



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. 12, No. 2 February 2001

This Month's Meeting...

Thursday, February 8th, 2001, at 8:00 PM
Phillips Auditorium, Harvard-Smithsonian
Center for Astrophysics

This Month's Speaker...

THIS MONTH'S guest speaker is Dr. Alois Mair and the title of his talk is "The Storage of Light". You may recall last year when research teams from around the world reported their ability to slow the speed of light to 40 MPH under laboratory conditions. Now a group of researchers at the Harvard CfA have demonstrated their ability to actually stop light and then release it at will. Dr. Mair will describe to us some fundamentals of how the experiments work and then discuss some FAQs. Dr. Mair has been working at the CfA since the project began seven months ago. Prior to his work at the CfA, he received his Ph.D. from the University in Vienna, Austria for a method to measure the orbital angular momentum of a single photon (published in German only, but an English publication is coming soon). For seven years he has been part of Anton Zeilinger's team in Innsbruck, Austria. Dr. Mair adds that Innsbruck, where he is originally from, is famous for its ski areas (Olympic games) as well as for its schools and university.

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

President's Message...

AS THE days are becoming noticeably longer and nighttime observing becomes shorter we are moving to March where the days and nights become closely divided. Hence, it is Messier Marathon month. Yes, I know we still have February to get through, but between the Moon and the cloudy weather of New England, it's not too early to get started in familiarizing yourself with the location of these faint fuzzies. Last year, STEVE

CLOUGHERTY ran the Messier Marathon in several sessions for those who wanted to see all the objects but not in a single, continuous, grueling 12-hour night. He divided the marathon into two six-hour sessions. He ran the first session from dusk to around 1:00 a.m. and the second session on the following weekend from 1:00 a.m. until dawn. This is a much gentler approach to the marathon for those of you who worry about sleep deprivation. Steve, I hope the marathon continues again this year. I think many of our members are interested in this popular observing activity.

Mirror making activities at the clubhouse on Thursday nights continues at a feverish pitch as evidenced by the amount of hot pitch dripped on the stovetop, dutifully noted by club members. The stove has been cleaned and once again looks marvelous. JOHN REED is taking the lead in freshening up the downstairs clubhouse meeting room. His team has already replaced the old couch with a newer looking one and the room is about to get a fresh coat of paint. John, please announce the date of the painting party so we can all pitch in. *-Bob Collara, President-*

January's Minutes...

THE 733rd meeting of the Amateur Telescope Makers of Boston, including the Bond Astronomical Club, was opened by President BOB COLLARA. Our guest speaker was Dr. Steve Murray, Director of the High Energy Astrophysics Division of the CfA. Dr. Murray gave an excellent detailed presentation on the construction, testing, and operation of the Chandra X-ray Observatory (<http://chandra.harvard.edu>), e.g. a typical exposure of the High Resolution Camera takes 50,000 seconds.

At the business meeting the officers present gave their reports. Member-at-Large BRUCE BERGER displayed the restored Celestron C8 donated by J. Douglas Brown, a long-time member of the ATM of B. Bruce gave details of the scope's history and what he did to repair it. Photos were taken and Bruce and J. Douglas Brown (not present) received a standing ovation of thanks. Bruce asked for \$100 from the club to buy two boxes in order to transport the telescope, tripod, and accessories to star parties.

MARIO MOTTA showed slides of the partial solar eclipse on XMAS day. He also showed some very old slides he recently obtained at Palomar, including a drawing by Russell Porter of the observatory, historic photos of the construction, and the 48" which Hubble used. The slides were being thrown away by the gift shop, which was in the process of moving. JOHN REED showed his photos of the Nov. 18th Leonid meteor shower. One showed a persistent train, which lasted for many minutes. John also had beautiful photos of a sun pillar and an arc seen from the clubhouse, and of the XMAS day partial solar eclipse. John's alpha-hydrogen photos showed several prominences on the Sun. He then entertained us with slides of an article taken from "THE TELESCOPE" (1938). (See article in this issue.) MIKE SCHEXNAYDRE, LEW GRAMER and MATT BENDANIEL visited White Sands, New Mexico, and of course had their cameras and scopes with them. We were treated to some of the photos they took of the blue and purple mountain peaks, and astrophotography, including rich galactic star cluster NGC7789 (White Rose Cluster) in Cassiopeia. *-Eileen Myers, Secretary-*

Membership Report...

WE WARMLY welcome our new members: KAREN FUNKENSTEIN from Lexington, RAMON BENET from Westford, JACK LONG from Wellesley, ROBIN SYMONDS from Melrose, and GEORGE FOSTER from Holliston.

-John Small, Membership Secretary-

Treasurer's Report...

FOR THE month of December we had \$534.30 in revenue and \$23.13 in expenses, for a net income of \$511.17 for the month. As of December 31st, 2000 our assets were:

Checking Account - Regular	\$20,583.31
Investments	\$18,553.21
Total Current Assets	\$39,136.52

Of the total, \$2,245.46 is in the Land Fund and \$160.00 is for clubhouse key deposits.

-Bernie Volz, Treasurer-

Clubhouse Report...

SATURDAY OPEN CLUBHOUSE SCHEDULE

Feb 3	Steve Clougherty	Phil Rounseville
Feb 10	WORK	PARTY # 2
Feb 10	David Prowten	Eileen Myers
Feb 17	Tom Wolf	Bruce Berger
Feb 24	MESSIER	MARATHON #1
Feb 24	Bruce Gerhard	Art Swedlow
Mar 3	Lew Gramer	Dan Feldkhun
Mar 10	WORK	PARTY #3
Mar 10	Steve Herzberg	Richard Burrier
Mar 17	Paul Cicchetti	Jack Drobot
Mar 24	MESSIER	MARATHON #2
Mar 24	Steve Mock	John Reed
Mar 31	Henry Hopkinson	Jim Suslowicz

THE FIRST work party of 2001 took place on January 6th. The meeting room effort under BRUCE GERHARD, the electronics room effort under DAN FELDKUN, and the evaporator room effort under DAVE SIEGRIST continued. The evaporator room floor stripping will await warmer weather to allow glue removal with plenty of ventilation. During the lunch break, a Bailey Hill spaghetti meal was enjoyed by all. Thank you PAUL CICHETTI, DAN FELDKUN, BRUCE GERHARD, MIKE MATTEI, JOHN PANASWICH, PETER PSYHOS, DAVE SIEGRIST, and ART SWEDLOW for your support.

The February 10th and March 10th work parties (#2 and #3) will continue these efforts and start the basement drain and barn insulation project. We anticipate the April 7th work party may see a reduced snow depth to allow the observatory project to continue.

Speaking of snow, again the quick work of snow removal around the oval driveway allowed members to clear the observing field and the 17" observatory in short order after each of the snow events. This cooperation has allowed ten observing sessions (supporting from 2 to 30 observers) to be held in January 2001, one of the snowiest in many years. Thanks again to the MIT crew.

-John Reed, Clubhouse Director-

Star Party Announcements...

Friday, February 2nd (Rain Date Feb. 9) 6:30 p.m. at the **Fiske School** in **Wellesley**. I'll be running a slide presentation first with observing to follow. Remember last year...the view of Saturn, Jupiter, and Mars low in the west?

Tuesday, February 6th (Rain date is tentatively Feb. 7) 6:30 p.m. at the **Woodland School** in **Weston**. These enthusiastic students have heard wonderful things from the older kids about our star parties. Woodland always has a great turnout.

Interested (please!) in either or both of these events: call me at (508) 879-3498 or email me at NugentRP@aol.com. Thanks to everyone in advance! -Rich Nugent, Observing Committee-

Other Announcements and News...

MATT BENDANIEL'S picture of the Virgo Cluster appears on NASA's Astronomy Picture of the Day for Friday, January 26, 2001. See <http://antwrp.gsfc.nasa.gov/apod/astropix.html> for that date. We also thank Matt for donating a copy of his North American Nebula photo, which became the club's New Year's Eve Party Grand Prize.

CONGRATULATIONS TO long-time ATMob member KEN LAUNIE. A sidebar in this month's issue of *Photonics Spectra* reported that Ken has been inducted into the Technology Hall of Fame at the Polaroid Corp. Ken works as a senior principal engineer and has distinguished his career with ten-plus patents to his credit in imaging technology. Ken is one of very few individuals who owns a Russell Porter Garden Telescope and has created many unusual instruments. Good Show! Ken has made good use of non-Clear Skies.

-Paul Valleli-

FOR THOSE who might be reconsidering being in the path of totality this June, Joel Harris of Twilight Tours still has room on the trip he is organizing. The 13-day trip costs \$4950, includes airfare out of Atlanta, visits Zambia (for totality), Victoria Falls, Cape Town, Johannesburg, and more. Several members of the club, including myself, have been on some of his previous trips and they were well organized and delivered totality. If you want more details on this solar eclipse trip, see:

<http://www.sciencecenter.net/twilighttours/200106.htm>.

-Bernie Volz-

WE HAVE been informed by Tom Spirock that **optical competition at this summer's Stellafane convention** will take place on **Friday night**. Consult www.stellafane.com for details.

THE LOWELL LECTURES on Astronomy at the Boston Museum of Science will be held on Wednesdays, March 21, 28, April 4, and 11, at 7 p.m. in the Cahners Theatre. **Seating is first-come, first-served**. The lectures are free, and are presented in cooperation with the Harvard-Smithsonian Center for Astrophysics. For more information, call (617) 589-0270.

MICHAEL ARAMINI scanned the photos he took of the December 25th partial solar eclipse. They are available at: http://www.ultranet.com/~aramini/xmas_eclipse/index.html

DAVID AUCOIN posted eclipse pictures he took on Christmas Day using a Celestron C102 short tube refractor on a Manufrotto head and tripod, a 9mm Nagler and a 20mm Meade research grade Erfle. He used a disposable camera! The link to his website page with the pictures is:

<http://www.geocities.com/Deepskydave/Dobscope7.html>

Dave also collects space stamps. He has assembled a small collection of very colorful and informative stamps covering the last 50 years at:

<http://www.geocities.com/Deepskydave/Dobscope9.html>

I DID a successful webcast of the solar eclipse. My ISP's server handled the 40,000 combined hits over the three hour eclipse very well. I have received hundreds of emails of thanks from folks from all types of backgrounds coming in from all over the nation and the world. I was overwhelmed by the interest. From my video tapes of the Christmas eclipse taken from Brookline, NH, I captured 40 video stills, spaced about 5 minutes apart. My camcorder was set for a 25X optical zoom. I aligned the images using Adobe Photoshop and then created an animated GIF. The 3+ hour eclipse is played back in about 4 seconds. I find it interesting to watch the Moon's disk slide across the top of the sun. Enjoy! Small version of animation (72K) at the bottom of: <http://www.bitnet.com/~pauer/eclipse00/ephotos/ephotos.html> Large version of animation (581K) at: http://www.bitnet.com/~pauer/eclipse00/ephotos/lg_christmas_anim.html

-Eric Pauer-

REMINDER: The club history is available for proofreading, comments, etc. Contact club secretary Eileen Myers.

Mount For ATMoB 20", Circa 1938...

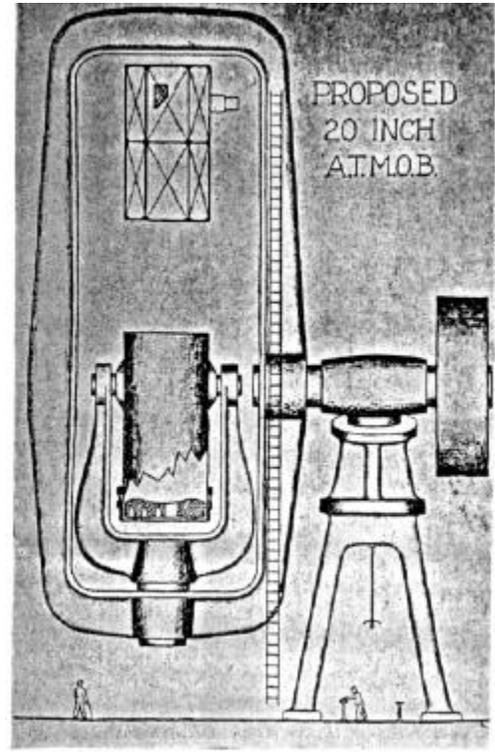
DENNIS DI CICCIO RECENTLY pointed out "...an obscure reference to the club's 20" scope in 'THE TELESCOPE' for January-February, 1938, pp. 22-23. While it doesn't say much about the history of the mirror, it is a humorous account of the 'planned' mounting, which goes to show that committees were no better at coming to a consensus of opinion back then than they are today!" Thanks Dennis.

The article reads:

Members of the Amateur Telescope Makers of Boston, ATMOb, one of the most active organizations of its kind in the country, are planning to build a twenty-inch reflector for club use. As is only natural, there has been much discussion as to the type of mirror, mounting, etc., to be employed. A compromise suggestion recently submitted to the Committee for the twenty-inch included the drawing reproduced herewith. We hope that professional astronomers, especially those engaged in designing large telescopes, will find the diagram helpful.

The mounting is a combination of the German equatorial, the closed "yoke", and the ordinary fork. The tube embodies the advantages of the closed tube, no tube at all, and the lattice-work tube. We asked the designers what held the lattice section in position and received the reply that the "no tube" section did this very effectively. When we countered with the query as to what held the "no tube" section in place, the answer was given that "nothing is required since the no-tube section doesn't weigh anything". Perhaps you can figure this out. Part of the mirror has a ribbed back and part is plain, to satisfy two schools of thought. Half a hole in the mirror is provided for the Cassegrainian observers. The face of the mirror is supposed to be parabolic. To allow for a possible "turned down" edge, the instrument has been designed large enough, with the hope that twenty

inches or so at the center will be satisfactory. An optical workshop is provided for at the base of the pier.



The first page of the magazine "THE TELESCOPE - An Illustrated Magazine of Astronomy" contains the following: "Published bi-monthly by the Bond Astronomical Club at the Harvard Observatory, Cambridge, Mass. Subscription one dollar a year. Single copies twenty cents. Board of Regents: Donald H. Menzel, Editor; Jenka Mohr, Assistant Editor; Harlow Shapley, Helen G. Rolfe, Fletcher G. Watson, Jr. Address all correspondence to THE TELESCOPE, Harvard Observatory, Cambridge, Mass." The magazine became the TELESCOPE of "Sky & TELESCOPE". *The Sky* was the journal of the American Museum of Natural History in NY. -John Reed & Eileen Myers-

For Sale... 6" HOMEBUILT Newtonian on equatorial mount. 6" f/8 Coulter mirror (mid-1970's vintage) in aluminum tube (interior flat black, exterior unpainted), with 1-1/4" rack & pinion focuser, 6x30 Criterion finder, gray pipe-fitting equatorial mount and pedestal (wooden feet) made from plans in Sam Brown's "All About Telescopes". Includes 45 mm fl. Celestron Plossl and 12 mm fl Edmund Kellner eyepieces plus 2-3x Edmund Barlow. Great scope for \$225, contact Jim Kile days at 781-862-7020 or at jkile@rri-usa.org.

ATTENTION

March *Star Fields* deadline is SUNDAY, February 25th
email articles to *Star Fields* Editor / ATMOb Secretary
Eileen Myers at starleen@ma.ultranet.com

Articles from members are always welcome.

POSTMASTER NOTE: First Class Postage Mailed February 2, 2001

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

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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 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 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 Observatory at the Groton town line. Proceed to the farm house on left side of the road. Clubhouse attendance varies with the weather. It is wise to call in advance. (978) 692-8708.

February Heads Up... Subtract 5 from UT to get EST.

Venus visible in daytime - upper left of setting Sun, by 46° on Feb 1, by 36° on Feb 28. Venus shows crescent, by month's end less than 1/4 full and over 0.7 arcminutes across, large enough to resolve with 7x binoculars.

Evening planets: Venus mag -4.6, Jupiter mag -2.5 to -2.3, Saturn mag +0.1 to +0.2. Saturn's rings are tipped just over 23° from edge-on. Look for the shadow of Saturn cast upon the rings, giving it a 3-dimensional appearance.

Morning planets: Mars in S at dawn, upper right of Antares, heart of Scorpius, by 18° on Feb 1, by 6° on Feb 28. Mars brightens from mag +1.0 to =0.5.

Thurs Jan 8 Full Moon - Snow Moon, Hunger Moon, or Wolf Moon.

Sun Jan 11 Zodiacal Light visible in W after end of evening twilight for next two weeks.