



evaporator operational. Mario Motta reported on the progress of his 32-inch mirror (2.2 waves) and his new observatory being built in NH. He will make the forms from his NH observatory available to the ATMob for our 20-inch observatory if we want them. Finally, our main speaker, Dr. Alan Guth of MIT, reviewed the evidence supporting the Big Bang theory, the questions it leaves unanswered, and how his inflationary theory supplies some of these answers.

THINGS YOU MAY WANT TO KNOW...

THE INTERNATIONAL DARK SKY ASSOCIATION (IDA) is holding its first NE meeting at Harvard College Observatory (HCO) on Sunday, Oct. 25, beginning at 10:30 a.m. The AAVSO hold its annual fall meeting the same weekend, with its talks scheduled at HCO for Saturday, Oct. 24. S&T is co-sponsoring the IDA meeting. Although the schedule for the meeting is being worked out, it is expected to have several invited speakers including David Crawford and Tim Hunter, IDA director and president respectively. The meeting is intended to organize a NE chapter of the IDA. All persons interested in getting this new chapter off to a good start, are encouraged to attend the meeting. It will be held in the Pratt Conference Room on the ground level of the Perkins building, the newest of the buildings at HCO. For more info call Steve O'Meara at 617-864-7360 (X149) or Daniel Green at 617-495-7440.

A BRIEF HISTORY OF TIME, based on the life and thought of British physicist Stephen Hawking, is now a movie. The creation of a local Cambridge director, Errol Morris, the movie is part biography, part explication, part metaphor, part meditation, and part mystery says Globe reviewer, Jay Carr. "How many movies today," he continues, "even try to satisfy the mind or the soul? The brilliant, exhilarating, compassionate "A Brief History of Time" nourishes both. The film was shown from Sept. 25 to Oct. 2 at the Loew's Harvard Sq. & Nickelodeon Theaters.

FALL SCIENCE DAY FOR CHILDREN. The CfA is holding its second annual free science day (rain or shine) for children and families on Oct. 17 from noon to 5 p.m. Hands-on activities and demos are intended to introduce middle-school-age children to astronomy and related sciences. No tickets or reservations are necessary.

STAR TREK: FEDERATION SCIENCE is a new exhibit at the Boston Museum of Science from Oct. 3 to Jan. 3. Embark on a bold voyage into the final frontier in this exciting, visionary exhibition. Discover the world of space travel with more than 30 interactive displays including two transporters. Theme areas that relate to Starship Enterprise stations are featured, plus original Star Trek artifacts. Special admission fee and advance-timed tickets are required. While there, enjoy the new companion show at the Hayden Planetarium: Orion Rendezvous: A Star Trek Voyage of Discovery.

OUR OCTOBER MEETING...

THE LARGE EYE OF THE SMALL TELESCOPE is the title of this month's talk by Glenn Chapel. Glenn has been an ATM'er for 12 years and an amateur astronomer since 1963. An avid member of the AAVSO, Glenn has logged some 20,000 variable star observations. Currently, he is teaching science in the Groton-Dunstable school system. He has written articles for Deep Sky and Starry Sky magazines and is currently writing the "What's Up" column for Odyssey magazine. His book, "Exploring with a Telescope" was published in 1988 by Franklin-Watts Publishers.

DARK LIGHT, LIGHT MATTER is the title of Dr. Philip Morrison's talk at our November meeting.

Thursday, October 8, 1992, 8 p.m. Phillips Auditorium, Harvard-Smithsonian Center for Astrophysics

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Join us for a 5:45 p.m. pre-meeting dinner with our speaker at the Changsho restaurant, 1712 Mass Avenue, Cambridge.

SEPTEMBER MEETING HIGHLIGHTS...

Our September meeting had a good turn out with some 74 members and guests present. All reports were given with the exception of that of the Treasurer who was absent. The bylaw amendments to articles V and IX were passed unanimously. Peter Bealo conducted our first monthly 50/50 raffle and the \$28 winnings went to David Liberman from a ticket drawn by young Andrea Motta. The present explained the need for expanding the Observing and Shop (Clubhouse) committees in order to spread the responsibilities and work load. Although some members have already volunteered, more are needed. Greg Chase reported that there was a particularly high attendance (about 50 individuals) at the clubhouse on Sept. 5. A brilliant aurora was observed on August 22 at Baxter, at Bernie Volz's home, and Mario Motta's house in NH. Ed Wallner reminded everyone that he conducts a aurora hotline. Kevin McCarthy made available a list of astronomy books that can be obtained at great savings from a source in Connecticut. Bob Heller provided a list of items and their costs needed to make our Veeco

OPEN NIGHT AT THE BU OBSERVATORY occurs every clear Wednesday night beginning at 7:30 p.m. and ATM'ers and their friends are invited to visit. During the academic year, a monthly lecture is also held in conjunction with the observing program, usually on the second Wednesday of the month. On Oct. 14, the talk is "Is there a Black Hole at the Galactic Center" by Prof. James Jackson. The observatory is located on the 7th floor of the College of Liberal Arts, 725 Commonwealth Ave., Boston. Call 617-353-2630 after 5:30 p.m. for more info and to check viewing conditions.

YOUR ATMob MEMBERSHIP is about to lapse if you haven't renewed this summer. If its slipped your mind, please renew NOW! Dig out your June issue of STAR FIELDS and use the renewal form published there or simply send your check for \$37 (dues plus S&T subscription) or \$17 (without S&T) to JOHN SAMOLYK, 65 Court St., Medford, MA 02155.

ATMoB ACTIVITIES...

VOLUNTEERS NEEDED to assist the CfA during their Science Day for children on Oct. 17, noon to 5 p.m. Members with solar observing scopes are particularly needed. Liza Milligan plans to demonstrate mirror grinding like she did for Astronomy Day and could use some help. Sign-up at the October meeting to help out or call me at 508-881-3614. --Bernie Volz

THE CLUBHOUSE TRIPLE EVENT on September 19 was a success. The clubhouse siding along the porch was scrapped and painted as was the Maksutov doghouse, and the 16-inch observatory. Windows were puttied, lattice was installed along the porch, and the inside of the clubhouse was cleaned (it really looked great!). Although we could have used a a lot more people earlier in the day, thanks the following members who were the work party:

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| Ed & Cindy Dougherty | Mark Paul Sheldon |
| Richard Burrier, Jr. | Margarita Drozdoff |
| Bruno Nardelli | Ted Poulos |
| John Reed | Tony Badessa |
| Phil Rounseville | Steve Mock |
| Bryan Stone | Liza Milligan |
| Tal Mentall | Ed Boudreau |
| Sai Vallabha | Marlo Motta |

Other members arrived latter to take part in our Monthly Observing Night and star party for the Appalachian Mountain Club and we thank them for their participation:

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|----------------|----------------|
| Mike Mattei | Isham Anand |
| Janet Maragus | Dennis Milan |
| Marion Hochull | Robert Heller |
| Justin Paudi | Scott Milligan |
| Dick Koollsh | |

About 13 members of the AMC got a briefing on astronomy from Mario Motta and myself. Later they were able to observe through partially cloudy skies

using scopes set up by ATM'ers.

Although a good number of members turned out for this event, some 250+ other members were noticeably absent!! Since there is still more work to be done, we need your help. Another work session is scheduled for Saturday, Oct. 10 beginning at 10 a.m. Won't you take part. --Bernie Volz

A STAR PARTY for some 40 youngsters and their parents was held at the Pierce School, West Newton, by ATM'ers KEN FYE and TED POULOS on October 1. A nearly quarter moon and saturn were the objects observed.

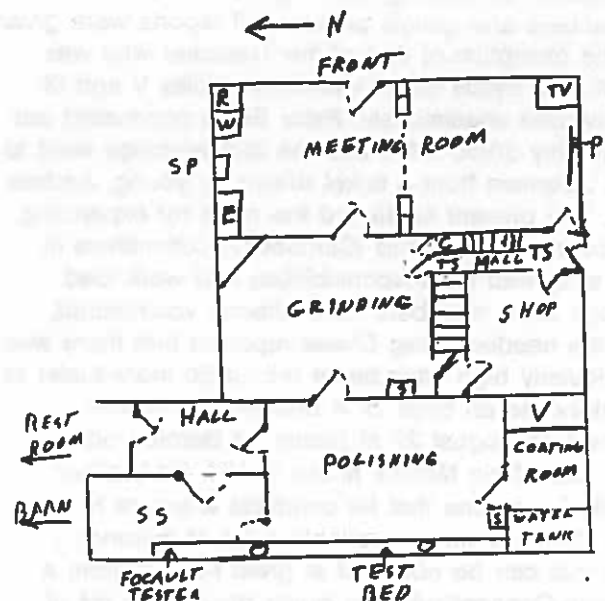
REFRESHMENTS at the end of last month's meeting where arranged by PETER BEALO and PAUL CICCETTI. At our service in October will be our Vice President, MARIO MOTTA.

THE ATMob EXECUTIVE BOARD MEETING is re-scheduled form the holiday weekend of Oct. 10 to Saturday, Oct. 17, 7 p.m. at the clubhouse. All board members MUST attend. --Bernie Volz

REARRANGEMENT OF THE CLUBHOUSE layout has been under discussion. The idea is diagrammed below. Basically, the front entrance room would be a new kitchen area (probably without sink). The current mirror grinding room along with the entrance room becomes the new "lounge" area. The present lounge becomes the mirror grinding room, and the current kitchen the polishing room. We will hold a short discussion of this idea at the October meeting. --Ed Dougherty

DIAGRAM LEDGEND:

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|------------------|-------------------------|
| TV - Television | W - Water Cooler |
| V - Vac. Evap. | O - Optical test tunnel |
| R - Refrigerator | E - Electric stove |
| S - Sink | C - Cellar stairs |
| P - Proj. Screen | SS - Secure storage |
| SP - Slide Proj. | TS - Telescope storage |



FRIENDLY REMINDERS...

We still need more volunteers for the Clubhouse and Observing Committees. Call Bernie Voltz to volunteer.

If you must visit with your friends during our meetings, please go down the hall so that your conversations do not disturb other members or the speaker.

ATMoB MEMBER PROFILE...

DAVID "DEEP SKY" AUCOIN, a past president of the ATMoB, began his interest in astronomy some 25 years ago due to the influence of the NASA's Apollo space program. He has owned a number of commercial scopes ranging in sizes from 4 to 13 inches, and they have been well used because Dave is an unquestioned accomplished observer. He says that he can find deep sky objects faster than a NGC Max CAT and we believe him! Dave still has a strong interest space science and model rocketry and enjoys hiking and playing with computers. He attended Salem State College and currently works as a Quality Control Technician. As a long time associate member of the Springfield Telescope Makers, he worked many hours in clearing the land of Stellafane east so that all of us can enjoy Stellafane each summer. His workaholic nature is often evident when he goes on whirl wind cleaning session of the ATMoB clubhouse.

IMAGING JUPITER AND SATURN WITH A VIDEO CAMERA...

by Ted Poulos

Last February, I reported that I had purchased a B&W video camera and a video frame grabber for my computer. Here are my experiences with the system thus far. The camera is small, measuring only 2.5 x 2 x 3 inches and weighing only 12 oz. Although it has a standard "C" lens mount, I have two adapters for it. One, an Orion C to T adapter, allows the camera to be attached directly to the housing of my C8, and the other, a C to 1.25" tube, allows the camera to be used in place of an eyepiece. The CCD chip has 610 x 488 pixels, but the video resolution is only 500 by 375 lines. The camera operates from 12 VDC supplied by an AC adapter, and it has a manual gain control.

To check the sensitivity of the camera, I aimed my C8 at M42 last winter. Of course, no nebulosity could be seen, but I was pleased to clearly see all four stars of the trapezium on the video monitor, the dimmest of which is about 7th magnitude. The image of portions of the quarter moon were fantastic! However, it was necessary to use an adjustable polarizing filter to attenuate the moon's brightness even when using minimum gain. The views of Jupiter were the best I have seen with my scope! Using a 2X barlow, Jupiter's disk was 2.5 cms in diameter on a 9-inch monitor. During instances of good seeing, the cloud bands and red spot stood out with good contrast. A video tape of the image, however, was disappointing because it

lacked the detail seen in the "live" image. Another evening, I tried eyepiece projection using a 40 mm eyepiece and a 6-inch extension tube to obtain a 4 cm image on the monitor. But at this magnification, the image showed little detail with only one cloud band.

Last month I had a chance to image Saturn for the first time with this camera. I obtained an 3 cm (ring diameter) on the monitor. As with Jupiter the "live" video image showed good detail during instances of atmospheric stability. With a flip of a switch I can route signal from the monitor to the computer and its frame grabber. The image is then displayed on the computer's VGA monitor and updated five times a second. Pressing a key then grabs an image in 1/60 of a second. The "live" video image is considerably brighter, because of the eye's persistence of vision, than the one displayed on the computer monitor. Also the computer image's aspect ratio is vertically elongated, but this can be immediately corrected using the image processing software. I have stored frame grabbed images of both Jupiter and Saturn on disk in the .TIFF format so that I could later try to "coax" more info out of them using image processing. The image processing software I am using is Catenary Systems' ZIP, and although inexpensive, it is very powerful. It permits image contrast, brightness, and sharpness changes together with providing a brightness histogram and the ability to add and subtract images. But my experiences with this software and the art of image processing must wait until another time when space permits.

NEW MEMBERS...

We extend a cordial welcome to the following new ATMoB members:

Jessica Herman	Merrimacport, MA
Frank Londers,	Westford, MA
Thomas A. Lucia	Lowell, MA
Charles J. McDonald Jr.	Reading, MA
Mark Sheldon,	Dracut, MA

IT'S A THOUGHT...

The dark lines in the spectrum of starlight striking the earth are shadows cast by atoms--shadows that can be seen from one end of the universe to the other. --James Trefil, "Reading the Mind of God", Charles Scribner's Sons, NY 1989

MARKETPLACE...

FOR SALE 5-inch, f/8 Astrophysics Starfire refractor. Jaegers heavy duty equatorial mount on light weight pedestal. Clock drive and setting circles. Like new. \$3200.00. Jack Flanagan, 508-263-5533

COMING EVENTS...

- Oct. 3-Jan. 3 STAR TREK: FEDERATION SCIENCE exhibit Boston Museum of Science. See page 1.
- Oct. 15 CfA MONTHLY OBSERVATORY NIGHTS, "Discovering the Autumn Night Sky: Astronomy From Your Back Yard" by Alan MacRobert, S&T, 8 p.m., Phillips Auditorium, CfA, Cambridge, MA. For more info call 617-495-7481.
- Oct. 10 CLUBHOUSE WORK SESSION, 10 a.m.
- Oct. 14 OPEN NIGHT AT THE BU OBSERVATORY, "Is There a Black Hole at the Galactic Center" by Prof. James Jackson, 7:30 p.m., Rm 522, 725 Commonwealth Ave., Boston. Call 617-353-2630 after 5:30 p.m.

EXECUTIVE BOARD 1992-93...

- PRESIDENT: Bernard Volz, 508-881-3614
- VICE PRESIDENT: Mario Motta, 617-334-3648
- SECRETARY: Ted J. Poulos, 617-566-5127
- MEMBERSHIP SEC: John Samolyk, 617-391-9290
- TREASURER: Anthony Costanzo, 508-521-4209
- MEMBERS AT LARGE: Peter Bealo, 603-382-7039
Anna Hillier, 617-861-8338
- PAST PRESIDENTS: 1990-92 Marlon Hochull
1989-90 David Aucoin
1987-89 Gary Walker

COMMITTEES...

- OBSERVING: Edward Dougherty, 508-458-8857
- CLUBHOUSE: Greg Chase, 617-272-9394

AMATEUR TELESCOPE MAKERS OF BOSTON

c/o John Samolyk
65 Court Street
Medford, MA 02155

- Oct. 17 ATMoB MONTHLY OBSERVING NIGHT at the clubhouse.
- Oct. 17 ATMoB EXECUTIVE BOARD MEETING at clubhouse at 7 p.m.

NOVEMBER STAR FIELDS DEADLINE...

October 29th is the deadline for items to be included in the Nov. issue of *STAR FIELDS*. Mail or phone your contribution to Ted Poulos, 18 Cushing Rd., Brookline, MA 02146 (617-566-5127).

HOW TO FIND US...

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

CLUBHOUSE: 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 495 to exit 33 and proceed west on Rt. 40 for 5 miles. Turn right at the MIT Lincoln Lab, Haystack Observatory sign at the Groton town line. Proceed to the farmhouse on the left side of the road. Since clubhouse attendance varies with the weather and other activities, it is wise to call ahead: 508-692-8708.