'll admit it. I was clueless. As I worked on the mount for the ATMoB Schupmann telescope, my driving force was to get a telescope into the observatory and it just happened to be this telescope that was slated to go in first. I had heard the name Schupmann many times in discussions about its installation and I knew Mike Mattie, a former member had won first place at Stellafane for its superb optics. I also knew of the McGregor Schupmann built by the Springfield Telescope Makers in Vermont. What I didn't know was HOW good this telescope was and why. I was clueless. Well the other day, Dave Prowten, John Blomquist and I visited the home of Jim Daley, the man who built our 6" Schupmann and one who is somewhat of an expert on this telescope design. I got an eye opening lesson on its merits and design.

Why should we be so proud to have one of these in our observatory? It's all in the design. A Refractor in itself has some very good properties going for it, the most notable being that there is no central obstruction to create diffraction rings, and the closed tube which prevents air currents. These serve to give very good diffraction limited images. The drawback of a refractor is of course the color or Chromatic Aberration where all the colors of light don't focus at the same point. The result of this is a red or blue ring surrounding bright objects. An apochromat will reduce this error but they are expensive lens systems.

A solution to this is the Schupmann Telescope design. It uses a simple single element objective with even more color aberration than the achromat. This is corrected however by a second lens, called a mangin, that has the exact same color aberration but of the opposite sign of the objective. The result is TOTAL removal of any color aberration in a telescope that has the desirable properties of a classical refractor. In addition, the design utilizes a baffle called a lyot stop at the corrector that blocks the light from the edge of the objective that can scatter into the image and reduce contrast. The result of this is a very dark background when looking through the eyepiece.

So the Schupmann is a very special telescope that we should all be glad to have in our new observatory. It is very unique as not many have been built, has very good optical properties making it a very good observational tool, and for us mirror makers this design beckons for its construction because it's so different, inherently simple to make yet quite a challenge none the less. Maybe another one of us will have one these telescopes up at Stellafane someday. **–** ***Michael Hill –***



Copied from "The Neglected Schupmann Refractor" Sky & Telescope, March 1983

Note: These telescopes are referred to as "Medial Refractors" where the word medial refers to the corrector lens at the midpoint of the optical train

Star Party Thank You's …

Acton Star Party March 3rd
"Good things come to those who wait"

What a great night... I think we had over 200 kids plus parents... 3 of the 5 Elementary schools participated last night. Everything seemed to come together correctly... the weather, the telescopes, the volunteers, the snacks, the activities, the students, the parents, the teachers, and most importantly.. all the celestial wonders - what a perfect evening. definitely worth the wait. We ended up with 13 scopes last night which included a parent of one of the students. Our guest lecturers... Paul "Galileo" Manning and Alan MacRoberts - had the full attention of the kids and their parents. I think everyone did a fabulous job.. Thank you for all your time that you contributed last night. It was well received by all the attendees.
- Steven Feinstein -

March 3rd Volunteers
Charlie McDonald, John Reed, Johnathan Hopewell, Scott Chizzo, Chris Porth, Dave Snay, Bruce Berger, Chuck Calvin, Tom Bergman, Karen Funkenstein, Bernie Kosicki, Dan Berslin, and of course, Eileen Myers

Acton Star Party March 10th
"Great weather prevailed again... two weeks in a row!!!"

What a great night... I think we had close 200 kids plus parents... The final two Elementary schools participated last night. And again everything seemed to come together correctly... the weather, the telescopes, the volunteers, the snacks, the activities, the students, the parents, the teachers, and most importantly.. all the celestial wonders - what a perfect evening. One of the best parts of the evening? We found the switch to turn off the security lights!!!! We ended up with 9 scopes last night which included two parents of the students. Again, our star guest lecturers... Paul "Galileo" Manning and Alan MacRoberts - had the full attention of the kids and their parents and the multimedia astrophotography show (provided by Gary Green) wowed everyone. Thank you for all your time that you contributed last night. We have already been invited back for next year.
- Steven Feinstein -

March 10th Volunteers
Dan Breslin, Bernie Kosicki, Glenn Skinner, Chris Porth, Chris Shea, Ellie and Bob Halsey., Scott Chizzo, John Maher, and Dave Snay for keeping everything organized.

See big "Thank You" from the kids...
<http://atmob.feinstein.net/thankyouindex.html>

I wish to thank all of you who helped out at the following star parties held in March and April ***-Charlie McDonald, ATMoB Star Party Coordinator-***

Barrows Elementary School in Reading on February 5th: Peter Bealo, Bruce Berger, Bobby Cohen, Jack Drobot, Steven Feinstein, Dan Feldkhun, Brewster LaMacchia, Charlie McDonald, Eileen Myers, Bill Toomey, and Paul Manning lecturing as Galileo. Attendance was about 150. A reporter covered the star party for the Education Section of *The Boston Globe*. The article appeared in the February 16th edition of that newspaper.

Joshua Eaton Elementary School in Reading on February 5th: Tony Flanders, Eileen Myers, and Rich Nugent as lecturer. Attendance was about 300. A reporter from the *Reading Chronicle* covered the star party. The article appeared in the March 14th edition of that newspaper.

This was the first time that ATMoB ran star parties at two different schools in the same town on the same night, making over 450 people in the town of Reading looking at the stars on one night.

Rogers Elementary School: Bill Toomey would like to thank those who helped out at the star party at the Rogers Elementary School in Lowell on March 17th: John Blomquist, John Reed, and friends Mark Lemire, 16-year-old Jason Voss, and Christine Voss. Bill Toomey was the lecturer. There were 120 attendees.

St. Michael's School in North Andover on March 18th: John Blomquist, Ted Carlman, Bobby Cohen, Charlie McDonald, Eileen Myers, John Reed, and Brewster LaMacchia as lecturer. There were over 200 in attendance, and the fog rolled in just as the last group finished observing.

Reading Unitarian Universalist Church "Youth Coming-of Age" group and their advisors on March 21st: Bobby Cohen, Jack Drobot, Charlie McDonald, Eileen Myers, and Jerry Skala. The skies clouded up so there were only 10 youths and 10 advisors in attendance, but the group welcomed me with an unexpected birthday party.

Birch Meadow Elementary School in Reading on March 25th: Tom Bergman, John Blomquist, Marsha Bowman, Bobby Cohen, Jack Drobot, Charlie McDonald, Eileen Myers, John Reed, and Paul Manning lecturing as Galileo. My neighbor Ray Thmosh and my ex-boss Gary Oczkowski helped out too. Birch Meadow Elementary School is my home Project Astro school.

Pollard Elementary School: Peter Bealo would like to thank those who helped out at the star party held November 8th for the Pollard Elementary School PTA in Plaistow , NH: Sean Walker, Neil Rabideau, Kevin McCarthy, Kurt Sidor, Brewster LaMachia, Bob Cusolito and John Blomquist (all the way from Fitchburg!). The event, held at Plaistow's only working farm, had about 375 in attendance. The school offered to make a donation to the club, but Peter matched the amount and purchased books on astronomy which he donated to the school instead.

Morey School: Over two hundred 3rd & 4th grade children and their parents or friends enjoyed the
2nd Annual Morey School Star Party on Monday, March 10th. Bill Toomey gave three slideshow presentations, and telescope volunteers included John Reed, Charlie Mcdonald, Chuck Evans and his friend Tom Lumenello, John Blomquist, Eileen Myers, Bruce Berger, Michael Carnes, and yours truly. There were plenty of refreshments to go around, including hot chocolate, soda, cookies, and 22 quarts of chili. Thanks to my wife, Diane, for helping on the chow line. Again my sincere thanks to to all, and especially Science Specialist Pat Keegan of the Morey School for helping to organize a fine evening !
JACK DROBOT

Upcoming Star Parties:

April

Friday, April 4 – Mill Rd Soccer Fields in Chelmsford – Observing starts around 7:30pm – Large crowd expected - Coordinator Bruce Berger bruceberger@scopemake.com 978-387-4189

Wednesday, April 16 – Butler Middle School, Lowell – Expected attendance 200 – Observing starts at 7:30pm - Coordinators Jack Drobot 978-692-8093 and Charlie McDonald 781-944-6140.

Monday, April 28 (cloud date Tues, May 6) – Lynnfield Middle School – Observing starts at 7:30 PM - Coordinator Mario Motta mmotta@massmed.org 781-334-3648, wk 978-744-3499

May

Saturday, May 3 - There will be a star party for 100+ girl scouts and leaders at Girl Scout camp Runnels. The camp is located on Route 38, 9.5 miles north of Interstate 495 exit 38 in Pelham, NH.
The scouts will all be from Westford, so any ATMoB members from Westford with girl scouts attending, please help out if you can. Of course, any other members are also welcome and encouraged to attend. There will be no rain date. If you can or may be able to help, please contact Gary Jacobson at gdjacobson@mindspring.com

ASTRONOMY DAY - Saturday, May 10
Museum of Science, Boston– Coordinators Dave Siegrist David.Siegrist@intel.com and Sai Vallabha at ssvallabha@hotmail.com 603-890-5442

What can you do to help? Be there! It does not take a great deal of knowledge about astronomy, telescope making, or mirror making. You don't even have to worry if your knowledge of the sky is not perfect. Other folks will help you set up, and be comfortable with what you are doing.

We will be there from 8:30 to 4:00, talking with folks, grinding, showing sun spots, and having a great time. We adjourn for dinner, and return for the star party that evening. So come for part of the day, or the entire day, and be prepared to have more fun than a volunteer should have.

If you are planning on being there, please send me a note (David.Siegrist@Intel.com <mailto:David.Siegrist@Intel.com>), or call at the club house any Thursday night, and I will arrange a name badge from the museum.

You don't have to pay admission, and parking will also be vouched.

June

Sat, June 21 – Tewksbury – Space Day – Coordinator Paul Manning

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May *Star Fields* deadline
Sunday, April 27th

Email articles to Mike Hill
at noatak@aol.com

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POSTMASTER NOTE: First Class Postage Mailed April 4th , 2003

Amateur Telescope Makers of Boston, Inc.
c/o Peter Psyhos, Membership Secretary
41 Fair Oaks Dr
Lexington, MA 02421

FIRST CLASS

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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 Month...

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

April 6 Daylight Savings time Begins
April 7 Saturn's ring system most open at an angle of 27°
April 9 First quarter moon
April 11 Jupiters Moon Ganymede partially eclipses Io @ 11:36 EDT
April 16 Full Moon
April 22 Lyrid Meteor shower just before dawn
April 23 Last quarter moon
Mars doubles in brightness this month and grows to 9½' wide (morning sky)