



GuideStar

July, 2006

At the July 7 meeting...

Recent Observations of Jupiter

Richard Schmude



Jupiter, the largest planet in our solar system is an amateur astronomer's delight. It's easy to see detail in the cloud bands that surround the planet and there are numerous

transient events that can attract our interest, too. The Great Red Spot (and now a secondary spot) can be visible, a Jovian moon can go into, or come out of an eclipse, a moon can cast its shadow on Jupiter and we can imagine what it would be like observing a solar eclipse from the top of Jupiter's clouds.

While a lot is known about Jupiter, we're learning all the time. At this month's meeting, Richard Schmude will talk with us about what we've learned recently.

Richard is the author of the Jupiter Observer's Handbook for ALPO.

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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.
Dennis Borgman "Observing the Moon"

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.

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 SartorH:281-370-3544
 Vice Pres: Bill Leach.....H: 281-893-4057
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Don Pearce.....713-432-0734	
Bob Rogers.....281-460-1573	
Kenneth Miller.....936-931-2724	
Allen Gilchrist.....	

Committee Chairpersons

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Education.....	Susan Kennedy.....	281-376-3262
Field Tr./Obsg.....	Clayton Jeter.....	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
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	Darlene Sartor.....	281-370-3544

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Logo Mds Sales.....	Judy Dye.....	281-498-1703
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Parliamentarian	Kirk Kendrick	281-633-8819
Publ. Star Party	Richard Nugent	713-524-1993
Rice U. Coord.....	Matt Delevoryas	713-666-9428
Schedule Obs'v'ty	Steve Goldberg	713-721-5077
Texas Star Pty	Steve Goldberg	713-721-5077

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	713-432-0734
Lunar & Planetary.....	John Blubaugh	713-921-4275
Occultations & Grazes.....	Wayne Hutchison	713-827-0828
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

July/August Calendar:



Photo by Scott Mitchell

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.

Date Time Event

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

August

4	7:00 p.m.	Novice Presentation - UH
	8:00 p.m.	General membership meeting - UH
2	3:46 a.m.	First Quarter Moon
9	5:54 a.m.	Full Moon
12	18:00	Perseid Meteor Shower Peak
15	8:51 p.m.	Last Quarter Moon
23	2:10 p.m.	New Moon
31	5:56 p.m.	First Quarter Moon

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

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.

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GuideStar deadline

★ ★ for the August ★ ★

★ ★ issue

★ ★ is July 15 ★ ★

★ ★ ★

★

Observations... of the editor

by Bill Pellerin, GuideStar Editor



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Summer has Arrived!

Those crazy days of summer are here. Summer officially began in Houston on June 21, at 7:26 a.m. This is the moment when the Sun is as far north as it gets and it begins its trek back south. It's also the day of the year with the most daylight, so after this date days get shorter and nights get longer. Good news for most observers.

Right now, and for a while to come, observing sessions will start later in the evening, will be warm, and will be accompanied by the buzz of mosquitoes. This weekend (June 17, as I write this) doesn't look good -- clouds are plentiful, and we had some rain earlier in the day.

I'm not a HAS officer, but I know that our paid membership has dropped off and I know that our attendance at meetings is down. Every one of us needs to do his or her part to let others know about the exciting hobby of amateur astronomy. Bring a friend to a meeting!

The Best Beginner's Telescope

The conventional wisdom is that the best beginner's telescope isn't a telescope at all; it's a pair of binoculars. I don't agree. Binoculars are great, and I've used a pair of binocs for years as an astronomical observing tool.

I remember what I wanted to see when I first got the notion that amateur astronomy might be fun. I wanted to see the craters on the moon, close up; I wanted to see the rings of Saturn; I wanted to see the moons of Jupiter. Why? I knew about these things as a beginner and I wanted to see them myself. And, I could see them from my back yard. The idea of using a pair of binoculars to see a fuzzy spot in the sky didn't appeal to me. I didn't understand what these objects were. Sure, you can see M13 (Hercules cluster), M31 (Andromeda Galaxy), and many other objects in binoculars, but at the time, I wasn't interested.

Have you ever done a public star party? I have. Many times I've been asked, "Can I see Saturn's rings?". What kind of reaction do you get when you show someone Saturn or the Moon? Do you get a 'Wow!' What if you show someone a faint galaxy or an unresolved star cluster? Not the same reaction, right?

I think that a knowledgeable person with a good pair of binoculars can find a lifetime of observing with that instrument. I also think that a newcomer to amateur astronomy will be disappointed with what he or she can see with binoculars.

Shallow Sky Object of the Month

I'm starting something new this month. I call it the 'Shallow Sky Object of the Month'. The idea is to tell you where (in the sky) and when

to find an object and then tell you why it's worth your time to look at it. Most, if not all of these objects will be visible from your backyard in Houston. So, you won't have to load up and make the trek to the Columbus observing site to see the object. I'd welcome any feedback or recommendations.

Our object this month is 61 Cyg, a 5th magnitude star in Cygnus the Swan. I saw it last night (as I write this on June 25), and I spent quite a bit of time looking at the star and thinking about its place in history.

Last night was a surprise. According to the Clear Sky Clock (see a link from the H.A.S. web page) it was going to be cloudy most of the night. It was cloudy most of the day, so this prediction seemed appropriate. But, it stayed clear from sunset until at least 1:00 a.m., when I called it quits. It goes to show you.

Have a safe and happy July 4th holiday weekend, and I'll see you at the H.A.S meeting on the 7th.

*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!

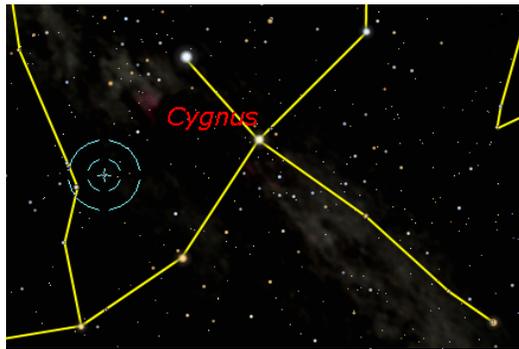
61 Cyg - A Remarkable Star

by Bill Pellerin, GuideStar Editor

Object: 61 Cyg
Class: Star
Magnitude: 5.2
R.A.: 21h 06m 55s (year 2000 coordinates)
Dec +38 44' 45"
Constellation: Cygnus
Transit time on 15 July, 2006: 02:57

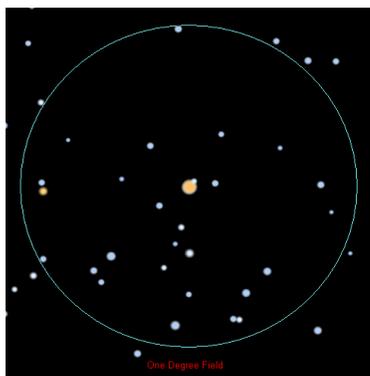
Why this object is interesting:

Cygnus the Swan is a beautiful constellation, especially from a dark site. The Milky Way passes through the constellation and a large dust lane in the galaxy is quite visible. The constellation also contains such showpieces as Albireo, (which some believe to be the most beautiful double star in the sky), and the Veil Nebula (a supernova remnant).



Cygnus - 61 Cyg indicated by the Telrad finder circles (from TheSky 6)

Stars, like 61 Cyg, don't have a name, but were assigned a number by John Flamsteed in the early 1700's. This star is historically significant, however, because it was the first star for which the distance to the star was determined by measuring the parallax of the star. Before this measurement, it was known that stars are very far away, but nobody knew how far.



61 Cyg in a 1 degree field of view circle

The parallax is the apparent change in position of an object when seen from two different angles. You can see this effect easily by holding up a finger at arms length, closing one eye, then switching eyes. Your finger appears to move. With a little bit of trigometry you could figure out the distance to your finger. No big deal for most earth-based measurements, but for distances to stars, well, it's tough to get a tape measure that long.

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Parallax shift applies to stars, but the observations of the star must be made at opposite sides of the earth's orbit. That is, the baseline is twice the distance from the earth to the sun or 186 million miles.

Why did anyone think that the distance to 61 Cyg might be measurable? Well, the reason is that 61 Cyg has a large, relatively speaking, proper motion. Proper motion describes the actual movement of the star in the sky. It was believed that since 61 Cyg was observed to have a large proper motion it must be close to us. The star is zipping across the sky at a rate of slightly over 5" of arc per year. It was Friedrich Bessel in 1838 who actually measured the distance to 61 Cyg as 11.4 light years.

Anyway, there's a unit of measurement in astronomy called the parsec. A parsec (parallax-second) is the distance a star would be from us to show one arc-second of parallax shift. As it turns out (you can do the math), a star that is 3.26 light years from us would show a 1 arc second of parallax shift from earth (using the 186 million mile baseline). So, we would expect that 61 Cyg, being 11.4 light years away would show us $3.26/11.4 = .286$ arc seconds of shift. This would be a very difficult thing to observe indeed, but Bessel was known to be a very good observer and he was able to pull it off.

As a bonus, you'll find that 61 Cyg is a double star. The primary star is magnitude 5.2 (although it's believed to be slightly variable), and the secondary is magnitude 6.1. The separation is an easy 31.1 arc seconds. The stars are both 'K' class, so they should be orangeish. What color do you see?

Don't confuse this star with 16 Cyg, with is famous because it was discovered that a planet goes around the star.

Enjoy!

Astronomy Technologies AT66

Review by: Bill Pellerin, GuideStar editor

One of the door prizes at this year's Texas Star Party was an Astronomy Technologies 80mm telescope. The telescope was beautiful to look at, but I didn't actually look through it, and, of course, I didn't win it.



The product line includes a 66mm refractor which sells through Astronomics for \$329. I had been considering getting a very small telescope for those situations where high portability was important. I have two TeleVue refractors already, and they are nothing short of superb, both mechanically and optically.

I considered the TV-60 for a while. It's an attractive telescope that has had good reviews, and my experience with TeleVue has always been excellent. The price of the TV-60 is \$825, and this is for the optics only. The Astro Tech telescope is \$329 and the price includes a hard, foam-lined, case and a dual-speed focuser. Here's how the two line up.

Feature	TV-60	AT66
Aperture	60mm.....	66mm
Color correction	Apo.....	Apo
Focuser	Helical	Dual Speed Crayford
Case	Carry bag	Hard case
Finder	No	No
Diagonal.....	No	No
2" Eyepieces?	No	Yes with SCT diagonal
Cost	\$825	\$329

Ok, so I bought the AT66. Two days after I ordered it, I got it. From Houston, it's hard to see much, but I was able to point it to Arcturus and check collimation. It looked great, really great. Later, I went to my 'dark' site and set the optics up on an alt-az mount. The moon was full, but I only wanted to see what the optics would do. Everything I looked at was outstanding. There was very little (to no) color evident when looking at bright objects like the moon or Jupiter. Four of the Jovian moons were clearly visible.

I waited a while for epsilon Lyr to rise above my trees. This is the famous double-double, with one of the close pairs being only 2.3" apart. Would the little telescope cleanly split the close pairs? Yes, it did!! I used a 7mm eyepiece (magnification is $400/7 = 57$) and I could barely tell that the stars were doubles. For fun, I pumped the telescope up, by adding a 5x PowerMate, getting the power to 285. The stated highest useful magnification is 133, so I was exceeding this limit by quite a bit.

Since I was on an alt-az (non-motorized) mount, I had to move the telescope slightly ahead of the stars and let them drift

through the field. When they did, I could see a clean split in the close stars.

This thing is a jewel to look at. Mine is blue, but you can get it in a variety of colors including chrome! The telescope will accommodate a 2" eyepiece if you attach a SCT 2" diagonal. I've confirmed that the diagonal goes on the telescope like it's supposed to. On my alt-az mount, however, I can't put the 2" diagonal and the heavy 2" eyepieces on the telescope and get anywhere near balance fore and aft. I haven't tried it yet, but it appears that the telescope will be mountable on my German equatorial mount and I may be able to fiddle with this configuration enough to get to a good balance.

One other very nice feature of this telescope, especially for use on a German equatorial mount, is that the back of the telescope, including the focuser knobs, will rotate to any angle you want. This means that the eyepiece can remain vertical in any orientation of the GE mount. There's an unlock ring near the eyepiece end of the telescope that allows you to rotate the focuser/eyepiece combination to any angle you want.

The telescope includes a SCT 1.25" visual back (but not a diagonal), a nice aluminum clad case, and a polishing cloth. The finish of the telescope shows fingerprints, but the cloth cleans them up easily. There's no finder that comes with the telescope, and as of this writing, Astronomy Technologies hasn't announced one. (It's easy to point at bright objects by simply sighting along the tube, but a red-dot finder would be a useful add-on.)

So.. bottom line... this is an excellent portable telescope for quick viewing sessions, for vacation trips (that are not primarily astronomy-related), or for taking on a quick trip to the country when you don't want to haul and set up a bunch of stuff. Think about what kind of mount you'll use the telescope on. The dual-speed focuser makes the back of the telescope wider than you might imagine for such a small telescope. In addition, consider how you'll balance the telescope, particularly if you want to use 2" eyepieces.

Time Capsule - 2030

By Steve Goldberg

Over 50 years ago in September, 1955, the Houston Astronomical Society was formed. The Society has done many new things over the years. One of the major accomplishments since the founding of the Society was the building of our Columbus Observatory. The land surveying started in 1979, and in 1982 the current observatory building was dedicated. Three years later a time capsule was placed in the ground on the south side of the building.

Move ahead 20+ years and that time capsule was recovered from its resting place. All of the items that were in the time capsule, as was the capsule itself, were in perfect condition. Among things that we placed in the capsule were:

- Complete set of the *Guidestar* Newsletter
- Latest issue of *Sky & Telescope* and *Astronomy* Magazines
- Newspaper articles
- Legal documents for the observatory
- Pictures taken during the "stuffing" ceremony were placed in last

Now, it is time to think about laying down the next time capsule that will be opened on our 75th Anniversary in 2030. This will be done at the HAS Picnic on September 23rd. We are looking for items to be placed in the capsule. These items may be newspaper articles, magazines, pictures, an observing aid

or eyepiece. There is a limit on the physical size of the object. It must be able to fit inside a 6" tube, which is the size of the capsule, so a "coffee table book" will not fit.

If you have any item that you would like to include, please contact Jayne Lambert at jd Lambert@houston.rr.com.

Red River Star Party

Sept 21-24

The Red River Astronomy Club will host our Second Annual ArkLaTex Star Party beginning Sept. 21 - 24, 2006 near Nashville, Arkansas. Of course, the main attraction is the dark sky. This years presentations will include a Mission Specialist (name to be announced by AAS), a Cosmochemist, a presentation on the mysterious lights of Gurdon, Arkansas and a workshop on image processing by a panel of experts.

Rex's Astro Stuff will have a wide variety of accessories available for sale. We offer free camping, observing field power for laptops and scopes, a shower, T-shirts, swap meet, bottomless coffee pot, cocoa and snacks plus our now famous ArkLaTex give-away. This's BBQ will have a catering trailer on site. What has become the hallmark of the star party is the relaxed and friendly atmosphere. 4 days / 3 nights.

For details / registration: rrac.org

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/soc aids/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: C8 / 17.5" Newtonian

1977 vintage orange-tube C8 with *excellent* optics. Original spur-gear drive supplanted by highly accurate Saulietis worm-driven HDPE gear. Includes Lumicon NGC Sky Vector digital setting circles with 12,000 object database. For autoguided imaging, system includes a modified Meade drive corrector for dual-axis autoguiding utilizing ST4-compatible inputs. Employs a Meade tangent-arm DEC drive motor. Includes field tripod and equatorial wedge. Other accessories TBD. See my website for many images made with this system over the past 10-15 years.

Perfect for imaging or visual star parties. 17.5" f4.5 Newtonian telescope with highly accurate microprocessor-controlled, stepper-based alt-az drive system with focal plane rotator. Designed and built by Andy Saulietis and the owner. Accepts ST4-compatible inputs for autoguiding. Mechanical and calibration work done by the owner to optimize system accuracy for autoguided CCD imaging. Original 1981 Coulter mirror refigured to smooth 1/8th-wave surface by Sky Optical in late 80's. Primary and secondary recoated with enhanced coatings group by PAP in early 90's. Optics in excellent condition. 80mm f5 finder. Breaks down to numerous major pieces for transport. With modest effort, can be a traveling scope, but better as a semi-permanent observatory. See my website for many images made with this system over the last decade.

Price negotiable. For pickup/delivery, maybe can meet you halfway.

Call 281-482-5190 or E-mail Al Kelly.

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 Solor 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 drawtube.

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

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

Continued on Page 13...

From Thunderstorms to Solar Storms...

By Patrick L. Barry

When severe weather occurs, there's a world of difference for people on the ground between a storm that's overhead and one that's several kilometers away. Yet current geostationary weather satellites can be as much as 3 km off in pinpointing the true locations of storms.

A new generation of weather satellites will boost this accuracy by 2 to 4 times. The first in this new installment of NOAA's Geostationary Operational Environmental Satellites series, called GOES-N, was launched May 24 by NASA and Boeing for NOAA (National Oceanic and Atmospheric Administration). (A new polar-orbiting weather satellite, NOAA-18, was launched May 2005.)

Along with better accuracy at pinpointing storms, GOES-N sports a raft of improvements that will enhance our ability to monitor the weather—both normal, atmospheric weather and “space weather.”

“Satellites eventually wear out or get low on fuel, so we've got to launch new weather satellites every few years if we want to keep up the continuous eye on weather that NOAA has maintained for more than 30 years now,” says Thomas Wrublewski, liaison officer for NOAA at NASA's Goddard Space Flight Center.

Currently, GOES-N is in a “parking” orbit at 90° west longitude over the equator. For the next 6 months it will remain there while NASA thoroughly tests all its systems. If all goes well, it will someday replace one of the two active GOES satellites—either the eastern satellite (75°W) or the western one (135°W), depending on the condition of those satellites at the time.

Unlike all previous GOES satellites, GOES-N carries star trackers aboard to precisely determine its orientation in space. Also for the first time, the storm-tracking instruments have been mounted to an “optical bench,” which is a very stable platform that resists thermal warping. These two improvements will let scientists say with 2 to 4 times greater accuracy exactly where storms are located.

Also, X-ray images of the Sun taken by GOES-N will be about

twice as sharp as before. The new Solar X-ray Imager (SXI) will



also automatically identify solar flares as they happen, instead of waiting for a scientist on the ground to analyze the images. Flares affect space weather, triggering geomagnetic storms that can damage communications satellites and even knock out city power grids. The improved imaging and detection of solar flares by GOES-N will allow for earlier warnings.

So for thunderstorms and solar storms alike, GOES-N will be an even sharper eye in the sky.

Find out more about GOES-N at goespoes.gsfc.nasa.gov/goes. Also, for young people, the Sci-Jinks Weather Laboratory at scijinks.nasa.gov now includes a printable booklet titled “How Do You Make a Weather Satellite?” Just click on Technology.

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



New GOES-N satellite launches, carrying an imaging radiometer, an atmospheric sounder, and a collection of other space environment monitoring instruments

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 June, 2006 Meeting of the
Houston Astronomical Society

The June, 2006 meeting of the Houston Astronomical Society was called to order at 8:07 p.m. by HAS President, Steve Sartor.

General Announcements:

- Steve Sartor welcomed everyone to the meeting and presented general information about the society.
- Steve recognized and welcomed the seven guests present at the meeting.

Announcements:

- Judy Dye announced that she has two new Astronomical League Observing Program books available through the HAS Logo Sales: Globular Clusters and Planetary Nebulae, each available for \$14.00. She also has Messier books available for \$10.00.
- Judy also announced that she is considering new venues for the HAS banquet. To that end, she asked members to complete a short survey located in the *GuideStar* that solicits members' food preferences.
- Steve Sartor announced that we have two opportunities for members to serve the society. We have two standing committee chairs open: the Field Trip/Star Party Committee Chair and the Loaner Telescope Program Committee Chair. Interested members should contact Steve.
- Amelia Goldberg presented David Ford with the Astronomical League's Honorary Messier Certificate #2284 in recognition of his having observed and logged all 110 objects in the Messier List.
- Steve Goldberg announced that planning is underway for the next planting of the HAS time capsule at the society's observing site in Columbus. This will occur at our annual picnic scheduled for September 23rd. Steve is looking for donations to be placed in the capsule, all of which must fit in a 6" diameter PVC tube. Jayne Lambert is in charge of collecting the prospective contents. Ed Preston is in charge of designing the new slab to cover the capsule, and Steve Goldberg is chairing the process. Steve polled the membership as to whether they wanted to actually witness the sealing of the capsule at the September general meeting or just view the items that were going to be placed in the capsule. The members voted to view the contents at the meeting and leave the sealing of the capsule to the committee at a later time.

- Tony Settles reported that the Spitzer Space Telescope has detected a relativistic jet emanating from the pole of a neutron star. While relativistic jets have previously been seen emanating from black holes accreting materials from companion stars, this is the first time this phenomenon has been detected coming from a neutron star.
- Don Pearce gave the Comet Report highlighting the May display put on by 73P/Schwassmann-Wachmann. He also reported on 41P/Tuttle-Giacobini-Kresak, which is currently shining at 10th magnitude. This periodic comet reaches perihelion on June 12 and will be in Leo for the rest of June. For more information on these and other comets of interest, see Don's Comet Corner on the HAS website at <http://www.astronomyhouston.org>.

Program

Don Pearce introduced the featured speakers for the evening:

- HAS member, Richard Nugent, delivered a brief presentation on the 47th Annual Science and Engineering Fair and introduced three fair award-winners who presented their projects to the members:
 - Billy Binder – *Living on Mars*
 - Raj Mistry – *The Effect of Temperature on the Refraction of Light*
 - Allesandra Rossi – *Measuring Light Pollution in Houston*
- HAS member, Steve Goldberg, delivered his presentation entitled *Volunteers of the TSP: The Hidden Heroes*.

Closing Announcements

- Steve Sartor highlighted the two opportunities for members to serve the society that he had mentioned earlier in the evening.
- Steve pronounced the meeting adjourned at 9:43 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

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.

July Supervisor	TBD	281-633-8819
Henry Schneider	FOCUS THIS MONTH	
Linda Sternbach	Weed eat	
Larry Wadle	Poison ants	
Mark Watsoncool off...	
Tom Williams	Weed eat	
Barbary Wilson		
Buster Wilson		
Volunteer		

Month	Prime Night	Members Observatory
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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!

Want Ads... from page 10

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

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

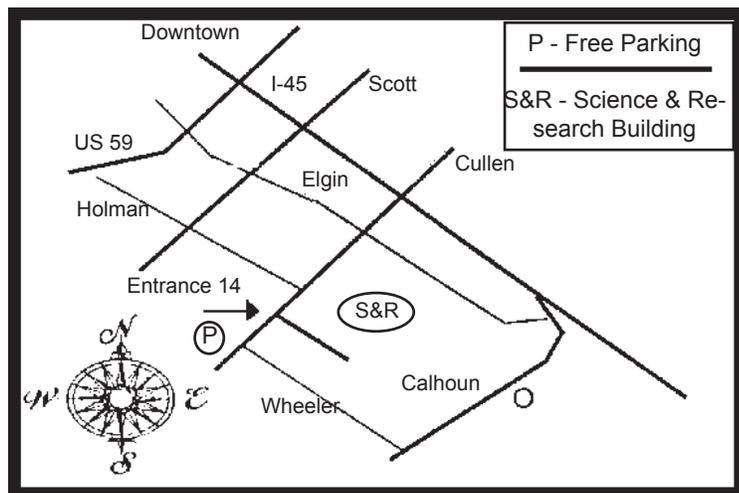
The Board of Directors Meeting is held on dates scheduled by the board at 7:00 p.m. at the University of St. Thomas. Information provided to GuideStar will be published. The meetings are open to all members of the Society in good standing. Attendance is encouraged.

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

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Houston Astronomical Society Meeting

July 7, 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.***