



# STAR FIELDS

NEWSLETTER OF THE AMATEUR TELESCOPE  
MAKERS OF BOSTON

Vol. 4, No. 4

April 1993

salvage area. Greg Chase won our 50/50 raffle for the month. Steve Mock made available a list of objects for the Messier Marathon. Our speaker, Dr. Gerald Sussman gave us a brief history of the chaos theory and then showed results of his work in studies of chaotic motion in the solar system. His video tape of computer simulations of some of this work were fascinating.

## ASTRONOMY DAY...

Saturday, May 1 is Astronomy Day. This is your opportunity to publicly celebrate your hobby and to share your enthusiasm and love of the stars with others. We certainly need younger members and what better way to attract them than at the ATMoB exhibit in the public Atrium area of the Boston Museum of Science on Astronomy Day.

The center piece of our exhibit will be Paul Calantropo's 12-inch refractor if others will assist him. But we would also like to display and demonstrate a SCT, an equatorial mounted newtonian, and a Dobson as examples of amateur scopes. We hope someone will volunteer to demonstrate mirror making and testing (Lisa and Scott can not this year). We need volunteers to sign-up for these areas of the exhibit: Telescopes as mentioned above; Educational Materials--Photos, charts, books etc.; Mirror grinding and testing; and evening star party. Mario Motta, Ted Poulos, and Bernie Volz will give talks in Wright Theater.

The schedule is: 8-9 a.m. off-load and setup in Atrium, 4-5 p.m. pack-up, and 7:30 p.m. telescope set up on garage roof for evening star party. SIGN UP TO HELP at the April meeting or call John Reed (861-8031) or Ted Poulos (566-5127) to volunteer by phone or for additional information.

## CANADIAN ASTRONOMER IN DISGRACE...

by Walter MacDonald

A severe blow was dealt to the Canadian Astronomical community on April 1 when Kingstone Centre Honourary President, David Levi tested positive for parabolic steroids. Levi, who has discovered 12 comets, has been banned from comet hunting for two years and will be stripped of his discoveries. Parabolic steroids artificially enhance the ability of the user to find solar system objects, especially those in parabolic orbits.

Levi's comet hunting career began in the late 1960's but he didn't meet with success until 1984. Since then he has discovered comets at an astonishing rate. Over the last few years Levi has been the target of allegations of steroid use by other comet hunters. Says William Liller, "Here's a guy who can't find a comet for 20 years and then finds 12 in 7 years. That should have been a dead giveaway."

Steroid use is believed to be rampant at many astronomical institutions. An IAU commission into steroid use in astronomy had been set up. It will conduct hearings around the world and report back to the IAU in

## OUR APRIL MEETING...

Thursday, April 8, 1993, 8 p.m.  
Phillips Auditorium, Harvard-Smithsonian  
Center for Astrophysics

**GRAVITATIONAL LENSES** is the subject of this month talk by Dr. Rudy Schild. As gravitational lenses are becoming better understood, microlensing by a single star in the lens galaxy is showing promise as a tool for microscopic inspection of a quasar. Dr. Schild will show what is known about microlensing and how it has resulted in direct imaging of a quasar. Receiving his PhD from the University of Chicago, Dr. Schild was a research fellow at both Mt. Wilson and Palomar. In the early 70's he was scientific director of Mt. Hopkins 60-inch telescope program. In 1974 he joined the CIA as an astronomer. Always interested in electronic imaging, he was one of the first to use CCD's to image galactic and extragalactic objects.

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

## MARCH MEETING HIGHLIGHTS...

Our March meeting had a good turn out with over 70 members and guests present. All the usual reports were given. John Reed reported on all the modifications going on at the clubhouse. Ed Dougherty announced that two telescopes are available at the clubhouse as loaners. Ken Laurie, who built the optical test tunnel originally, volunteered to give advice on how to disassemble it so that it can be moved. The President reminded everyone about the UMass astronomy convention on March 27. Mario Motta suggested that UMass should make a donation to the ATMoB for our help in the affair since they are charging admission. He also told us that his 32-inch mirror is finished and ready for aluminizing and described briefly his experiences with the Mars images he obtained on CD ROMS. Orders for David Levy's new book were taken by the President. Paul Cicchetti suggested that we advise MIT's Lincoln Labs that we are a non-profit organization so that we might be able to obtain items from their

September. In his own defense Levi says, "I'm not the only one! Look at [Robert] Evans—he lives on steroids!"

Editor's Note: Although I cannot attest to the accuracy of this story, I would like to thank the following for it: The Webfooted Astronomer, March '93, Newsletter of the Seattle Astronomical Society; Prairie Astronomer, The Prairie Astronomical Club of Lincoln, NE; and The AstroTent, North York Astronomical Society.

## DEALING WITH UNIVERSAL TIME...

by Ted Poulos

If you want to observe Jupiter's red spot or the occultations, eclipses, and transits of its satellites, you have to deal with Universal Time (UT). In fact, UT is used to mark the time of any astronomical event that takes place simultaneously everywhere on earth. If working with UT just involved a time conversion like EDT to EST, I could handle it, but often there is a date change also. This always confused me. I simply had to get the idea of UT time straight if I were ever to observe the Jupiter phenomena on a planned basis! Let me share with you what I learned.

Universal Time is the astronomers name for the terrestrial time standard known as Greenwich Mean Time (GMT) and for all practical purposes is identical to it. GMT, normally expressed in 24-hour time, is the local time in the London borough of Greenwich—a small city that lies directly on the Earth's prime meridian (0° longitude). When it is 11:30 p.m. in Greenwich, for instance, the GMT and UT time is 23:30 (23 hrs., 30 min. from midnight last, or time 0).

The UT for events that fall within Boston's usual night time observing hours (8 p.m. to Midnight EDT) is 0:00 to 4:00 UT. So if you want to observe the minimum of Algol at a convenient hour, check the Algol listing in S&T Calendar Notes for minima that fall between 0 and 4 UT.

Choose, for example, April 19, 3:24 UT which is equivalent to 11:24 p.m. EDT. Simple enough, right? Wrong! The time is right, but the date is wrong for a Boston observer. You must observe this minimum on April 18 at 11:24 p.m. EDT. **Rule of thumb:** While Boston is on EDT, any event with a UT time between 0:00 and 3:59 must be observed on the night before the date listed. Any events occurring at 4:00 UT or later can be observed on the date indicated in the listing.

The reason for this is that when Boston is on EDT, midnight at Greenwich occurs 4 hours before it does here. Greenwich (and UT) is 4 hours into a new day and date compared to Boston. Therefore, events occurring during the first 4 hours of UT time are still happening on the previous day in Boston.

A general rule for converting UT and date to EDT, subtract 4 hours (5 hrs. for EST). If you get a negative number, add 24 hrs and change the date to the day before. Example: Listing April 19, 3:24 UT.  $3:24 - 4:00 = -1:2$ , adding 24= 23:24 UT or 11:24 EDT On Apr. 18.

## THINGS YOU MAY WANT TO KNOW...

TELESCOPE BUILDING with John Dobson is a new 90-minute instructional video. Its billed as Dobson's personal step-by-step guide to making scopes 8 to 16-inches. The price is \$39.95 plus \$3.50 S/H. Dobson Astro Initiatives, P.O. Box 460915, San Francisco, CA 94146-0915.

THE PRACTICAL GUIDE TO THE UNIVERSE is a new weekly cable TV series narrated by Tom Selleck. It begins Wednesday, March 31 at 8:30 EST on the The Learning Channel (TLC).

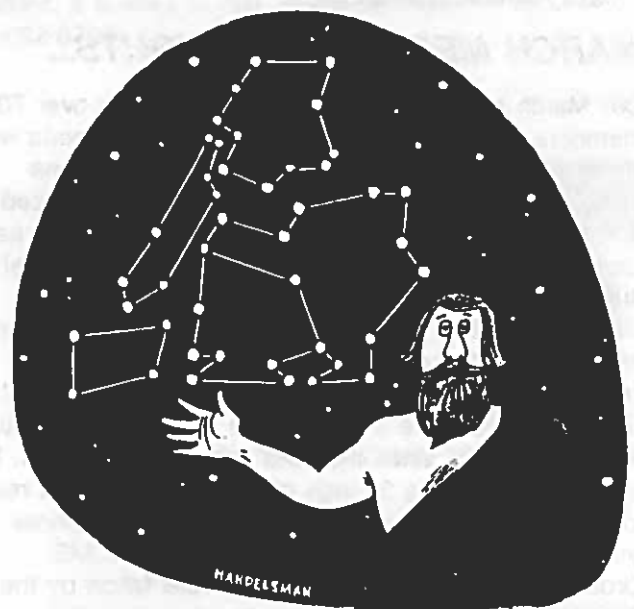
AMATEUR SKYWATCH is a new magazine for amateur astronomers being published by Robert DuHamel, former publisher of the Celestial Observer (circa 1972). The magazine will include articles on telescope making, photography, observing techniques and related subjects written by amateurs across the country. For subscription info and writer's guidelines send a SASE to: Robert DuHamel, 535 N. First St., Ste. E, El Cajon, CA 92021.

PAUL VALLELI is looking for an optical engineering position. If anyone can offer a lead in this regard, call Paul at 617-272-8946.

A STAR PARTY for the Habitat Institute for the Environment has been requested by Hannah Lermann, Program Coordinator (617-489-5050). The organization is a small nature education center in Belmont, MA. They would like someone to give a short talk and then point out things in the sky. The date, around the Perseids meteor shower, August 12. If you would like to coordinate this even, call Bernie Volz.

PHIL HARRINGTON is writing another astronomy book

**ASTRO FUNNIES...** Contributed by Richard Koolish



*After the death of New York City, Zeus placed it in the heavens as a constellation.*

dealing with the kind of equipment both new and old used by amateurs. He is asking people to write him describing the scope(s) and accessories they use along with their good and bad features. Reviews will receive credit in the book. Write him at: 54A Dillmont Dr., Smithtown, NY, 11787. -- Peter Bealo

ANOTHER MIRROR ALUMINIZING source is the EMF Corporation, 701 Spencer Rd., Ithaca, NY 14850, 800-456-7070. They have been doing optical coatings for both amateur and professional astronomers for 55 years.

A BIT OF CLUB HISTORY published in the February issue of *STAR FIELDS* was written by Paul Vallell, an ATMob past president and long time member.

NASA LAUNCHES COMET THIS MONTH, but not a comet of the astronomical variety. The first Commercial Experiment Transporter (COMET) mission is scheduled for takeoff on April 28. It is an unmanned spacecraft launched from NASA's flight center on Wallops Island, VA. COMET will carry a 450 lb. payload of 11 industrial experiments 300 miles into low-earth orbit. After 30 days, a recoverable capsule containing some of the experiments will descend to Utah's Bonneville Salt Flats. The remaining experiments, housed in the craft's service module, will remain in orbit over two years before being destroyed by reentry. COMET will provide longer exposure to a low-gravity environment than the space shuttle. --Scientific American, April '93

## DONATIONS TO THE ATMob...

We want to thank the following for recent donations to the ATMob. The KILLAM SCHOOL of Reading, MA gave us \$25 in gratitude for the star party conducted for them on February 27th. ATM'er ALAN DELMAN gave the clubhouse shop a brand new bench grinder. OPTICAL SYSTEMS, INC., Phil Rounseville's employer, presented us with a light box for testing flats by viewing 436 nm Hg light interference fringes.

## ATMob ACTIVITIES...

THE MESSIER MARATHON took place at the clubhouse on March 19. The temperature was frigid, the ground was snow covered, the sky was clear, but some cloud dogging was necessary after 1:30 a.m. Over 16 ATM'ers with about 10 scopes took part in the event with only Steve, John, and Tania staying until dawn. Steve provided cider and munchies. No one scored the near dawn objects like M30, M72, M75, etc. The final scores stood at:

Steve Mock, 60 John Reed, 53 Rich Nugent, 45 Phil Rounseville, 25 Tania Ruiz, 21 Greg Chase, 20 Rich Burrier, Jr., ? Mike Beath, 19 Jim Hendrickson, 19

LUMINARY CELEBRATION sponsored by WUMB-91.9 FM of UMASS was held on March 27th. Among a dozen speakers was MARIO MOTTA who gave a talk entitled "Amateur's Universe" and BERNIE VOLZ one called "Nightsapes". KEN FYE and TED POULOS

manned an ATMob literature table. Ken showed slides of his unique computer processed astrophotos and Ted was interviewed on station WUMB. RICH NUGENT, JOHN REED, and Bernie had telescopes on the 10th floor roof. Bernie and John provided solar observing of a rather quite sun. ATM'er GEORGE TUCKER of the UMASS Physics Dept. provided tours of the observatory and its 16-inch telescope.

A VARIABLE STAR EVENING will be held at the clubhouse from 9 - 11 p.m. on Saturday, April 17. Beginners are specially welcome. For last minute schedule changes, call 603-880-6219 and enter the code 52 at the start of the recorded message.

A BABY BOY was born to Debbie and Paul Cicchetti on Sunday morning, March 21. Newly born Michael is the family's second son. Paul almost missed the event by working at the clubhouse that morning. Now that's dedication!

A NOMINATING COMMITTEE of three will be elected at our April meeting. Their task is to announce a slate of candidates at the May meeting for the ATMob annual executive board election in June.

## NEW MEMBERS...

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

Edward Cohen	Auburndale, MA
Tim Flynn	Reading, MA
James Hendrickson	Glendale, RI
Eric Johansson	Billerica, MA
Mark W. McKeever	Waltham, MA
Stephen J. Mills	Manchester, NH

## MARKETPLACE...

FOR SALE Celestron 8-inch SCT. Top optical quality and hard-coated corrector. 4 eyepieces, wedge, steel tripod, AC/DC drive corrector, camera T-mount, E.P. proj. tube, and Star Atlas. \$975. 617-272-8946.

FOR SALE Telephoto/Telescope, catadioptric 500 mm, 1/8 T-mount with tripod adapter and eyepiece. Similar to Russian Mak. \$95. 617-272-8946.

## OBSERVER'S CALENDAR...

Apr. 14-28 DARK-SKY observing window for the month.

Apr. 19 Patriot's Day daytime Moon occultation of Venus, 12:32 p.m. EDT

Apr. 22 Lyrid meteor shower

Apr. 11 Jupiter's red spot on meridian, 12:28 a.m. EDT. Other times: Apr. 13, 9:57; 15, 11:35; 18, 9:05; 20, 10:43; 23, 12:21; 25, 9:50; 27, 11:27.

**FOR SALE** 11 mm Nagler eyepiece, mint condition, \$165. Novak 2" R&P focuser, flal base, \$75. Celestron C65: 65 mm aperture, 815 mm fl; 22 mm eyepiece and vinyl case, rarely used and in excellent condition, \$75. Lumicon H-Beta filter, 1-1/4", \$50. Ken Fye, 617-353-4120 (days), 527-9161 (evenings).

**FOR SALE** Original Meade Model 2120, 10", 1/10 SCT with 8x50 finder, wedge and tripod, excellent condition. Includes moio-focus, moto-dec, full aperture glass solar filter, ATI CAT installed, but never used, star diagonal, Meade orthoscopic eyepieces 6 and 12.5 mm, off-axis guider, piggy-back camera mount, and counter weight set. Price \$1800, Tal Mentall, 617-598-0766.

### COMING EVENTS...

**Apr. 14** OPEN NIGHT AT THE BU OBSERVATORY, "Status Report: Exploration in the Solar System" by Dr. Christopher Paranicas, 8:30 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:** Marlo Motta, 617-334-3648  
**SECRETARY:** Ted J. Poulos, 617-566-5127  
**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  
1989-90 David Aucoin  
1987-89 Gary Walker

### COMMITTEES...

**OBSERVING:** Edward Dougherty, 508-458-8857  
**CLUBHOUSE:** -- Open --

### FIRST CLASS

**Apr. 15** C/A MONTHLY OBSERVATORY NIGHTS, "Double Trouble: The Complicated Lives of Binary Stars" by Saku Vrtilek, 8 p.m., Phillips Auditorium, C/A, Cambridge, MA. For more info call 617-495-7461.

**Apr. 17** CLUBHOUSE STAR PARTY for Dave Huestis's (Skyscrapers) BMOS Telescopic Astronomy class.

**Thru '93** ORION RENDEZVOUS: A STAR TREK VOYAGE OF DISCOVERY, Hayden Planetarium, For more info call 617-723-2500.

### MAY STAR FIELDS DEADLINE...

April 28th is the deadline for items to be included in the May 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:** The Tom Britton clubhouse is open every clear Saturday from 7 p.m. to 12:15 a.m.. 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 opening varies with the weather and other activities, it is wise to call ahead between 7 - 8 p.m.: 508-692-8708.



BOSTON MUSEUM OF SCIENCE  
Saturday, May 1

### ASTRONOMY DAY

c/o John Samolyk  
65 Court Street  
Medford, MA 02155  
AMATEUR TELESCOPE MAKERS OF BOSTON