



**STAR
FIELDS**

BOSTON

NEWSLETTER OF THE AMATEUR
TELESCOPE MAKERS OF BOSTON

Vol. 6, No. 8 September 1995

Our September Meeting...

Thursday, September 14th, 1995
Phillips Auditorium, Harvard-Smithsonian
Center for Astrophysics

WE WILL start our new season off with a bang, literally. Heidi Hammel will be our first speaker of the year, and will discuss "The Catastrophic Collision of Comet Shoemaker-Levy 9 with Jupiter". Dr Hammel was the lead scientist of the Hubble Space Telescope Team that investigated Jupiter's atmospheric response to the collisions. She was also a member of the team using NASA's Infrared Telescope Facility on Mauna Kea, Hawaii, and was a central part of an effort to obtain complete coverage of the impacts using small portable CCD systems deployed around the world.

Now that a year has passed since that memorable event, she will be able to show data held up for publication reasons, and give us the benefit of a year of data analysis. In this talk, Dr. Hammel will review the effects of the collision on Jupiter, discuss the implications the observations have for the late comet, and describe Jupiter's current

Dr. Hammel is a principal research scientist at MIT, in the Dept. of Earth, Atmospheric, and Planetary Sciences. She received her degree from this same Dept., and got her Ph.D. in Physics and Astronomy from the University of Hawaii in Manoa. After completing a post-Doctoral position at the Jet Propulsion Laboratory in Pasadena, she returned to MIT in 1990. Dr. Hammel works primarily in the field of outer planets and their satellites, with a focus on observational techniques. She is an acknowledged expert about the planet Neptune, and was a member of the Imaging Science Team for the Voyager 2 encounter with that planet in 1989. As lead scientist of the Shoemaker-Levy impact, she became a familiar figure to the general public with her frequent television news interviews. In this way, she may have inspired many young people to consider a career in the sciences.

Please join us at a pre-meeting dinner at the Changsho Restaurant, 1712 Mass. Avenue, Cambridge. Please meet at the restaurant by 6:00 PM.

Our July Meeting...

IT WAS members night at the last meeting. Before the members various and interesting presentations started, the usual meeting activities took place.

President Mario Motta opened the meeting, Steve Beckwith read the minutes from the previous meeting, Bernie Volz gave the Treasurer's report and Mark Bruckner informed the club the membership stood at 259. He also said he is the Astronomical League contact for the club and that Meade Instruments Corp. will be supplying the award for winners of the Astronomical League's "Young Astronomer" program. The award is a 10-inch Schmidt-Cassegrain telescope. If you're young, an amateur astronomer and interested. Contact Mark for details.

John Reed and Paul Cicchetti gave the clubhouse year end report which is summarized in the Clubhouse News section of this *Star Fields*.

Mario pointed out that since we are financially "in-the-black", membership dues will not be raised this year. John Reed announced the membership raised \$153.00 for a memorial for Walter Scott "Scotty" Houston at Wesleyan University. Matching funds will be provided by the university.

Marion Hochuli had photographs of the Mir-Space shuttle passing overhead and then discussed her successful attempts at locating Pluto with her 8-inch Schmidt-Cassegrain telescope as well as inadvertently finding satellite in geo-synchronous orbit. Dick Koolish showed a 1932 eclipse viewer to the members.

Joseph Rothchild gave a great slide show on several simple but well thought out observing aids he has implemented to augment his viewing.

Vlad Vudler and John Reed had photographs of the Mir-Shuttle pass over taken from the Boston Museum of Science. Vlad exhibited a 150 Watt flashlight that will be attached to the Boston Museum of Science's telescope mount and, with the conjunction of NASA, be aimed at a future space shuttle mission as the orbiter passes over the area.

Mario Motta had slides chronicling the telescope making activity that was part of the Partnership in Astronomy program in the Lynnfield School. He also exhibited slides of deep space objects he took through his 32-inch telescope.

Gary Walker presented and explained variable star data he and others had gathered via CCD imaging.

President's Message...

WHAT MAKES astronomy so appealing to so many people? Is it the quest for the ultimate scientific questions of where are we, where did we come from and where are we going? Is it for the ability to do science as an amateur at home, studying variable stars, solar flares, planetary events (as in this month's talk), or stellar evolution? Or possibly does astronomy reach you at a metaphysical level: do you find yourself out under the canopy of stars in the early morning hours musing about God, life and your place in the cosmos? Or finally is it aesthetic, with the sky filled with pretty and exotic formations to observe and admire? If you are like most amateurs, the appeal of astronomy lies in all of the above to varying degrees.

Even if you are the hardened scientific type, I'm sure you occasionally observe for the sheer beauty that you see. For the casual observers out there, thoughts of how that gas cloud you just observed came to be and how it will evolve must have crossed your mind. Possibly due to work and family pressures, you have not been observing much lately. That would be a real shame. If you are a true amateur astronomer, a good night under the stars can refresh your spirits and allow you to deal with life's stresses all the better. It certainly does that for me.

During the typical busy observing nights when I am fiddling with encoder connections, the CCD camera or hypered film imaging, I find that it does oneself good to stop for a while, chose a far flung galaxy and stare intently at it for some time.

What is its shape, any H2 regions visible, how many billions of stars does it contain, and how many millions of years has the light been traveling before it impacted on my retina. Finally, how many planets filled with intelligent beings with similar thoughts in all these island star groupings. Inevitably thoughts of the vastness of the scale of the universe creep in, and I am humbled by the immensity of it all. I find these moments far more uplifting and delivering me closer to God than most Sunday sermons: the universe as the ultimate cathedral.

After sessions like that life's minor problems become just that, minor problems far easier to take in stride. If you have not observed recently, get out your telescope and get out under the stars. Do it for your hobby, and do it for your soul.

- Mario Motta

Space Day Success...

HAZY, HOT and humid was the prediction for Saturday, July 22nd and for once, the weather forecasters were right! Space Day 1995 was held that day (outside!!) at the Boston Museum of Science and the ATMoB was there to help out. Ken Fye, Walter and Pam Lewis, Ed Los, Ted

Poulos, Jim Suslowicz, Art Swedlow and I treated museum-goers to an introduction to astronomy. We set up a large display table as well as provided some telescopic views of the Moon and a sunspot-less Sun. When clouds interfered, Ed's scope gave impressive views of the Museum's spire! It looked as though clouds were going to spoil the evening star party but Tom Calderwood, Art and I set up our 'scopes anyway. The estimated 250 attendees got to look at Jupiter. The sky was so hazy that the only other objects visible were Arcturus and Vega.

Noreen Grice sent a letter to the club thanking us for helping to make Space Day '95 a great success. I too would like to thank those who helped out! The club really appreciates your time and effort with these events. We always have a great time at the Boston Museum of Science with the Astronomy Day and Space Day celebrations. If you've never been with us, please consider volunteering for one of next year's events. For more information, call me at (508) 879-3498.

- Rich Nugent

For Cloudy Nights...

THREE BOOKS on astronomy and space flight are now available in paperback. "Newton's Clock" by Ivars Peterson, recounts the history of the mathematical study of planetary motion. It reads best for those with a math or physics bent.

"Moon Shot", by Shepard and Slayton, is a highly readable chronicle of NASA's Moon program (Even my mother liked it). Finally, "Angle of Attack" by Mike Gray is a gripping story of the design and construction of Apollo. An excellent book for engineers.

I enjoyed all three. If they are not on your bookseller's shelf, order them.

- Tom Calderwood

On Clear Nights...

TELRAD TIP: A transparent overlay with four and two degree concentric circles placed over a star chart can be extremely useful. By noting the positions of visible stars in relation to the overlay circles when the target object is centered, the Telrad and telescope can be aimed with extreme accuracy.

It is difficult and not necessary to draw tiny circles on clear plastic (believe me, I tried!). For sixth magnitude atlases, use a clear, self-adhesive, notebook page reinforcement (Avery #05721, Office Max). Stick the notebook page reinforcement to a clear, plastic ruler and place this over the star chart. The inner circle is two degrees, the outer circle is four degrees.

On Tiron's 7th magnitude Atlas 2000, four degrees is about 1.25 inches. Use a 1.25 inch key ring!

- Bryan Stone MD., STG

Announcements...

I AM saddened to report that a long time member of the club, Dennis Milon, is gravely ill. He has been in the hospital (Mass. General, Boston) since the first week of June, 10 weeks in the intensive care unit on a respirator as of this writing. His heart is very weak, and his prognosis is poor. Our Prayers and wishes for recovery go out to Dennis and his family. Cards, or flowers could be sent to Dennis at Mass General hospital, and I am sure some visits could cheer him up.
- Mario Motta

WHILE ON Nantucket for our 20th wedding anniversary, I spent some time with the new director of the Maria Mitchell Observatory (MMO), Eileen Friel. The ATM's of Boston have a long history of cooperation and mutual benefit with the MMO, and this should continue with the new director. She told me of some guiding errors that have hampered the use of the observatory. After inspecting the gearing (Alvin Clark drive) and mount, I discovered that the problem is in the drive corrector. (their drive corrector is many years out of date). If any club member has a working corrector that is not being used, and would like to donate it, please let me know. Address of MMO is 3 Vestal St., Nantucket, Mass 02554. (Internet:efriel@mmo.org). If you go to Nantucket, visit the MMO, and introduce yourself as a member of the ATM's of Boston.
- Mario Motta

THE AMERICAN Association of Variable Star Observers (AAVSO) has a new internet address (aavso@aavso.org). Even better, it now has its own web page, that is (<http://www.aavso.org>). Surf and enjoy.

STAR PARTY volunteers are needed on October 2nd (October 4th weather date) for the Hampstead, N.H. Library Summer Reading Program. The party will be held at the Library. Peter Bealo is the star party contact. He is looking for three to four volunteers. Please give him a call (603-382-7039) if you can lend a hand.

AN EXECUTIVE board meeting will be held at Mario Motta's home on Sunday, September 24th at 6:00PM. Any club members with concerns or issues they need discussed at the meeting, should contact a board member (listed on the last page of *Star Fields*) prior to the meeting.

Clubhouse News...

THE FOLLOWING is the 1994-95 fiscal year clubhouse report.

Nine hundred seventy four visits to the clubhouse by members and guests were noted on the log sheets. Please take time to sign the log. Months with over 100 visits: June, October, November and March. Less than 50 visits:

February and July. Fifty to 100 visits: August, September, December, January, April and May.

EXPENDITURES FOR modification, maintenance & operating supplies went slightly over budget;

6/19/94	\$333.21	Ed Dougherty
7/24/94	\$ 64.89	Paul Cicchetti
8/24/94	\$412.44	John Reed
8/25/94	\$ 65.47	John Reed
1/15/95	\$426.33	John Reed
1/15/95	\$151.91	Steve Clougherty
1/15/95	\$372.75	Bertlin Security
3/11/95	\$ 55.73	Steve Mock
4/8/95	\$402.25	John Reed
6/30/95	<u>\$265.49</u>	John Reed
	\$2550.47	\$0.47 over budget.

GLASS EXPENSES were \$470.99; Glass receipts (sales) were \$508.25 (\$37.26 profit). Blanks on hand: 4.25" and 12" - one set each, 6", 8" and 10" - two sets each.

TONIC/COFFEE receipts totaled \$261.40; food purchased totaled \$93.34. Paper towels, trash bags, sprays, batteries, minor repairs, etc. totaled \$86.11. Two new Sirius eyepieces totaled \$84.90. With adequate supplies on hand, we end with a \$2.95 deficit.

MAJOR EFFORTS were completed in the polishing room, new dry kitchen and the observing field. The evaporator room has a new roof, the side porch is braced at four points - allowing repair work to commence. Poison ivy has been sprayed and work on the rear barn door access is continuing.

YOUR CONTRIBUTIONS, your visits, your help on work sessions are sincerely appreciated. Keep up the good work. New hands are always welcome.

- Paul Cicchetti & John Reed

CLUBHOUSE DUTY ROSTER

Sept. 9:	Gary Walker	508-785-0352
	Jim Suslowicz	508-454-9239
Sept. 16:	Greg Chase	508-957-9926
	Henry Hopkinson	603- 432-2490
Sept. 23:	Dave Aucoin	617-891-9650
	Steve Mock	617-625-5870
Sept. 30:	John Reed	617-861-8031
	Steve Clougherty	617-784-3024
Oct. 7:	Phil Rounsville	617-527-1080
	Art Swedlow	508-486-4734

For Sale...

FUJINON BINOCULARS: 14x70, \$350.00. Contact Joseph Rothchild, 617-221-2609 (days).

OVER 100 primary and secondary mirror blanks for sale. Every conceivable size from two-inches to ten-inches. Ultra-low expansion glass. Thousands of other lenses too including large six-inch PCX. Lots more cheap! Contact Rick Burwen, 508-670-2913.

EXECUTIVE BOARD 1994-95

PRESIDENT: Mario Motta 617-334-3648
VICE PRESIDENT: Peter Bealo 603-382-7039
SECRETARY: Steve Beckwith 508-779-5227
MEMBERSHIP: Mark Bruckner 617-648-4426
TREASURER: Bernie Volz 508-881-3614
MEMBERS AT LARGE: Gary Walker 508-785-0352
Dick Koolish 617-646-6086
Phil Rounseville 617-527-1080
Anthony Costanzo 508-521-5382

PAST PRESIDENTS: 1993-94 Bernard Volz
1990-92 Marion Hochuli

COMMITTEES

CLUBHOUSE DIR.: John Reed 617-861-8031
Paul Cicchetti 508-433-9215
OBSERVING: Richard Nuge 508-879-3498
HISTORIAN: Anna Hillier 617-861-8338

OCTOBER STAR FIELDS DEADLINE

September 30th is the deadline for items to be included in the September issue of *Star Fields*. Mail or phone your contributions to: Steve Beckwith, 195 Wilder Road, Bolton MA. 01740 508-779-5227 e-mail: Compuserver@71762.2513

How to Find Us...

MEETINGS: Held the second Thursday of each month (September to July) at 8:00PM in Phillips Auditorium, Harvard-Smithsonian Center for Astrophysics, 60 Garden St., Cambridge MA.

CLUBHOUSE: The Tom Britton Clubhouse is open every Saturday from mid-afternoon 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 Observing at the Groton town line. Proceed to the farm house on the left side of the road. Since clubhouse attendance varies with the weather, it is wise to call in advance: 508-692-8708.

Amateur Telescope Makers of Boston

FIRST CLASS