



STAR FIELDS

NEWSLETTER OF THE AMATEUR TELESCOPE MAKERS OF BOSTON, INC.

Vol. 3, No. 7

July 1992

JULY OUR JUNE MEETING...

Thursday, July 9, 1992, 8 p.m.
Phillips Auditorium, Harvard-Smithsonian
Center for Astrophysics

A SHOW AND TELL will be the main activity at our July meeting. Plan your presentation so that it is brief (<10 min.), informative, and right on point. Let's make this month's Show and Tell as active, enlightening, and fun as those in the past. Please phone President Bernie Volz a few days before the meeting so that he can schedule your presentation. Leave a message if he is not at home. The participants so far are:

Ed Los	McAuliff Planetarium
Ed Wallner	Jai Singh Observatories of India
Ed Dougherty	Video of 20" scope
Mario Motta	Update on his 32" mirror
Scott Milligan	Stellafane Schupmann
Kevin McCarthy	Dell-Kirkham Rap
Ed Kochanski	How Dark the Sky

Join us for a 5:45 p.m. pre-meeting dinner with your fellow ATM'ers at the Changsho restaurant, 1712 Mass Avenue, Cambridge.

JUNE MEETING HIGHLIGHTS...

The meeting was opened by the president, but no Secretary or Treasurer reports were given because of the absence of these board members. The Workshop report which indicated little member activity this past month was presented by Phil Rounsville in Greg Chase's absence. Ed Dougherty, Observing Chairman, reported that the H-alpha party on May 23 went well with some 60 people in attendance. The Maksutov was used for the first time with its new Meade CAT. Ed also announced that the Lowell Sun published a story on the ATMob, and that he had obtained the 20-inch mirror test data from Dennis DiCicco that showed the mirror had a 1/10 wave figure. A discussion was again held on the subject of the AL liability insurance and the general consensus was that we should obtain this insurance. Mario Motta described the pads used to polish his 32-inch mirror. Marion Hochull read a letter from Dave Huestis inviting ATM'ers to join members of the Skyscrapers at a special Hayden Planetarium show on June 29 at 7 p.m. The president proposed making Ed Knight an honorary member of the ATMob for all the things he has done for the club and clubhouse. The

membership voted and the proposal was passed. A unanimous vote elected the new Executive Board members proposed by the Nominating Committee. Finally, Dr. Eric Silverberg described the construction a submillimeter radio telescope array to be built at Westford before being installed on Mauna Kea.

-Richard Koolish

INTRODUCING THE ASTRONOMICAL LEAGUE...

The beginning of the Astronomical League (AL) dates back to 1939 when members of 11 amateur astronomical societies met in the American Museum of Natural History in New York City. Similar meetings followed in Pittsburgh, 1940, Washington D.C., 1941, and Detroit, 1946. At the last meeting, final plans laid the foundation for permanent organization constituting a nationwide federation of societies. A convention was held in Philadelphia on July 4, 1947 where the federation officially came into being. Bylaws were adopted, officers were elected, and the name *Astronomical League* was eventually selected. Soon the AL was incorporated as a non-profit organization under the laws of the District of Columbia.

The purpose and objectives of the AL head the Bylaws, but recognizing that changing times may require shifting focus, a strategic planning committee constantly reviews these objectives for today's relevancy. The overall focus, however, remains: to promote the science of astronomy by (1) fostering astronomical education, (2) providing incentives for astronomical observation and research, and (3) assisting communication among amateur astronomical societies.

Membership in the AL consists primarily of clubs located throughout the US. Currently, more than 170 societies, representing over 10,000 individual members, are affiliated. In addition, many amateurs have joined the AL as individuals. In order to serve this geographically disperse group, the AL is divided into 10 regions. Their boundaries are chosen to permit clubs to participate in regional meetings without travelling long distances. The ATMob belongs to the Northeast region (NERAL) and our representative to the regional organization is Edward Los.

The AL is an all volunteer organization. National and regional officers and the chairpersons of all standing and ad hoc committees donate their time to help the AL pursue its mission. The affairs of the league are administered by five officers who are elected by vote of

the members. The officers are: Pres., VP, Sec., Treas., and Exec. Sec. The first three officers serve 2-year terms while the latter 2 officers serve 3-year terms. The terms are staggered to maintain continuity as new officers are elected.

The Council is in charge of all business of the AL and directs its policies. The 25 Council members are the 5 national officers plus the Chairman and Representative from each of the 10 regions. These 2 regional officers, together with other officers who administer a region, are elected by members within each region. While Council conducts routine business of the League, any change to the Bylaws of any fundamental change in policy must be approved by vote of the full membership. Dues from each member society provide the primary revenue for all activities of the AL. Other income derives from the sale of publications, League memorabilia, advertising, annual conventions, and contributions.

Info about the AL's activities and membership benefits will be covered in a forthcoming issue of *STAR FIELDS*

THINGS YOU MAY WANT TO KNOW...

YOUR MEMBERSHIP RENEWAL is due by July 31. For details, see the June issue of *STAR FIELDS* and use the renewal form published there or simply send your check NOW for \$37 (dues plus S&T subscription) or \$17 (without S&T) to JOHN SAMOLYK, 65 Court St., Medford, MA 02155.

A DISCOUNT OF TEN PERCENT on all books and other items in the Sky Publishing Corporation's catalog is available to all ATMob members who subscribe to S&T. Simply mail or phone (617-864-7360) your order to Sky Publishing and indicate that you are an ATMob member. The special order form is no longer necessary since they can now verify your membership status. Also your order will now be shipped postpaid. If you don't have their current catalog, call them and ask for one.

200-INCH TELESCOPE MODEL. Way back in 1948 when I was a youth, I responded to an add in S&T and purchased for \$2.50 a 200-inch model kit. When completed, it was beautiful and one of my prized possessions. As I passed into adulthood, somehow my

cherished model and I became separated. In more recent years I longed to build another one, but the kit was not to be had. Then to my utter delight I saw an ad for kit again on page 84 of the July 1992 S&T. Its price is now \$14.50, but otherwise the model looked identical to the one I built nearly 40 years ago. I immediately sent for it and now have the kit in hand. The kit will not be easy to build, because it is quite detailed, and all the parts are not die cut but must be cut out by hand. Furthermore, a few parts (drawings supplied) must be cut from heavier stock that you must provide. The assembler must also provide glue and gray paint. My kit will probably not get assembled until this Fall or Winter, but I can already visualize how striking it will look on my mantle. --Ted Poulos

ATMoB ACTIVITIES...

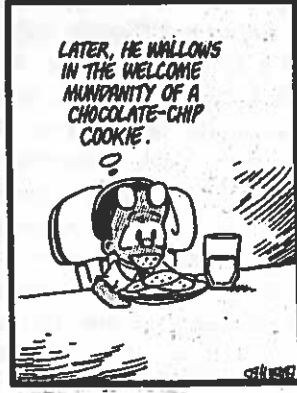
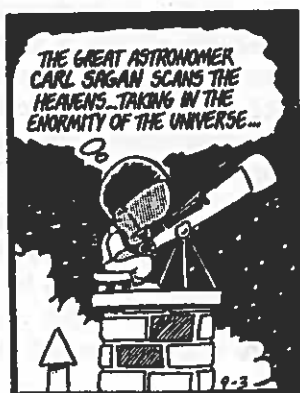
ATMoB PRESIDENT, BERNIE VOLZ, was on a trip to South America from June 27 through July 7. He hopefully observed the sunrise total solar eclipse from coastal Punta del Este, Uruguay on June 30. Later he was to tour the European Southern Observatories at La Silla, Chile.

A VERY BRILLIANT METEOR was sighted at 11:18 p.m. in the western sky by DICK KOOLISH and others as they were leaving our June meeting. What more fitting display could nature produce for amateurs leaving an astronomical meeting.

THE PARTIAL LUNAR ECLIPSE of June 14 was undoubtedly observed by many ATMobers. One group of members, STEVE MOCK, JOHN REED, and DICK KOOLISH, observed and photographed it from Bentley College Observatory. They reported that the earth's shadow on the moon was very dark and that even with the observatory's C-14 no detail in the dark area could be seen.

AN ATMob EXECUTIVE BOARD MEETING will be held on Saturday, July 18 at 7 p.m. at the clubhouse. All board members are requested to be present. The agenda will include: ATMob Clubhouse, AL Insurance, Observing projects committees and more. Any board member who cannot attend should Bernie Volz (508-881-3614) as soon as possible.

BLOOM COUNTY by Berke Breathed



Courtesy of Tal Mental

OUR BEST WISHES are extended to 16 year member, Paul Comba, as he leaves this month to retire in Prescott, Arizona. We hope that the dark skies of the far west greatly enhance his asteroid observing.

A SPACE WEEK STAR PARTY will be held on Friday evening, July 17 at 8:30 p.m. (raindate July 18) by the ATMoB in cooperation with the Hayden Planetarium staff. The museum's garage roof is the sight. Prepare to set up your scope at 8 p.m. Free parking will be provided ATMoB participants. Please plan to attend and sign up on a sheet available at the July meeting.

CLUBHOUSE BOOKS AND TOOLS. If you have borrowed any books or tools from the clubhouse, please return them! Or, if you have an extra copy a book or some spare tools, please consider donating them to the clubhouse library or shop. We're in particular need of: - All about Telescopes by Sam Brown - Making Your Own Telescope by Allyn Thompson - Amateur Telescope Making (Sci. Am. classic) - How to Make a Telescope by Jean Texereau Thanks to Dennis Milon for donating a revised edition of Michael Covington's book on Astrophotography.

— Bernie Volz

THE NEW AND CONTINUING EXECUTIVE BOARD members elected at the June meeting are listed with their telephone numbers on the center panel of page four of this and all forthcoming issues of *STAR FIELDS*

ATMoB BYLAWS AMENDMENTS. The amendments published in the May and June issues of *STAR FIELDS* will be voted on at our July meeting.

ATMoB OBSERVER GUIDES Members who have volunteered to provide one-on-one observing assistance to anyone requesting it are: Dick Koolish, Arlington, MA (617-648-6086) STEVE MOCK, Somerville, MA (617-625-5870)

LET'S COMMUNICATE...

STAR FIELDS needs your contributions. Share with all our members (not with just those who attend our meetings) your announcements, observing or other activities, and/or your interests, and thoughts about your hobby. Fill out a member profile questionnaire (available from the Secretary) to be profiled in *STAR FIELDS*. Notes or articles on items like the following are always welcome:

- Comments about some astronomical telescope, accessory, or software you purchased.
- Astronomical trivia—a piece of interesting or unusual technical or historical information that you came across that others might find intriguing.
- Review comments about an article or book you read and that you would recommend to others.
- Poems, cartoons, or other philosophical reflections on astronomy.

- Reports on an observatory or other institution you visited or astronomical related event you attended.
- Notes or tips on observing and telescope making and using, or warnings of possible pitfalls.
- Good commercial sources for hard to find parts, materials, and other things needed to make a telescope or construct an observatory.
- Items you no longer need and would like to sell.

ASTRO-TRIVA...

MACHO's are the astrophysical candidates for the nature of the dark matter in the universe according to Joseph Silk writing in a recent issue of Science. These Massive Compact Astrophysical Halo Objects are compact stellar remnants like white dwarfs, neutron stars and black holes ranging in mass from about 0.3 to 100 solar masses, and substellar fragments like brown dwarfs in the approximate range of 0.01 to 0.1 M solar.

THE CARBON OF OUR BODIES was first in the interior of a star, then in a fierce wind blowing off the star, and in minute dust grains swirling through space between the stars, before finding itself part of the solar nebula which formed the Sun, planets and the Earth itself.

THE DEEPEST BOREHOLE on Earth is in the Kola Peninsula (near Murmansk) of the USSR. It is 12 km deep. The German Continental Drilling Project (KTB) has started the second deepest borehole in a small Bavarian town. When completed in 1994, it will be 10 km deep. The hole is being drilled strictly for geological research.

THE FIRST "NEARBY" SUPERNOVA since the invention of the telescope in the 17th century appeared in February of 1987 and gave modern astronomers a chance to scrutinize it. But even this "nearby" event was 170,000 light years away in a neighbouring galaxy to our own, the Large Magellanic Cloud.

ASTRONOMERS DETECT neutral hydrogen atoms (not hydrogen molecules or ions) by the microwave radiation they emit at wave-lengths of 21 cms. The radiation results from proton and electron spin-flips (parallel spin—both in the same direction—has a bit more energy than the anti-parallel spin). These transitions occur every 12 million years for the average H atom and the excess energy is released as a 21 cm wavelength photon. It is only because of the incredible number of hydrogen atoms in space that makes this radiation detectable at all.

A 19-YEAR-OLD ENGLISH AMATEUR ASTRONOMER and deaf-mute, John Goodricke, discovered the first pulsating variable, delta Cephei, in 1784. The star varies in magnitude from 4.4 to 3.7 with a period of 5.4 days. Goodricke was also the first to explain earlier (1782) the cause of the variability of Algol.

COMING EVENTS...

- July 16 & Aug. 20 CfA MONTHLY OBSERVATORY NIGHTS, CfA, 8 p.m., Phillips Auditorium, CfA, Cambridge, MA. For more info call 617-495-7481.
- July 17 SPACE WEEK STAR PARTY, 8:30 p.m., Roof of BMOS garage. Cloudy date July 18.
- July 18 ATMob MONTHLY OBSERVING NIGHT at the clubhouse with Maksutov training beginning at 7 p.m. For more info, call Ed Dougherty, 508-458-8857.
- July 18 ATMob EXECUTIVE BOARD MEETING, 7 p.m. at the clubhouse.
- Aug. 28-30 THE CONJUNCTION, Northfield Mountain Recreation Center, Northfield, MA. Contact:

EXECUTIVE BOARD 1992-93...

- PRESIDENT: Bernard Volz, 508-881-3614
- VICE PRESIDENT: Mario Motta, 617-334-3648
- SECRETARY: Ted J. Poulos, 617-568-5127
- MEMBERSHIP SEC: John Samolyk, 617-391-9290
- TREASURER: Anthony Costanzo, 508-521-5382
- MEMBERS AT LARGE: Peter Bealo, 603-382-7039
Anna Hillier, 617-861-8338
- PAST PRESIDENTS: 1990-92 Marion Hochull
1988-90 David Aucoin
1987-89 Gary Walker

COMMITTEES...

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

FIRST CLASS

- Jack Megas, 311 Surrey Rd., Springfield, MA 01118.
- July 31-Aug. 1 STELLAFANE, Breezy Hill, Springfield, VT. Info: Send long SSAE to Stellafane, P.O. Box 50, Belmont, MA 02178.
- Sept. 12 STARCONN '92, Astro. Soc. of Greater Hartford, Wesleyan University, Middletown, CT. For info: STARCON '92, P.O. Box 2271, Hartford, CT 06145.

SEPTEMBER STAR FIELDS DEADLINE...

August 27th is the deadline for items to be included in the Sept. issue of *STAR FIELDS*. Mail or phone your contribution to Ted Poulos, 18 Cushing Rd., Brookline, MA 02146 (617-568-5127).

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.

MEMBERSHIP RENEWAL
Due July 31
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AMATEUR TELESCOPE MAKERS OF BOSTON
c/o John Samolyk
65 Court Street
Medford, MA 02155