

GuideStar

June, 2006

At the June 2 meeting...

Science Fair Winners

Richard Nugent

HAS Member Richard Nugent has coordinated the participation of the Houston Astronomical Society in judging the work of area participants in the Houston Science Fair. The winners are invited to present their projects at the HAS meeting.

Billy Bender - "Living On Mars"

Alessandra Rossi - "The Measure of Light Pollution in Greater Houston"

Raj Mistry - "The Effect of Temperature on the Refraction of Light"



Highlights:

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HAS Web Page:

<http://www.AstronomyHouston.org>

See the GuideStar's Monthly Calendar of Events to confirm dates and times of all events for the month, and check the Web Page for any last minute changes.

Schedule of meeting activities:

All meetings are at the University of Houston Science and Research building. See the inside back cover for a map to the location.

Novice meeting: 7:00 p.m.
Bill Leach "The Constellations"

Site orientation meeting: 7:00 p.m.
Classroom 121

General meeting: 8:00 p.m.
Room 117

See last page for a map and more information.

Volunteers of the Texas Star Party

Steve Goldberg

Steve and Amelia Goldberg work hard to keep the Texas Star Party on track, and at this month's meeting Steve will talk about the Star Party, who helped, and what a great time it was!

The Houston Astronomical Society

The Houston Astronomical Society is a non-profit corporation organized under section 501 (C) 3 of the Internal Revenue Code. The Society was formed for education and scientific purposes. All contributions and gifts are deductible for federal income tax purposes. General membership meetings are open to the public and attendance is encouraged.

Officers & Past President

President: Steve Sartor	H:281-370-3544
Vice Pres: Bill Leach.....	H: 281-893-4057
Secretary: Doug McCormick.....	H: 281-996-0177
Treasurer: Bill Flanagan	H:713-699-8819

Additional Board Members

Liaison responsibility		
Steve Goldberg.....	713-721-5077	
Don Pearce.....	713-432-0734	
Bob Rogers.....	281-460-1573	
Kenneth Miller.....	936-931-2724	
Allen Gilchrist.....		

Committee Chairpersons

Audit	Tom Blocker
Education.....	Susan Kennedy..... 281-376-3262
Field Tr./Obsg.....	Clayton Jetel..... 281-573-1337
Novice.....	George Stradley..... 281-376-5787
Observatory	Kirk Kendrick 281-633-8819
Program.....	Don Pearce
Publicity	John Missavage
Telescope	Mike Hamlin 281-489-2926
Welcoming	Susan Kennedy..... 281-376-3262
	Darlene Sartor..... 281-370-3544

Ad-Hoc Committee Chairpersons

Historian	Leland Dolan..... 713-688-0981
Librarian.....	Peggy Gilchrist..... 281-443-8773
Logo Mds Sales.....	Judy Dye
Long Range Plan.....	Bill Leach..... 281-893-4057
Parliamentarian	Kirk Kendrick 281-633-8819
Publ. Star Party	Richard Nugent
Rice U. Coord.....	Matt Delevoryas
Schedule Obs'v'ty	Steve Goldberg
Texas Star Pty	Steve Goldberg

Special Interest Groups & Help Committees

These are now listed on the inside of GuideStar (not every month). See the Table of Contents

Advisors

Dr. Reginald DuFour, Rice Univ.
Dr. Lawrence Pinsky, U. of H.
Dr. Lawrence Armendarez, U. of St. Thomas

Dues and Membership Information

Annual Dues:Regular	\$36.00
Associate	\$6.00
Sustaining	\$50.00
Student	\$12.00
Honorary	None

All members have the right to participate in Society functions and to use the Observatory Site. Regular and Student Members receive a subscription to *The Reflector*. Regular, Student, and Honorary Members receive *The GuideStar*. Associate Members, immediate family members of a Regular Member, have all membership rights, but do not receive publications. Sustaining members have the same rights as regular members with the additional dues treated as a donation to the Society. *Sky & Telescope* mag \$32.95/year, *Astronomy* mag \$29/year -- see club treasurer.

Membership Application: Send funds to address shown on outside cover of *GuideStar*. Attention - Treasurer, along with the following information: Name, Address, Phone Number, Special Interests in Astronomy, Do you own a Telescope? (If so, what kind?), and where you first heard of H.A.S.

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Special Interest Group Listing

Any member who wants specific information on a SIG listed below may call the listed individual. Also, see the "Ad Hoc Committee Chairpersons" on the inside front cover and the "Special Help Volunteers" listing (not in every issue).

Advanced.....	Bill Leach..... 281-893-4057
Comets	Don Pearce
Lunar & Planetary.....	John Blubaugh
Occultations & Grazes.....	Wayne Hutchison
Advanced.....	Bill Leach..... 281-893-4057

Other Meetings...

Fort Bend Astronomy Club meets the third Friday of the month at 8:00 p.m. at the First Colony conference Center. Novice meeting begins at 7:00, regular meeting begins at 8:00. Web site: <http://www.fbac.org>

Johnson Space Center Astronomical Society meets in the the Lunar and Planetary Institute on the 2nd Friday of each month. Web site: <http://www.ghg.net/jscas/>

North Houston Astronomy Club meets at 7:30 p.m. on the 4th Friday of each month in the Teaching Theatre of the Student Center at Kingwood College. Call 281-312-1650 or E-mail bill.leach@nhmccd.edu. Web site: www.astronomyclub.org

June/July Calendar:



Photo by Scott Mitchell

Date Time Event

June

2	7:00 p.m.	Novice Presentation - UH
	8:00 p.m.	General membership meeting - UH
3	6:07 p.m.	First Quarter Moon
11	1:06 p.m.	Full Moon
18	9:10 a.m.	Last Quarter Moon
25	11:07 a.m.	New Moon

July

7	7:00 p.m.	Novice Presentation - UH
	8:00 p.m.	General membership meeting - UH
3	11:37 a.m.	First Quarter Moon
10	10:02 p.m.	Full Moon
17	2:13 p.m.	Last Quarter Moon
24	11:31 p.m.	New Moon

Send calendar events to JBlubaugh@aol.com
or call 713-921-4275.

Note:

The June, and future, meetings will be held in the original meeting room in the Science and Research building (see the last page for details). The May meeting was in a different classroom due to conflicts with student testing.

Check the web site:
www.astronomyhouston.org
Webmaster: Bob Rogers
siteworkerbob@hotmail.com

The Houston Astronomical Society Web page has information on the society, its resources, and meeting information.

Want your astronomy work and name on the Internet for the whole world to see? Have some neat equipment? Pictures in film, CCD, hand drawings or video format are all welcome on the page. Do you have an idea to improve the page? I'm listening. Send me Email at siteworkerbob@hotmail.com.

Special "Help" Volunteers

Any member who wants specific information on an astronomical topic may call special help volunteer (listed in most issues of the *GuideStar*). If you have a moderate knowledge of a special subject and would be happy to have others ask you about that subject, let the editor know and your subject, name and phone will be listed in *GuideStar* in the future.

At the HAS meeting, please remember to park across from Entrance 14.



Observations... of the editor

by Bill Pellerin, GuideStar Editor



Some observations from the 2006 Texas Star Party

To see the array of telescopes and binoculars on the observing fields of the Texas Star Party could leave you with the impression that the best observations can only be made with the best equipment. While there are plenty of extraordinary observations to be made using the various optical instruments, the observation that I made this year that sticks with me, and most impresses me, was one made without any optical instrument at all.

Friday night was as clear as any night I remember at the Texas Star Party. Once my eyes got used to the darkness I could walk around the field easily with the field illuminated by the accumulated starlight. By 4:30, Saturday morning I was able to see the most magnificent of galaxies naked eye. The bulge at the center of the galaxy was obvious and the various dust lanes near the galactic

center and continuing through Cygnus were obvious. This galaxy is, of course, our own – the Milky Way. If you go to the TSP for only one thing, make the trip to see the Milky Way arching across the whole sky. It's a sight you'll never forget.

At its best the skies at the Texas Star Party are a visual delight. Objects which you never thought you'd see appear easily in even the smallest instruments. Scott Mitchell, next to me on the upper field, was easily observing galaxies with his 70mm Pronto. The contrast of objects against the ink-dark skies is something to see. I did some variable star photometry early in the week, and visual observing later in the week. It's the visual observations that I remember. Omega Centauri is astonishing from the Texas Star Party field.

Jayne Lambert - TSP Super Trooper

As many of you know, Jayne Lambert became ill on Monday at the TSP. She's doing much better now, and we all look forward to seeing her at the 2007 TSP and many times between now and then. It was my pleasure to take over some of the effort to get the door prizes organized for the Friday night and Saturday night giveaways. I was assisted by my wife, Lori Valencic (organizing the prizes), by Steve Sartor (gathering up prizes), by Scott Mitchell (gathering up prizes), and by Bill Flanagan (assembling the Friday evening prize telescope). Jayne has done most of this herself (we're sure she enlists Dana) and we now appreciate how much time it takes to get this



The North Field at the 2006 Texas Star Party

organized. Thanks Jayne, and don't hesitate to ask for help next time.

The vendors were very generous about providing prizes for the event.

Other stuff

Do you look at www.cloudynights.com? If not, you should. There's a very nice photo-tour of the NEAF (Northeast Astronomy Forum) showing some of the equipment visible at the show. TeleVue has made versions of their popular refractors that meet the needs of imagers, with focusing motors and micrometers.

There's new information in this issue about the Alcon Expo coming up in August. Check it out! I'm signed up and am looking forward to going.

Also, great articles by Allen Gilchrist and Don Pearce this month. What are you doing? Write an article for the *GuideStar* and send it to me.

*Until next time...
clear skies and new moons!*

..Bill

billpellerin@sbcglobal.net

Logo Sales

The *Observer's Handbooks* for 2006 are in. They sell for \$25.00. If you would like to have one or more, please e-mail me at judyadye@aol.com, call me at 281-498-1703, or see me at the meeting... Judy

Astronomical League Convention

August 4-5 - Dallas

Howdy!

You are invited to Texas for ALConExpo 2006, the Astronomical League's annual grand gathering of amateur astronomers!

ALConExpo 2006 will take place on August 4-5, 2006. The Texas Astronomical Society of Dallas is the host society for ALConExpo 2006, this year's Astronomical League Convention. Convention activities, including the traditional Star-B-Que and a public outdoor star party, will take place on the campus of the University of Texas at Arlington, located in the heart of the Dallas/Fort Worth Metroplex.

Convention headquarters will be the E. H. Hereford University Center. The College of Science at UT Arlington is the on campus sponsor. The Astronomical League's Annual Council Meeting will be held in the University Center on August 3, 2006.

Visit the ALCON Expo 2006 website to register online:

www.alconexpo.com

Or download your registration form from the website:

www.alconexpo.com/pdf/AlconRegistrationForm2006.PDF

and mail to:

ALCon/Expo 2006 Registration
Post Office Box 25162
Dallas, TX 75225

Great Speakers include ...

David J. Eicher, Editor, *Astronomy Magazine*

Scott Roberts, Vice President, Brand Community for Meade Instruments Corporation

Robert L. Gent, President, Astronomical League; and Vice-President, International Dark Sky Association.

Dean W. Chandler, President, Central Texas Astronomical Society

Dr. James Horwitz, Chairman of Physics, UT Arlington

Jason Ware, Astrophotographer Extraordinaire, Galaxy Photography

... and many others!

Housing

On Campus Accommodations are available In Arlington Hall. Reservations and Payment MUST be received by May 29, 2006

Single Room: \$50 Per Person Per night - 2 Twin Beds

Double Room: \$40 Per Person Per Night - 3 Single Beds per Suite, Shared Bath

Hotel Accommodations

Accommodations are available at a special rate of \$89.00 per night at the following Marriott hotels:

SpringHill Suites: 817-860-2737
www.marriott.com/dfwsh

TownePlace Suites: 817-861-8728
www.marriott.com/dfwta

Phone Bookings: Contact either hotel directly or call toll free 800-932-2198. You must ask for ALConExpo 2006 Group Rate to receive the special rate.

Hotel reservations must be made by July 5, 2006!

For complete information on ALCON-Expo 2006, visit our website: www.alconexpo.com

Come to Texas for ALConExpo 2006. While you're here ...

Explore the Lone Star Sky!

Breaking the Eight Degree Barrier

by Don Pearce

One of the holy grails of observing thin crescent moons is observing the Moon when it is less than 8 degrees in elongation from the Sun.

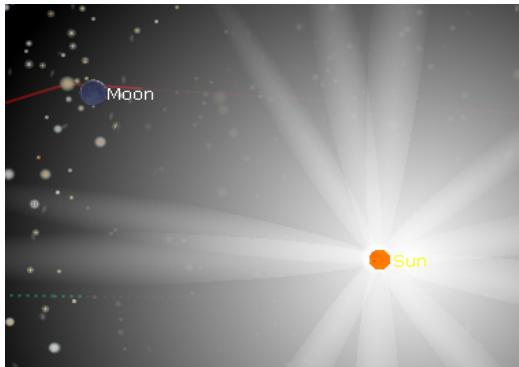
Only a handful of validated observations have ever been made that have accomplished that feat, all, of course, with the aid of optics. The validated “world” record is $7^{\circ} 31'$, set in 2002. For me, initially, I was torn between the desire to travel to the Mediterranean for the total solar eclipse on March 29th (at about 4:11 a.m., Houston time) or try for the first crescent over western North America on the evening of the 29th. Obviously, both could not be accomplished. For various reasons I opted for going for the first crescent. The first consideration was location, followed by weather. From Houston, the elongation just after sunset at the probable acquisition time was about $7^{\circ} 33'$, most certainly too close for its altitude and air quality.

We then considered Mt. Locke, home of McDonald Observatory, in the Davis Mountains of West Texas, for a number of reasons. For one, the elongation would be greater, but still less than 8 degrees. Secondly, its elevation of 6837 ft. (2084m) combined with its no more than one-degree horizon obstruction might give us an excellent chance. Third, Bill Flanagan and I successfully observed an $8^{\circ} 5'$ elongated crescent from Mt. Locke last May, and we knew its advantages. If only the weather would cooperate.

On the afternoon of March 29th, Bill Flanagan, Tom Fox, and I were in downtown Ft. Davis, near Mt. Locke, and Bill acquired an internet connection with his laptop. The news from the satellite imagery was not good. Everywhere, within hundreds of miles, seemed to have little prospect of being clear. Overhead, cirrus clouds blanketed the sky. We decided that Mt. Locke would give us the best chance for a successful observation, but as the afternoon wore on, that prospect seemed remote.

Nevertheless, we proceeded to the site (N $30^{\circ} 40' 17''$ by W $104^{\circ} 01' 25''$), and set up our equipment. We had telescopes, binocu-

lars, tripods and a camera. As the Sun set over Sawtooth Mountain we noticed about a 2 degree gap in the clouds, from about 3 degrees above the horizon to about 5 degrees! Above and below that gap the clouds were too thick for any observation of the Moon. And in that gap the sky was a light blue. There is a principle in observing thin crescents that “low clouds can be your friend”, meaning, of course, that low clouds over the sunset point help to increase the contrast in the clear sky above. I believe this was an important factor in the events to follow. The Sun set at 7:13 p.m. (CST), and, at about 7:25 p.m., using my 10X70 binoculars, I first spotted the crescent near a very thin, dark and horizontal cloud strip within the gap. However, after only a few seconds it disappeared, leaving me thinking I had, perhaps, only observed a striation in the clouds, something, I might add, that is very easy to do with such a thin crescent. Within seconds, Bill, using his 11X80s announced that he, also, observed it at the same location and the conviction in his voice made me aware that he really had it. After a few more moments, I then observed it, with certainty, in my binos. At that point, Tom Fox announced that he had seen it in a pair of 16X70s. The time was 7:26 p.m. (CST), and the Moon had an elongation of $7^{\circ} 52'$ from the Sun and was 15 hrs. and 10 minutes old.



Sun and Moon locations at 7:25 p.m. on 3/29/2006. From The Sky.

Unfortunately, after about a minute, it again sank behind some clouds, not to reappear. And we had an anomaly. I had seen the horns extend only from about 4:30 to 6:30 o'clock for about a 60 degree illuminated arc, which also gave it the appearance of being slightly tilted to the right. Bill reported that he had seen the horns extend from about 4:30 to 7:30, the expected orientation. One possibility was that my estimate was made when there were thin, obscuring clouds covering part of the crescent. It was gratifying that all three of us were able to observe the crescent, and for myself, I was pleased to break the eight-degree barrier.

Pocket Sky Atlas

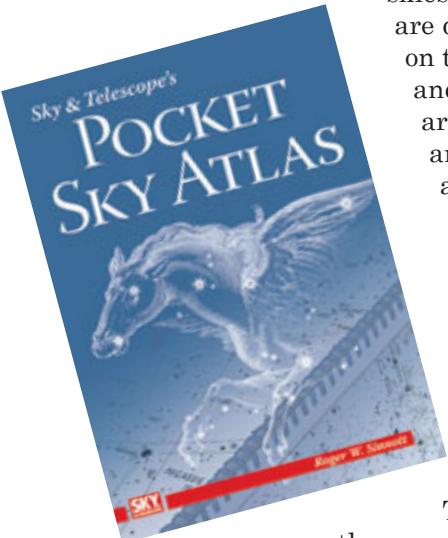
Sky & Telescope

By Roger W. Sinnott

Review by: Bill Pellerin, GuideStar editor

The *Pocket Sky Atlas* from Sky & Telescope is a beautiful, small atlas **intended** to be used by the amateur astronomer. The notion that the book is *intended* for the amateur is important here. The atlas makes an effort to show only objects that are visible using amateur telescopes under reasonably dark skies.

For example, there are double stars indicated on the map, but separation and relative magnitude are taken into account and only those stars that are (generally) visible to amateurs are marked as doubles. As with most object, your ability to view the double stars, or various deep sky objects depends on your telescope and your observing site.



There are other 'pocket'

atlases on the market, and some of these deserve consideration as well. The

Peterson's *A Field Guide to Stars and Planets* is smaller, but thicker, and is more than an atlas. The charts aren't as readable as those in the *Pocket Sky Atlas*. In addition, you may want to check out a book by Eric Karkoschka called *The Observer's Sky Atlas*. While not as comprehensive as the *Pocket Sky Atlas*, it does provide observing lists and an assessment of visibility with various instruments. At Amazon.com you can view some sample pages of this book to give you an idea of what it has to offer.

The *Pocket Sky Atlas* isn't, well, pocket-sized. Unless the clothes you wear have very large pockets, the atlas won't fit. It's about 6 1/2 inches wide. It might better be called the Portable Sky Atlas. Never mind; it's small enough that it's not a burden to carry it out to your backyard site for a quick observing session. Last night, for example, I looked at Mizar (Ursa Major) to see if I could split the close double (the wide double with Alcor is easy) with a small telescope that I keep at home. I could, but there's no information in the atlas about how close they are (14 arc seconds, as it turns out).

I like the organization of the atlas. It's divided into 8 groups, based on RA and the contents page shows which set of maps corresponds to which viewing months. Since there are 12 months (last time I looked) and only 8 groups, 4 of the groups are associated with two months each.

There are four close-up maps at the end of the Atlas - one for the Pleiades (M45), one for Orion's Sword, one for the Virgo Galaxy Cluter, and one for the Large Magellanic Cloud.

The *Pocket Sky Atlas* is wire-bound. This is important because this binding allows the book to lie flat and be folded backwards without destroying the spine. This is an extremely useful feature of the atlas. It can be a challenge in the field to keep a book open to the correct page while trying to move the telescope and find the object.

Bottom line -- If you need a beautiful atlas that you can carry with you easily (vacations, perhaps), and that does an outstanding job showing you what's in the sky and where it is, the *Pocket Sky Atlas* meets the need. If you want a small book that contains maps and a guide to the maps (observing lists, object descriptions), you'll need to either supplement the *Pocket Sky Atlas* with other materials, or choose another book.

Observing “Larry’s List”

With Electronic Eyes

By Allen Gilchrist

Each year at the Texas Star Party there are several lists of suggested objects for observing under the dark west Texas skies. The most challenging of these is The Advanced Observing Program - a list of objects put together by HAS’s own Larry Mitchell. Anyone who observes twenty

of the objects listed gets a nice pin along with the satisfaction of knowing that they have accomplished something that not everyone does. I’ve wanted to attempt “Larry’s List”, but with no scope larger than 11-inches, I felt it was beyond me. I know that Matt Delevoryas routinely does the list with an 8-inch, but my eyesight just isn’t that good.

For several years, I’ve thought about “observing” the list using my CCD camera.

After all, the fun part is finding these objects. This year, “Larry’s List” was based on a theme of emission, reflection, and dark nebula. It looked particularly inviting, and I decided to give it a try. Larry gives out the list and a detailed set of finder charts and even images to anyone who asks for them, but I decided to use my own finder charts from TheSky and Megastar, and object images from TheSky and The Real Sky.

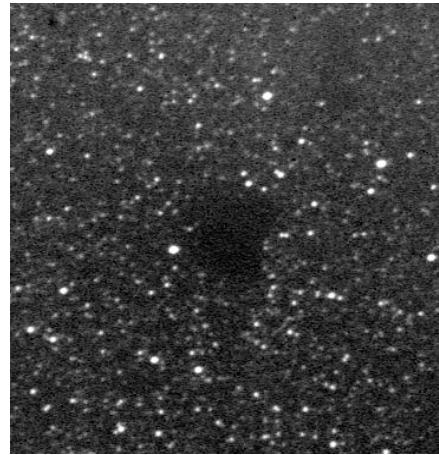
Some of the objects listed, like the zodiacal light or the “E” nebula in Cygnus were too large to image, but they were either naked eye or binocular objects. Most of the rest of the objects listed were within the capabilities of my imaging system, an ST-10XME on a C-8 working at f/6.3.

My first task was to locate each of the objects in either TheSky or in Megastar.

TheSky has images of most NGC objects, but its database did not include every object in “Larry’s List”. The object data base in Megastar is more extensive, but I still needed The Real Sky for some of the objects to get some idea of what I was looking for.



B68 from the Real Sky Images



B68 Image from TSP

When the Star Party arrived, armed with TheSky, Megastar, and a bunch of FITS images from The Real Sky, I was ready. I should mention one important point. When searching for faint objects, it is critical to know the field of view of your finder and telescope-eyepiece combination; or in my case, the field of view of the telescope and CCD camera. These were determined ahead of time and were loaded into both TheSky and Megastar.

My basic procedure was to start with a nearby naked-eye star and then star hop using the finder until I matched the star field as nearly as possible.

Then I would begin looking for the object with the CCD camera. Sometimes I could see the object without further searching, but sometimes I had to work a bit harder. I found that I could match the star field in the CCD image on the computer screen to a portion of the sky display in either TheSky or Megastar. Then I could determine which way to move in order to center the target object. Once an object was centered, I took and saved a single one minute exposure to compare to the images from either TheSky or The Real Sky. Each object I imaged was clearly recognizable. As an illustration, I have included a 20x20 arc second image of the dark nebula B68 from The Real Sky along with my quick shot. The little irregularly shaped dark nebula and the prominent field stars can clearly be seen in both images.

...Continued

Observing Larry's List... from previous page

I worked on the list along with other observing activities for several nights, and completed the required twenty objects under less than ideal conditions on Thursday night. CCD cameras can pull photons through thin clouds better than the eye can. I collected my pin from Larry on Friday, and will display it proudly on my hat. In addition, some of these objects looked pretty interesting, and I may put some of them on my list of objects for longer imaging sessions in the future.

How can I learn more about the Astronomical League?

Amateur astronomers from across the country benefit from perusing the many pages of the Astronomical League's website, www.astroleague.org. Naturally, this is the place to go if you're looking for information about upcoming events and League news. But there is so much more...

Want to learn all about one of the great League observing programs? Go to www.astroleague.org/observing.html.

Do you know of a worthy candidate for one of the many League awards? Look at <http://www.astroleague.org/al/awards/awards.html>.

Are you interested in buying a particular book about our fascinating hobby? Then go to www.astroleague.org/al/bookserv/bookserv.html.

There is even something to help your club function better. Try www.astroleague.org/al/socaids/socaidid.html

Make the most of your Astronomical League membership! **To find out more about what the Astronomical League offers you, why not log on to www.astroleague.org today?**

Membership Renewals...

Your membership is renewable on January 1 of each year.

Total yearly dues are \$36.

If you paid your dues any time in 2005, your payment for 2006 is due as of January 1, 2006. New members joining in 2006 will pay only for the months remaining in the calendar year.

Magazine subscriptions can be renewed at any time and the renewal does not need to be synchronized with your HAS dues.

Membership in the Houston Astronomical Society is one of the great bargains in Astronomy. For a regular membership of \$36 you get the opportunity to support an active and growing organization, you get the monthly *GuideStar* newsletter, and you get access to the outstanding H.A.S. observing site near Columbus, Texas. (You must attend an orientation, given monthly, to use the site.) And, after two months of membership you can borrow, at no charge, one of the Society's loaner telescopes. It's the best deal in town, we think. Please renew your membership when it expires.

Encourage other astronomy enthusiasts to join the organization as well. It's a great group.

Thanks!

Want Ads

For Sale: SCT Denkmeier II x PowerSwitch binoviewer and Eyepices

Excellent condition, original aluminum case, along with a pair of TeleVue Nagler 6 7mm eyepieces and a pair of TeleVue Panoptic 24mm eyepieces, all four eyepieces in their original TeleVue boxes.

New the set retails for \$2500. Will sell the set for \$1500. All pieces are in excellent condition and little used. I will also toss in my 3 year old LX90, also in excellent shape, for an additional \$750, for a great binoviewer set up. The LX90 still has its original packing carton, as well as a Telrad finder and an 8x50 finder attached. I will toss in for free a Meade electronic focuser and an eyepiece tray that attaches to the LX90 base.

I can be contacted by telephone at 713 851 2861 or email (james.morse@exxonmobil.com). I live and work in Houston and would prefer a hand delivery, but am willing to send by post. - Jim Morse

For Sale: Celestron Nexstar 8

Like New Condition...Celestron Nexstar 8, Used only 2 times in back yard. Some extras include Solar filter, 1 1/4" star diagonal, 40 mm multi-coated nexstar plossel, 8-24 mm Z00 eyepiece, variable polarizing filter, 2X multicoated Barlow. \$ 850.00 Jack DeNina, Willis, Texas 936-856-0704, jjack9485@cs.com

For Sale: 20" Obsession

I can no longer handle the weight, or trips up the ladder, and must sell the 20" Obsession. I would prefer this to be a Texas or Oklahoma deal in which both parties could drive a reasonable distance for the exchange.

Included with the basic telescope are:

1. The JMI NGC Max digital circles (never used, but the light comes on).
2. A Protostar diagonal holder with heating wiring attached (also never needed),
3. A 6-foot customized ladder with grab bar and intermediate steps up to 3 feet.
4. A battery "shelf" that bolts into the handlebar bushings.
5. An Astro Systems Scope Coat.
6. TelRad finder.
7. Lots of stainless replacements on the hardware.
8. Obsession light shroud.
9. JMI focuser upgraded to compression ring version draw-tube.

The mirror is Galaxy, recoated by Galaxy with 96% coatings in 1998 and coatings remain in excellent condition. My 71-year old eyes saw one galaxy rated at 16.3 mag by Megastar at TSP and lots in the 15.7 mag. range.

The truss tubes have been equalized as best as possible so that when assembled in the field, collimation is never far off. There are about 18 pounds of fitted counterbalance weights, needed to accommodate an 80 mm finder. This finder is not a part of the sale, however. The UTA round box has a custom lid that can substitute as a table top in the field.

There are a few battle scars as this is a 1993 model.,

Overall, this is an excellent telescope, in great condition, and has been a joy to use.

I would like to get \$5,100 for everything listed above, based on Midland pickup, or \$5,250 for pickup at some intermediate point. The new replacement values for the above is in excess of \$7,000. Contact Don Judd at dkjudd@nts-online.net

For Sale:

Celestron Sky Master 11 X 80 Astronomical Binocular with original carrying case. Celestron Photographic Tripod (crank up) in original box. Both items purchased new and gently used a few times. \$250 or best offer. George Sellnau 713-978-7774, [gSellnau@aol.com](mailto:gsellnau@aol.com)

For Sale: 13.1" Colter "Odyssey"

13.1" Colter "Odyssey", 1.8 tele-vue barlow, 32mm plossl tele-vue 10.5mm Tele-Vue, 21.5mm rke Edmonds, Lumicon UHC filter, Celestron eyepiece filter set, 7 x 50 finder scope, Telerad finder, tube cap, light box and Skyatlas 2000 maps, Burnham's Celestial Handbook, vol 1,2,3., Thats the details,everything for \$600.00.

E-mail: roy60@ev1.net

Phone: 713-434-2647

For Sale: Meade ETX 90EC Telescope,

and Meade tripod Used once. Includes Autostar controller. Paid \$850 new 6 months ago – no time for a new hobby. Includes all original boxes and manuals, and carrying case for scope and tripod. Before I put it on eBay, I'd like someone local to enjoy this scope. I'll take \$500 or any reasonable offer. Contact Bill at beley8@houston.rr.com.

Email your ads to Bob Rogers, our Webmaster, at siteworkerbob@hotmail.com

HAS Banquet Survey

I would like to take a survey. Please let me know what kind of food you like from the choices given.

- Bar-B-Que
- Italian
- Mexican
- Oriental
- Original as it has been

Thank you for the information.

Judy Ann Dye

Banquet Chairman

judyadye@aol.com

281-498-1703

Not a Moment Wasted

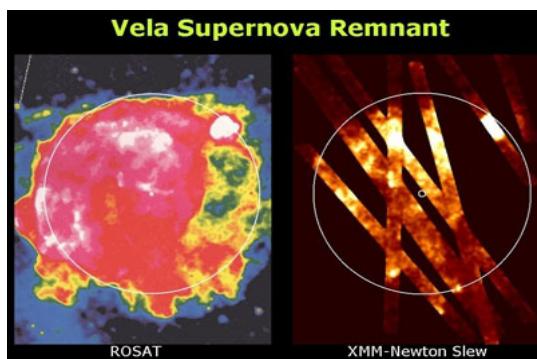
By Dr. Tony Phillips

The Ring Nebula. Check. M13. Check. Next up: The Whirlpool galaxy.

You punch in the coordinates and your telescope takes off, slew-ing across the sky. You tap your feet and stare at the stars. These Messier marathons would go much faster if the telescope didn't take so long to slew. What a waste of time!

Don't tell that to the x-ray astronomers.

"We're putting our slew time to good use," explains Norbert Schartel, project scientist for the European Space Agency's



The image above is the Vela Supernova Remnant as imaged in X-rays by ROSAT. On the right are some of the slew images obtained by XMM-Newton in its "spare" time.

larly well at x-ray wavelengths.

For the past four years, whenever XMM-Newton slewed from one object to another, astronomers kept the telescope's cameras running, recording whatever might drift through the field of view. The result is a stunning survey of the heavens covering 15% of the entire sky.

Sifting through the data, ESA astronomers have found entire clusters of galaxies unknown before anyone started paying attention to "slew time." Some already-known galaxies have been caught in the act of flaring—a sign, researchers believe, of a central black hole gobbling matter from nearby stars and interstellar clouds. Here in our own galaxy, the 20,000 year old Vela supernova remnant has been expanding. XMM-Newton has slewed across it many times, tracing its changing contours in exquisite detail.

The slew technique works because of XMM-Newton's great sensitivity. It has more collecting area than any other x-ray telescope in the history of astronomy. Sources flit through the field of view in only 10 seconds, but that's plenty of time in most cases to gather valuable data.

The work is just beginning. Astronomers plan to continue the slew survey, eventually mapping as much as 80% of the entire sky. No one knows how many new clusters will be found or how many black holes might be caught gobbling their neighbors. One thing's for sure: "There *will* be new discoveries," says Schartel.

Tap, tap, tap. The next time you're in the backyard with your telescope, and it takes off for the Whirlpool galaxy, don't just stand there. Try to keep up with the moving eyepiece. Look, you never know what might drift by.

See some of the other XMM-Newton images at <http://sci.esa.int>. For more about XMM-Newton's Education and Public Outreach program, including downloadable classroom materials, go to <http://xmm.sonoma.edu>. Kids can learn about black holes and play "Black Hole Rescue" at The Space Place, <http://spaceplace.nasa.gov/>, under "Games."

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

NASA's Space Place

Remember --

All HAS memberships are due for renewal in January, 2006. Our membership year now corresponds to the calendar year.

Mail your dues to the address on the back page of this GuideStar or bring your payment to the meeting in March.

***Minutes
the May, 2006 Meeting of the***

Houston Astronomical Society



The May, 2006 meeting of the Houston Astronomical Society was called to order at 8:10 p.m. by HAS President, Steve Sartor.

General Announcements:

- Steve Sartor welcomed everyone to the meeting.
- Steve recognized and welcomed the two guests present at the meeting.

Announcements:

- Steve Sartor spoke briefly about our new meeting room for the night, the new auditorium. It is uncertain if we will use this room in the future, as we are not sure of the policy regarding food in the new auditorium. Steve also mentioned that our old meeting room is slated for renovation.
- Steve mentioned that Dale Morningstar is the new chair of the Telescope Loaner program.
- Steve reported that Texas Star Party attendees enjoyed five and one-half clear nights, and it did not appear as dusty on the ranch as in years past.
- Don Pearce gave the Comet Report highlighting 73P/Schwassmann-Wachmann, a periodic comet that broke up on its 1995 return to the inner solar system. It is now making a spectacular return to the inner solar system, and the brightest fragments are easily observable during the month of May. For information, see Don's Comet Corner on the HAS website at <http://www.astronomyhouston.org>.
- Steve Sartor presented Amelia Goldberg with the Astronomical League's (AL's) Deep Sky Binocular Club Certificate #220 and pin, awarded for successfully observing a list of sixty selected non-Messier deep sky objects with binoculars. Steve also mentioned Amelia has four more observations remaining from the Arp Peculiar Galaxies list to finish her tenth AL observing program and qualify for the AL's Master Observer Award. Amelia would be only the second HAS member to receive the Master Observer Award.
- Ken Miller announced the next HAS field trip/star party is scheduled for Saturday, May 20th at his ranch in Hockley. Hot dogs will be served, and attendees are asked to bring their own drinks and perhaps a desert for the group. Ken had a flier available for meeting attendees, and full details and a list of observing targets up during this outing

are available through the "HAS Member's Night 'Star Gaze'" link on the HAS website.

- Tony Settles reported on a neutron star with a very strong magnetic field, a magnetar, in Sagittarius that experienced a "star quake" on December 27, 2004.
- Steve Goldberg reported that Jayne Lambert, who fell ill Monday at the Texas Star Party, had been released from the hospital and was feeling better.
- Steve also announced that the Astronomical League Convention (ALCON) is scheduled for August 4th and 5th in Arlington, Texas. Steve had a flier available and a link to ALCON is available on the HAS Website. Information on ALCON is also available in the GuideStar.
- Kirk Kendrick announced that the combination for the HAS observing site is changing on May 21st. Qualified individuals who haven't received the new combination should contact Kirk @ 281-633-8819.

Program

Don Pearce introduced the featured speaker for the evening, HAS member, Richard Nugent, who delivered his presentation entitled, "*Historical and Modern Methods to Measure the Solar Diameter*." Upon completion of his presentation, Richard answered questions from the audience, and Don Pearce presented him with a gift of appreciation from the society.

Closing Announcements

- Bill Molinare presented slides of his Mediterranean cruise to observe the March 29th Solar Eclipse.
- Steve Sartor announced that the topic of the next meeting would be a review of the Texas Star Party including a look at the TSP-award-winning astronomical image by one of our members.
- Steve pronounced the meeting adjourned at 9:42 p.m.

Observatory Duty Roster

by Kirk Kendrick, Observatory Chairman

A new approach to the duty roster is under development. The site continues to be in GREAT shape thanks to the unending efforts from our chief grounds keeper – Ed Szczepanski. Bob Rogers, and a few other volunteers that keep tackling key jobs.

Major Projects under planning:

- Site (continued) cleanup – before Picnic
- Annual Picnic – plant the new time capsule!
- Additional Camping sites with water and electricity

June Supervisor Jerod Kendrick 281-787-2367

Doc Pearce
Sim Picheloup
Scott Poteet
Leonard Raif
Logan Rimes
Eric Rothgeb
Kay Sandor
Volunteer

FOCUS THIS MONTH
Weed eat
Poison ants
Trim bushes along entrance /
exit roads

July Supervisor TBD 281-633-8819

Henry Schneider
Linda Sternbach
Larry Wadle
Mark Watson
Tom Williams
Barbary Wilson
Buster Wilson
Volunteer

FOCUS THIS MONTH
Weed eat
Poison ants
....cool off...
Weed eat

Additionally:

The Field Trip & Observing committee is planning some **observing events to coincide with the “Members Observatory Night”** for certain months (stay tuned!). Rather than a small event each month, we will focus on more help a little less frequently.

Month	Prime Night	Members Observatory Night
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June	24	17
July	22	15

Please volunteer to help us keep the site in great shape! Contact Kirk Kendrick with your desires and let him know of any special skills you have that the club could leverage. Thanks!

General Membership Meeting

The Houston Astronomical Society holds its regular monthly General Membership Meeting on the first Friday of each month, unless rescheduled due to a holiday. Meetings are in Room 117 of the Science and Research Building at the University of Houston. A Novice Presentation begins at 7:00 p.m.. The short business meeting and featured speaker are scheduled at 8:00 p.m. Also typically included are Committee Reports, Special Interest Group Reports, current activity announcements, hardware reviews, an astrophotography slide show by members and other items of interest. Parking is NOW across from Entrance 14, by the stadium.

Board of Directors Meeting

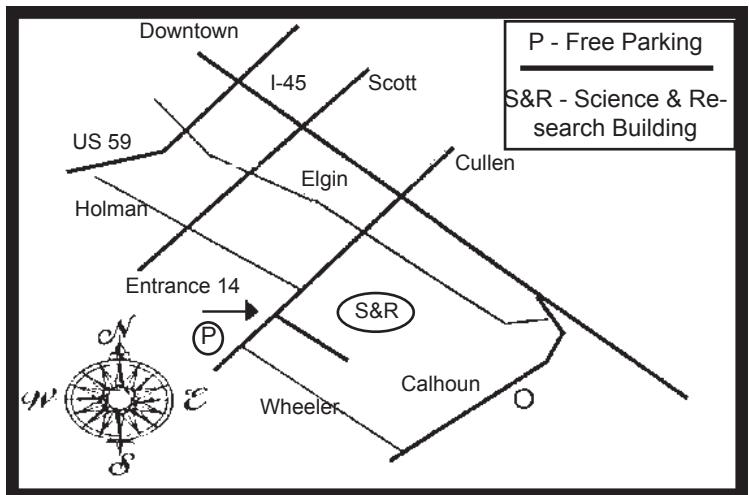
The Board of Directors Meeting is held on dates scheduled by the board at 7:00 p.m. at the University of St. Thomas. Information provided to GuideStar will be published. The meetings are open to all members of the Society in good standing. Attendance is encouraged.

GuideStar Information

The H.A.S. *GuideStar* is published monthly by the Houston Astronomical Society. All opinions expressed herein are those of the contributor and not necessarily of Houston Astronomical Society. The monthly Meeting Notice is included herein. *GuideStar* is available on the HAS web site to all members of H.A.S., and to persons interested in the organization's activities. Contributions to *GuideStar* by members are encouraged. Electronic submission is helpful. Submit the article in text, MS-Word format via email BillPellerin@sbcglobal.net. Copy must be received by the 15th of the month for inclusion in the issue to be available near the end of the same month. Or, bring copy to the General Membership Meeting and give it to the Editor, or phone to make special arrangements.

Editing & Production: Bill Pellerin, 713-880-8061; FAX: 713-880-8850;
Email: BillPellerin@sbcglobal.net

Advertising: Advertisers may inquire concerning ad rates and availability of space.



Houston Astronomical Society Meeting

June 2, 2006

7:00 Novice & Site Orientation

8:00 General Meeting

University of Houston

Houston Astronomical Society

P.O. Box 20332 • Houston, TX 77225-0332



The Houston Astronomical Society welcomes you to our organization. The HAS is a group of dedicated amateur astronomers, most of whom are observers, but some are armchair astronomers. The benefits of membership are:

- Access to our 18 acre observing site west of Houston -- a great place to observe the universe!
- A telescope loaner program -- borrow a HAS telescope and try observing for yourself!
- A monthly novice meeting, site orientation meeting, and general meeting with speakers of interest.
- Opportunities to participate in programs that promote astronomy to the general public (such as Star Parties at schools)
- A yearly banquet with a special guest
- A yearly all-clubs meeting for Houston area organizations
- Meet other amateurs and share experiences, learn techniques, and swap stories

**You're invited to attend our next meeting.
You'll have a great time.**