



# STAR FIELDS

NEWSLETTER OF THE AMATEUR TELESCOPE MAKERS OF BOSTON, INC.

Vol. 1, No. 4

November 1990

## THIS MONTH'S MEETING...

Thursday, November 8, 1990, 8 p.m.  
Phillips Auditorium, Harvard-Smithsonian  
Center for Astrophysics

ASTRONOMICAL IMAGE PROCESSING AND THE HST is this month's talk by Peter Nisenson of the Harvard-Smithsonian Center for Astrophysics. The principles of image processing will be discussed as well as how this technique can be used to salvage some of the HST science programs.

Please join us for dinner before the meeting at the Changsho Restaurant at 5:45 p.m. The restaurant is located at 1712 Mass Ave. in Cambridge, near Linnean St.

## LAST MONTH'S HIGHLIGHTS...

The October meeting was attended by about 60 people. President, Marion Hochuli, reported that the Executive Board voted, at a meeting on September 30, for the ATMOB to host ALCON 91. After John Reed reviewed the preliminary plans for the convention, the president asked that the membership confirm or reject the vote of the Executive Board. A unanimous affirmative vote was recorded. Ed Los reported that due to S&T price increase and postage increases for STAR FIELDS next year, ATMOB membership dues should be increased. It was decided that a vote will be taken at the November meeting on three motions in regard to this increase (see announcements). Because of the fickle oil furnace at the clubhouse, Greg Chase recommended that we look into a more reliable heating system. He has explored the addition of two propane heaters for about \$1200, but also says that maybe additional electric heaters would be less expensive. The subject of the talk at the meeting was CCD imaging for amateurs presented by three speakers and ATMOB members: Ed Dougherty, Gary Walker, and George East.

## ATM ACTIVITIES ROUNDUP...

THANKS TO GREG CHASE, a series of fortunate circumstances, and the help of John Reed the club house has a great new refrigerator. Gone is the hassle of trying to keep the old one's door closed!

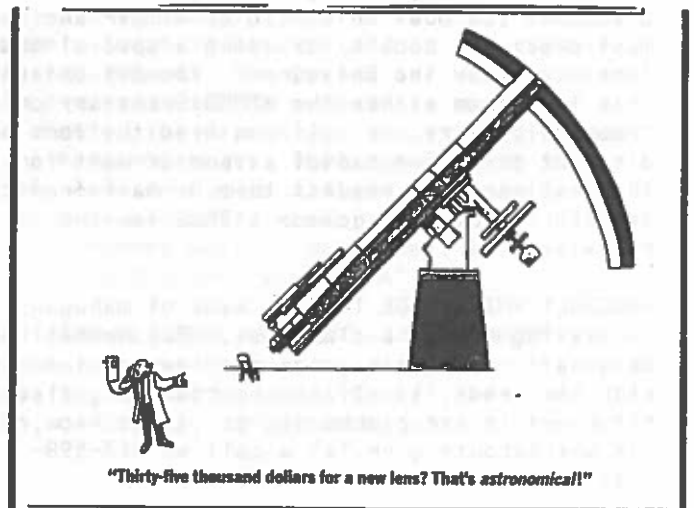
ALCON 91, the Astronomical League's annual national convention, will be hosted next summer by the ATMOB at UMASS, Amherst. This is our chance to be recognized nationwide as the vital, important, and 'can do' amateur astronomical club that we know we are. Mark your calendars with the dates of August 7 through 9 (just before the Stellafane weekend) and plan now to both attend and to volunteer your services. Help will be needed to plan and organize the affair as well as during the event. Contact the chairman or co-chairman of the organizing committee, John Reed and Bernie Volz, now to give them sources for possible speakers and/or to volunteer your help. Your assistance and support is essential!

KUDOS TO SCOTT MILLIGAN, our Vice President, for his very revealing article in the November issue of S&T that reported on his evaluation of commercial telescope mirrors. If you haven't read it yet, search it out.

A CLUBHOUSE LEARNING ADVENTURE session was planned for Saturday, September 29, but the participants failed to show up. Nevertheless, Scott Milligan and Greg Chase presented the program to some visiting guests.

ASTRO-ASSEMBLY, the annual convention of the Skyscrapers, Inc of Rhode Island, was its usual success with well over a dozen ATMer's among the 120 or so people attending. The warm, sunny day kept the swap tables busy and allowed for solar observing through the 9-inch Clark refractor of the club's Seagrave Observatory.

## ASTRO-FUNNIES...



## ATM PROJECTS...

THE CLUB'S 6-INCH SCHUPMANN is very close to having a permanent mount at the clubhouse thanks to the efforts of Steve Beckwith and Greg Chase. The concrete pier is complete. Within a couple of weeks, according to Steve, a Cave Astroia mount, donated to the club, will be permanently mounted on the pier. The Schupmann can then be easily attached to the mount whenever it is to be used for observing.

## ANNOUNCEMENTS...

A MEMBERSHIP DUES INCREASE is necessary because of the increase in S&T subscription rate and a STAR FIELDS postage increase next year. The following three motions, discussed during the October meeting, will be voted on at the November meeting:

- The dues for regular membership shall be \$35.00 per year for all applications and renewals received after January 1, 1991.
- The dues for family membership shall be the same as the dues for regular membership.
- The dues for full-time students or members under the age of 21 shall be \$20.00 per year.

BAXTER 1991 DARK SKIES TRIP dates have been announced by Scott Milligan. They will be September 6-13, 1991. A sign up sheet will be available at the next meeting.

APOLOGIES to Phil Rounseville for describing the optics of his new Gregorian reflector incorrectly. The scope employs a flat window at the upper end with a concave ellipsoidal secondary and a parabolic primary.

A DISCOUNT ON BOOKS purchased from Sky Publishing Corp. is a privilege of ATMOB membership of which you may not be aware. The actual discount depends upon the book and can be determined from a price list that will be available at our meetings. To qualify for the discount, you must be a paid up member and you must order the book(s) by using a special order form signed by the Treasurer. You can obtain this form from either the ATMOB Secretary or Membership Secretary. If you need the form and discount price and cannot attend or wait for the next meeting, request them by mail from the Secretary. Please include a SSAE for the reply.

FOUCAULT KNIFE EDGE TESTER, made of mahogany, is missing from the clubhouse. Tal Mentall who originally made the tester and loaned it to the club now needs it. If you borrowed it, please return it to the clubhouse, or if you know of its whereabouts give Tal a call at 617-598-0766.

INFORMATION ON A BARN DOOR (TANGENT) DRIVE for a camera is needed by Margarita Drozdoff. Any info, tips, or references you might have on such a drive would be of interest. Call her at 617-492-2765. If you have built a unit, Margarita would appreciate if you would bring it to the November meeting so she could see it.

KALMBACK MAGAZINE SUBSCRIPTIONS that were received after the dead line of September 15 cannot be honored and your payment will be returned. --Ed Los

YOU PAID FOR THEM, but you haven't claimed them: Galileo kits for J. Baker, and ATM T-Shirts for P. Calantropo, D. Emerson, H. Robinson, and T. Kochanski.

EVENTS HORIZONS, a public bulletin board, makes available images from the HST and other astronomical satellites. The images are posted in the .GIF file format. The board sells download time at \$10 per hour. Disks are also available at \$39 each. Call 503-697-7700 for voice info or log on at 503-777-1578 at N81.

## ATM PROFILES...

Public outreach is no stranger to Richard Koolish. For at least the past five years, he taken part in the Center for Astrophysics Monthly Observatory Nights on the roof of the Harvard Observatory. With his 8-inch Odyssey, which he bought for this purpose because his C8 was a little heavy to carry to the roof, he has introduced hundreds to a view of celestial objects through an amateur telescope. Dick lives in Arlington and is a computer programmer for Bolt, Beranek, & Newman, a computer communications hardware and software firm. An ATMOB member for some 17 years, he also served a stint as club secretary. Dick's earliest recollection of things astronomical was when he was a boy in Chicago in the mid 50's. During an early morning solar eclipse, he remembers observing dozens of little crescent images on his bedroom wall--pinhole projections created by the spaces between tree leaves outside his window. Ever since then he has been chasing solar eclipses from his first in Nevada in 1963 through others in the 70's and 80's. Oh yes, he'll be in LaPaz next summer. In addition to astronomy, Dick is interested in boat building, navigation, and photography both astronomical and otherwise. He has participated in talks on astrophotography during the past two Astronomy Day sessions at the Museum of Science. As chairman of the photographic committee for the Head-of-the-Charles Regatta, he is responsible for coordinating the photo-documentation of this annual October event on the Charles River.

### NEWSLETTER DEADLINE..

The 30th of this month is the deadline for items to be included in next month's STAR FIELDS. Mail or telephone your contribution to Ted Poulos, 18 Cushing Rd., Brookline, MA 02146, 617-566-5127.

## THROUGH THE 'SCOPE...

AN INFORMAL ATMOB OBSERVING NETWORK was alerted by Bernie Volz during the first week of October to the appearance of a giant white spot on Saturn. Steve Mock, who works at Bentley College Observatory, together with John Reed, Vladimir Vudler, Jack and Stelita Cronin observed the spot through the college's C14. According to astronomers, the spot is in the clouds above Saturn about 22 degrees below the planet's equator and apparently is the result of rapidly emerging hot material from deep within the planet's atmosphere. The oval spot is about 21,000 kilometers in length--about 5% of the Saturn's circumference. Reportedly, no comparable phenomenon has been observed on Saturn in 57 years.

MARS IS GETTING HIGHER in the sky, brighter and closer. It is nearest the Earth on Nov. 20 when its apparent diameter will be 18.1". For you Mars observers and photographers, November is your month!

ALDEBARAN, a red-orange K5 giant 40 times the sun's diameter and 125 times as luminous, lies about 6 deg. north of Mars but pales in its apparent brightness compared to the planet. Aldebaran is one of the few 1st magnitude stars that can be occulted by the Moon. Can you name the others?

WHILE VIEWING HUES OF RED, focus your scope on Herschel's 'Garnet Star' ( $\mu$  Cephei) to see a really red object. This supergiant star, spectral type M2, is an irregular variable (3.7-5.0) with an average period of 755 days. It is one of the few stars that show water bands (steam?) in its spectrum.

## FROM THE EDITOR'S DESK...

I would like someone to prepare the monthly STAR FIELDS piece, Through the 'Scope... I made a feeble attempt at it this month to illustrate the idea of it. I see it as a way to alert members to new happenings in the sky, and to direct our attention to lesser known objects or objects the writer finds interesting so that all the scopes at the clubhouse are not pointed to the same popular objects. If you're interested in becoming a columnist, see me at the meeting or call me at 617-566-5127.

As club Secretary, I have prepared a notebook of ATMOB information that will be available on the rear table at our meetings. It contains the book discount list, By-Laws, membership list, meeting minutes, back issues of STAR FIELDS, etc. Feel free to peruse it.

## THE MARKETPLACE...

WANTED a Jaegers Clock Drive. Call Bernie Volz, 508-897-0822

FOR SALE Celestron C6, f/5 with equatorial mount. Great for astrophotography. \$450.00. Call Tony Costanzo 508-521-4209.

FOR SALE DARK SKIES waterfront lots in Burlington County, Maine. For further info call Tony Costanzo 508-521-4209.

FOR SALE UNUSED Celestron 8-inch full aperture #4 density glass solar filter. Original price \$350, for sale at \$150. Bob Henderson, 227 Linwood St., Lynn, MA 01905. 617-598-3378.

WANTED to buy a used 10-inch Dobsonian telescope. Call Sai Vallabha, 603-893-7884.

## ASTRO-TRIVIA...

THE TIME OF SUNRISE AND SUNSET cannot be predicted with a greater accuracy than 4 minutes, according to new research by Bradley E. Schaefer of NASA Goddard Space Flight Center. Atmospheric refraction prevents greater precision, he reports, because it can change not only by a greater amount than previously believed, but also more rapidly and randomly.

THE IDEA THAT NUCLEAR FUSION is the source of stellar energy was arrived at independently by several workers in the 1930's. According to David Fisher in his book, 'The Birth of the Earth', the first person to think of this idea was a young German physicist, Fritz Houtermans. Here is Fisher's account of Houtermans' discovery: "He told me (Fisher)...that he was intoxicated at the time (early 1930s) with the fermenting, bubbling-over ideas and excitement of nuclear reactions and radioactivity, and after weeks of concentrated study he finally took and evening off to relax. He was lying on his back on a Bavarian mountainside, his arms around a girl; she was cradled against his chest, and they were both looking up at the stars above, thinking their thoughts, when he suddenly began to breathe deeply and tremble with excitement. She lifted her head, looked into his eyes--and he pushed her away, sat up, and shouted the German equivalent of, 'Goddam it, I know what makes that sonofabitch shine!' It all came to him in a flash, and he then tried to explain it to her, he told me, but she somehow seemed putout, she wasn't interested. He never did understand women".

A 19-YEAR-OLD ENGLISH AMATEUR ASTRONOMER and deaf-mute, John Goodricke, discovered the first pulsating variable, delta Cephei, in 1784. The star, of course, varies in magnitude from 4.4

to 3.7 with a period of 5.4 days. Goodriche was also the first to explain earlier (1782) the cause of the variability of Algol.

**LATE ANNOUNCEMENT:** There will be a meeting at the Clubhouse on November 10 at 7:30 p.m. for those who would like to work on a project to get the club's 20-inch telescope into operation. For more info, call Ed Dougherty, 508-458-8857.

## COMING EVENTS...

Nov. 1 **BLUE PLANET**, new Omni Theater film, BMOS. More info call 617-523-6664.

## EXECUTIVE BOARD 1990-91

### PRESIDENT

Marion Hochuli, 28 Taschereau Blvd., Nashua, NH 03062, 603-888-0141

### VICE PRESIDENT

Scott Milligan, 843 Boston Rd., Groton, MA 01450 508-448-2596

### SECRETARY

Ted Poulos, 18 Cushing Rd., Brookline, MA 02146, 617-566-5127

### MEMBERSHIP SECRETARY

Edward Los, 7 Cheyenne Dr., Nashua, NH 03063, 603-880-6219

### TREASURER

Anthony Costanzo, 4 Lafayette St., Haverhill, MA 01832, 508-521-4209

### MEMBERS AT LARGE

Mario Motta, 806 Lowell St., Lynnfield, MA 01940, 617-334-3648

Bernard Volz, 36 Hastings St., Stow, MA 01775, 508-897-0822

### PAST PRESIDENTS

1989-90 David Aucoin, Derry, NH 03038

1987-89 Gary Walker, Dover, MA 02030

1985-87 E. Talmadge Mental, Lynn, MA 01902

## FIRST CLASS

Nov. 15 **CfA MONTHLY OBSERVATORY NIGHTS.** "The Origin and Early Life of Star Clusters" by Charles Lada, CfA. 8 p.m. Phillips Auditorium CfA, Cambridge, MA. More info call 617-495-7461.

Nov. 17 **OBSERVING NIGHT**, Amherst College Observatory, 18" Clark Refractor, 8 p.m., conducted by AAAAA club. For more info call Tom Whitney, 413-256-6234.

Nov. 27-Jan 1 **THE CHRISTMAS STAR**, Hayden Planetarium, BMOS. For times call 617-523-6664.

Nov. 28 **SAIL ON, VOYAGER!**, Infinite Voyage TV series, 8 p.m. PBS, Ch. 2

## COMMITTEES

### OBSERVING

John Reed, 1437 Mass Ave., Lexington, MA 02173, 617-861-8031

### WORKSHOP

Greg Chase, 29 Beacon St. 65F, Burlington, MA 01803, 617-272-9394

## 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 NEROC sign at the Groton town line. Proceed to the farmhouse on the left side of the road. Clubhouse telephone 508-692-8708.