Houston Astronomical Society

GuideStar

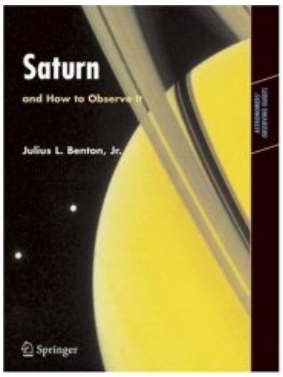
May, 2007

At the May 4 meeting...

Amateur Observations of Saturn

Julius Benton

Who can forget the first time he or she saw Saturn through a telescope? It's an amazing sight. With today's telescopes and technology observations of Saturn provide more detail than ever thought possible.



Julius Benton is the author of the book *Saturn and How to Observe It* as well as articles in *Sky and Telescope*, *Astronomy*, and the *Association of Lunar and Planetary Observers Journal*. He has written the A.L.P.O. observing manuals on Saturn, Venus, and the Moon.

Highlights:

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, "Herbig - Haro Objects"

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

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Brian Cudnik .....
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Bram Weisman .....
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Novice ..... Justin McCollum .....
Observatory ..... Bob Rogers 281-460-1573
Program ..... Don Pearce .....
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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't'y ..... 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

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/cbr/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-mailbill.leach@nhmccd.edu. Web site: www.astronomyclub.org

May/June

Calendar:

Photo by Scott Mitchell

Date	Time	Event
May		
2	5:10 a.m.	Full Moon
4	8:00 p.m.	HAS General Meeting, U of H
6		Eta Aquarid Meteors Peak
9	11:27 p.m.	Last Quarter Moon
12		Prime Night, Columbus Observing Site
13		Texas Star Party Begins, Prude Ranch, Ft. Davis, TX
16	2:28 p.m.	New Moon
20		Texas Star Party Ends
23	4:02 p.m.	First Quarter Moon
31	7:30 p.m.	HAS Board Meeting
June		
1	8:00 p.m.	HAS General Meeting, U of H
	8:04 p.m.	Full Moon
2	5:00 a.m.	Mercury at greatest elongation east
5	6:00 p.m.	Jupiter at Opposition
8	6:43 a.m.	Last Quarter Moon
9	10:00 p.m.	Venus at greatest elongation east
		Observing Field Trip, Columbus Observing Site
15	10:14 p.m.	New Moon
16		Prime Night, Columbus Observing Site
19	11:00 p.m.	Pluto at opposition
21	1:11 p.m.	Summer solstice
22	8:14 a.m.	Moon at first quarter
30	8:49 a.m.	Full moon

Send calendar events to Doug McCormick - skygazer10@sbcglobal.net

***GuideStar* deadline for the June issue is May 15**

Check the web site:

www.astronomyhouston.org

Webmaster: Kay McCallum

KayMcCallum@MccLibrary.net

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 KayMcCallum@MccLibrary.net.

President's Message
by Bill Leach

Greetings H.A.S. Members!

We are well into the 2007 observing season and the weather has been typical, a succession of fronts separated by one or two days of clear skies. For a few days last week it was winter again and a few of our members on the north side experienced sleet. In spite of the weather we march on steeling nights for observing when allowed. There are several events coming up for H.A.S. members. One of the big highlights of the year is the Texas Star Party where hundreds of astronomers gather at the Prude Ranch outside of Ft. Davis in west Texas. Spending a week in west Texas breathing in the beautiful scenery and observing under very dark skies is truly a soul cleansing experience. Members Steve and Amelia Goldberg are two of the main organizers of the event. The star party is always held in the late spring so if you are not planning to go this year then you need to start planning for next year. A trip to the McDonald Observatory is a must and also a visit to one of the area's restaurants for a little local flavor.

George Stradley is up to no good again. :)

George is planning another star party at the Columbus site on Saturday, June 9. He did mention something about having some food there this time. Hopefully this time they will not be closing the freeway. I spent the afternoon of the last star party in the Grand Parkway parking lot. I promised George that we would try the binocular session again for the June 9th event.

Speaking of the Columbus site, have you seen the new canopy over the BBQ area? Thanks to Bob Rogers and his crew and a generous donation by Larry Wadle, the new shed should provide a little more comfort for our cooks and an area to place the food freeing up the picnic tables. There is also a new sign at the site announcing the times of scheduled light windows where light rules are relaxed allowing viewers to come and go.

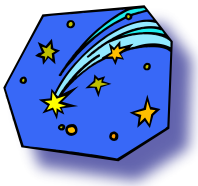
The Banquet

The Houston Astronomical Society's annual banquet was last night at the Hilton on the Southwest Freeway. The food was good, the camaraderie was excellent and the speaker was superb. Thanks to Dr. Mary Kay Hemenway from the University of Texas for her presentation on Galileo. Who would have known that improving one's astrological skills was a primary motivation in determining the laws that govern the motions of the planets? Thanks also go to Judy Dye and her committee for another great success. It was also good to see Michael Dye up and about after his surgery. Welcome to the upright world again Michael.

Our next meeting is May 4th. I hope to see you there. We can share reports of how we stole a small patch of clear sky here and there as our annual spring deluge continues. The next meeting of the H.A.S. Board of Directors is Thursday, May 31.

Bill Leach
H.A.S. President

Observations... of the editor



by Bill Pellerin, GuideStar Editor

Texas Star Party -- This Month!!!

Wow... May is about here (as I write this) and I'm furiously getting ready for the Texas Star Party. This weekend, I set up the telescope configuration that I'll be taking to west Texas to make sure that everything worked ok. It did, but I have a list of follow-up items to finish my preparation for the trip.

The observing wasn't great last night, but at least it was possible. The moon was up until about midnight reducing the contrast of the sky and making it difficult to find my way to objects. It's good to know that on the night of the next new moon I'll be observing from the Prude Ranch near Fort Davis, TX.

The Illustrated On the Shoulders of Giants (the great works of physics and astronomy)

Deal of the week -- I got a copy of the *On the Shoulders of Giants* at the Borders Books on West Alabama at Kirby for $5.99 on Friday. This book has text from (and about) Copernicus, Galileo, Kepler, Newton, and Einstein. This beautifully illustrated volume probably sold for $30 or so when it was at full price. If the history of astronomy and physics is of interest to you, check this out.

BlueConsole bluetooth serial port

There was an article in *Sky and Telescope* recently about the *Starry Night BlueStar Adapter*, and it generally got a good review. Let's back up. Many of the currently available computer controlled telescopes use a computer serial port to provide the connection between the computer and the telescope mount electronics. The Meade LX-200 telescopes work this way and many others work that way as well.

This means that you're obliged to run a serial cable between your computer and the telescope. (Never mind that most newer computers don't have serial ports and that you may be obliged to get a USB to serial port adaptor to make one available.) Anyway, running a cable across the ground can be a problem. It's easy to trip on the cable with the potential for damage to yourself, the telescope, the computer, or all of these.

This problem can be solved by setting up a wireless serial connection between the computer and the telescope. The *BlueStar Adapter* is one solution, and if you're interested in this product you can read the article by Alan Dyer in *Sky and Telescope* or check it out at www.oriontel.com. After the article ran in *S&T*, a reader wrote to the magazine to recommend the *BlueConsole* adapter (www.blueconsole.com).

The *BlueConsole* presents a DB-9 (male) serial connector at the output side, and is powered by a 9-volt battery. The advantage of this configuration is that your existing telescope control serial cables will work as-is with the *BlueConsole* BC-02-9M. Your controlling computer must have a bluetooth adapter, either built-in or added-on.

I set the *BlueConsole* up and used a D-Link DBT-120 bluetooth adaptor in my configuration. Like most things with computers, it took some fiddling to get all this to work. I'll spare you the details -- your system is likely to be different enough that you won't have the same problems I had -- you'll have different problems.

Anyway, once it was set up it worked great. The serial port was transparent to my computer and my astronomy software (The_Sky) and everything worked just as though I had a wire running across the ground.

The real question is... does this make any sense to set up if you've already got power, and perhaps imaging cables running to the telescope? With this configuration, what's one more cable? Well, in my case, I was using a battery powered telescope computer and a battery powered *BlueConsole* adapter. So, I had no wires running to the telescope at all!

The newer LX-200 telescopes can be powered by internal batteries as can many B-Box type computers such as the JMI NGC-Max or the TeleVue SkyTour. I'll have this stuff at the Texas Star Party if you're interested in seeing it.

Have a great May, and I'll see you at the TSP.

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

..Bill

billpellerin@sbcglobal.net

Just Looking

A *GuideStar* Interview by Clayton L. Jeter

Randy Brewer - Imager

Randy Brewer's name seems to be everywhere in Houston's amateur astronomy community. He is well known as the area's premier digital CCD imager. If you haven't seen any of his gorgeous astronomy images, then you're missing something. His work can be seen quite regularly in both *Sky and Telescope* and *Astronomy* publications. As I browse the many photos throughout the monthly magazines, I always look for his stunning eye-popping achievements. These photos take on a spaceship fly-by appearance. I gaze at the captured object just as I do through my eyepiece and I seem to see more detail the longer I look… just like when visually observing out in the field!

Randy Brewer

I have compiled this interview not only to discover more about Randy, but also to learn further about this hobby because this guy seems to have all the answers. Let's enjoy our chat with Randy Brewer…

Randy Brewer's Bio:

I am 52 years old, married to my wife Dolly, and have 2 great children – Jeremy & Stephanie. I work for Exxon Mobil in Risk Management. I've been there well over 30 years and am nearing retirement.

I was born in Houston Texas and have lived on the Gulf Coast all of my life. We currently live in Baytown on Galveston Bay where we enjoy a variety of boating hobbies from fishing to water skiing.

I have been involved in many hobbies through the years but re-discovered astronomy in 2000. We were sitting in the back yard with friends enjoying a good bottle of wine while watching the February 2000 Lunar Eclipse. I had the usual cameras and binoculars to watch and document the event. As the discussions (and wine) went on, I mentioned that when I retired that I planned to get a nice telescope to enjoy the sky with. When asked why I was going to wait until I retired, I didn't have a good answer. The next month I bought a new 10" LX-200. I searched around and found a local star party where I was introduced to the locals and the astronomy clubs in the area. I am now an active member of four clubs in the Houston area.

I quickly began to be more interested in astrophotography and sold the SCT for a 6" Takahashi refractor and more stable mount to serve my purposes. I now eagerly attend as many club meeting as I can and attend several expeditions to dark sites with the clubs. One such star party is at Fort McKavett in the spring and fall. The site is in central Texas at about 2100 feet elevation and is pretty darn dark. We camp among the ruins of the old Fort for four days. We give a public star party for the locals on Saturday night. I also have a great friend with a house in Ft. Davis near the McDonald Observatory. I go there about four times a year for a week at a time for some serious CCD imaging time.

The Randy Brewer interview:

Clayton: Thanks Randy for taking time to answer a few questions for our society. Do you think that by becoming involved in this hobby it has changed the way you see our universe?

Randy: Absolutely!!! Before I got into the hobby, like most people, I knew that the other 'stuff' was out there and it was a long way off. But, now that I look through the scope at other galaxies and really under-

Continued …

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stand the true vastness between us, it is humbling in my opinion as you recognize how small and frail our beautiful Earth is in this dangerous place that we call our universe.

Clayton: We all have seen your wonderful astrophotos through the years (and they just keep getting better), but just what scope design and equipment do you prefer for astrophotography? Which design do you least prefer for your work and why?

Randy: I prefer SIMPLE & RELIABLE. Those two qualities remove the frustration from the hobby and leave you with the joy of a successful night of imaging. That said, most any scope can be used for some form of imaging. But those with poor optics, a shaky mount, or poor tracking make imaging VERY frustrating. A simple refractor on a quality mount is no doubt the simplest. I now use a large Ritchey-Chrétien to image tiny galaxies. It is more complex but does a job that few other can for that type of object.

Clayton: Have you got a type of object that you like capturing digitally? How about planets…got a favorite?

Randy: I am currently really into galaxies as mentioned previously, however, I am constantly amazed at the incredible quality of Planetary images taken with simple webcams by stacking many low resolution images with free software. With little to no previous experience, I was able to get a nice image of Mars that shows the volcanoes and even some clouds on the surface of the planet.

Clayton: How do you envision photographing the sky to change in the next quarter century for the amateur?

Randy: We are already seeing HUGE ccd chips available to amateurs for reasonable prices today. The use of narrow-band filters is really catching on. Spectrographs, Adaptive Optics, all sky cameras, seeing monitors, guiders, and meteor cameras are just some of the products available to us today. I think that remote imaging is really catching on. Set up a fully automated scope at a really dark site and you can image most any time over the Internet. I guess that I still like being there while imaging though. To me, that is part of the chase and the thrill of getting a pretty image...

Clayton: In your own words, just what is the most gratifying aspect in this hobby of yours?

Randy: For me that is easy.

Imaging: Anyone can download a superior image of most any object out there. But when you capture the data, process it, and have it to view or print as your own, there is a pride associated that can't be described.

Star Parties: The look on the face when someone sees Saturn's rings for the first time, the "WOW" that you get on M-13 through a bino-viewer, and the genuine appreciation shown for spending the time to show objects and tell them about what they are seeing is very gratifying to me.

Clayton: You have told us that you're a member of all four Houston astronomy clubs… can you give us your personal likes about each of these groups?

Randy: Lets just say that each club definitely has it's own 'personality'. We enjoy the people from each club and what the different clubs can offer.

Clayton: Do any family members or co-workers-seem interested in your hobby?

Randy: Dolly, my wife, has never been taken with astronomy. Maybe the 2 AM wake-ups to come out and see the Giant Red Spot on Jupiter on a night of pristine seeing had something to do with that...??? Anyway, she said that she would play if I got her a comfortable camper to stay in. So I did. Now, she enjoys the 'other' wives that come over to stay with her in the camper while I do the astronomy part. My office walls are a collection of my favorite images on 13" X 19" prints. I get hundreds of people stopping by to look and talk about them. So many are interested in astronomy as a hobby but don't know how to get started. I keep magazines, catalogs, and a suggested list of things to do to get into the hobby on my desk for them.

Clayton: Here's another interesting question that I like to ask…Do you have an amateur mentor?

Randy: Not really. Al Kelly and others from the JSCAS Club were instrumental in helping me early on in ccd'ing. But we all soon develop our own style and choices on the way that we like to present the various images. I do go to imaging conferences such as AIC (Amateur Imaging Conference) and I buy books on image processing from the respected authors on the subject to keep abreast of the latest tips and tricks.

Clayton: You've told me that your going to retire to New Mexico… will you build an observatory at your new home? When do plan on your move?

Randy: When I retire in 3 to 5 years, Dolly and I do plan to move to Cloudcroft NM. We have a

Continued ...

Some Books to Check Out

By Bill Pellerin, GuideStar Editor

Here's a short book list for you to fill your summer reading time:

Q.E.D., Beauty in Mathmatical Proof
by: Burkard Polster
Publisher: Wooden Books
This book is a collection of short, illustrated explanations of various mathmatical proofs. Included are the well known Pythagoras's Theorem and a description of how the number Pi can be calculated.

Einstein
by Walter Isaacson
Publisher: Simon and Schuster
A new biography of the famous scientist and the first since the release of Einstein's personal papers.

Saturn and How to Observe it
by: Julius Benton
(Our speaker at the May meeting).
Publisher: Springer
The title tells you what the book is about. If doing some serious observing of Saturn is of interest to you, take a look at this book.

The Scientists
by: John Gribbin
Publisher: Random House
A history of science for the last 500 years presented with the stories of the scientists who made it happen.

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beautiful spot on the top of a mountain bought and waiting for us. Yes, I will build a 'dream observatory' for my RC scope. It will be a 15' dome on a stone cylinder designed to look like a Light House. I also plan to build a roll-off roof observatory for other scopes and guests scopes. We are in a National Forrest so I will also have a gazebo with a huge pair of binoculars mounted in it to watch the game with. The observatory will be fully remote controlled from the house for those cold nights...

Clayton: Do you have any helpful advice to pass on to other amateurs just starting out in this exciting hobby of photographing the night sky?

Randy: Yes, play with someone else already doing it to get a feel for what is involved before you jump in. It can be expensive, frustrating, or gratifying. If you do decide to get into it, start simple and upgrade if you stay in it. As always, I'd be happy to work with anyone interested in getting started in taking images of our heavens...

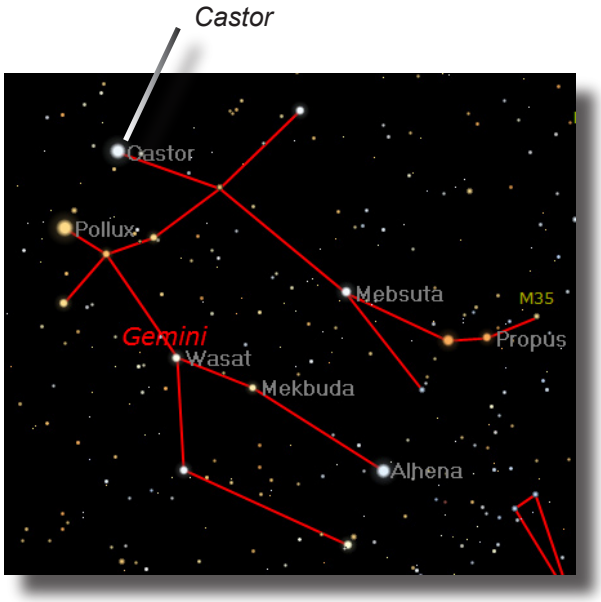
Clayton: Thanks Randy for taking the time to share your interest and thoughts with us for our monthly newsletter. We wish you luck with all of your astronomy interests. You keep taking photos and I'll keep looking for them every month in those astronomy magazines. Clear skies, always.

Shallow Sky Object of the Month

Castor

Object: Castor
Class: Double star
Magnitude: 1.57
R.A.: 7 h, 34 m, 36 s
Dec: 31 degrees, 53 minutes, 18 seconds
Distance: 50 light years
Constellation: Gemini
Optics needed: Small telescope

Gemini and the location of Castor



From The_Sky ver 6

Why this object is interesting.

If you look up to the night sky during the early evening at this time of year, you'll see the zodiacal constellation Gemini to the west, with Castor and Pollux identifying the heads of each of the twins. Pollux is redder (I'd call it orangeish) than Castor, so it's easy to tell them apart based on their color alone. Castor appears as a bright, white star to me. This time of the year, Castor is the more northern of the pair.

While Castor is designated as Alpha Gem, it's a bit dimmer than its twin, Pollux. According to the information in *The_Sky* Castor shines at a magnitude 1.57 and Pollux is a bit brighter at 1.15. There is reason to believe that at one time Castor was the brighter star of the pair, but this is difficult to confirm.

Castor is a beautiful double star, and last night (4/21/07), I was able to observe the pair of stars that constitute Castor. The moon was near the feet of Gemini, but the moonlight didn't detract from the beauty of this double star.

Take a look at Castor; then pump up the power on your telescope. You'll soon see that Castor consists of a beautiful pair of stars with a magnitude 2.0 component and a magnitude 2.8 component. So, the star that defines the head of one of the twins is, itself, a twin. The sources of information that I've consulted disagree on the separation of the two stars, so they may be as close as 2 arc seconds or as far apart as 4 arc seconds. Either way, they're close to each other because of their position (from our vantage point) in their 400 year orbitial period. I could see the two stars with a magnification of about 67. Actually, the seeing wasn't the best, so I had to watch the star for a bit before I could see the split in steady air. At that magnification, the pair of stars was rather tight, and the pair would have been better viewed with higher magnification (on a night with good seeing).

There's quite a bit of discussion among amateur astronomers around the issue of how much magnification a telescope can support (the rule of thumb has been 50 power per inch of aperture), and the magnification you'll need to see a double star. Clearly, and obviously, the closer the double, more magnification will be required. Also, for a double star with significant magnitude differences between the components will be more difficult than one for which the components are evenly matched.

There's more to this set than this. If you look about 1 arc minute (60 arc seconds or 30 times the distance between the two main stars) south of the bright pair, you'll see a 9th magnitude star which is believed, but not by everyone, to be gravitationally associated with the two brighter stars.

That's not all. Each of the three stars has been discovered to be a double!! This means that Castor is a triple-double. You won't be able to see the additional stars, though. It takes spectroscopy to tease out the information about the companions of each of these three stars.

Check it out!

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 2006, your payment for 2007 is due as of January 1, 2007.

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: Celestron Starhopper, 8" Dobsonian Telescope
$250.00, Kerry Warner, 713 784 7673

For Sale: 17.5" Newtonian
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 Optrical 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: 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: Celestron Sky Master binoculars
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

Email your ads to Kay McCallum, our Webmaster, at KayMcCallum@MccLibrary.net

Publicity Suggestion Box

I welcome any suggestions that *any* member has to offer. It doesn't matter how trivial you think your idea may be. All input will be reviewed and welcomed.

Let's grow.

Please drop me a note at the following address.

itjdm0@yahoo.com

John Missavage- HAS Publicity Chair

Remember --

All HAS memberships are due for renewal in January. Pay your 2007 dues now!! Our membership year now corresponds to the calendar year.

Mail your dues to the address on the last page of this *GuideStar* or bring your payment to the meeting.

Rocky Mountain State Stare

Rocky Mountain Star Stare (RMSS) is not your typical star party. It's laid back. It's family oriented. It's in the heart of the Rocky Mountains, just 65 miles west of Colorado Springs. You don't camp on top of your neighbor.

You can set up outside of your tent or RV. You have great trout fishing just a short drive away. You have turn of the century towns just a short drive away. There is white water rafting, nature hiking, and horseback riding just a short drive away.

But best of all there's a universe of stars, galaxies, nebulae, and clusters just above the horizon in every direction. Whether you are looking through a 20 inch Dob or a pair of binoculars there's more to see in a night than most people get to see in a month and some see in a lifetime.
Introduce your family to the wonders of the Colorado Rockies and the awesome spectacle of dark skies. Who knows, you might make a scientist out of one of your kids yet. And even if you don't it will be an unforgettable family experience.

Join us for our 21st Anniversary celebrating the night sky. This year's event is held from June 14th - 17th and early-registration is currently open. Information on RMSS and online registration can be found at http://www.rmss.org.

For more information regarding RMSS, groups, or other items pertaining to RMSS, please email me directly at chairman@rmss.org <mailto:chairman@rmss.org>. I will be more than happy to assist.

Thank you for your time & clear skies,
Al Schlafli
RMSS 2007 Chairman

The Rocky Mountain Star S tare (RMSS) is an annual star party sponsored by the Colorado Springs Astronomical Society <http://www.csastro.org>. The RMSS Committee reserves all rights to make sudden and/or last minute changes to this website. RMSS, the Best Star Party in the Nation! <http://www.rmss.org>

Sidewalk Astronomers - Outreach Opportunity

Hello!

I'm Katy Haugland, Vice President of the Sidewalk Astronomers and I'm writing to inform you of an upcoming astronomical outreach opportunity. Many of you are familiar with the concept of sidewalk astronomy, started by John Dobson back in the 60's. We are taking his vision a step further by organizing one night (May 19) in which all amateurs around the world can set up their telescopes in public locations and offer free views of the night sky to the general public.

The idea here is not to set up at an observatory, but instead to set up at a mall, restaurant, or other public place. We want to expose people who have never even thought of looking through a telescope before to the wonders of the night sky. Yes, there will be light pollution, but all you really need to look at is the Moon and Saturn. Almost everyone you show will have never seen them up close through a telescope before and many people will be profoundly impacted by it.

Please join for this exciting new event, and let us know what you'll be doing as well. Our goal is to get 1000 telescopes set up worldwide, and if each telescope operator lets 100 people look through their telescope, that will be 100,000 people who have gotten their first up close look at the rest of the universe. We would appreciate it if you could let us know in advance if and how many people will be participating, what their location will be (if known) and after the fact, approximately how many people looked through the telescopes. We're hoping many amateurs will try and like this different approach to astronomy outreach and will continue to hold sidewalk observing sessions throughout the year.

For more information, you can either e-mail me at katy.haugland@gmail.com or go to our website ***www.sidewalkastronomers.us***. A link to our special International Sidewalk Astronomy Night website can be found on the homepage. I hope you can participate.

Happy stargazing,
Katy Haugland
Vice President
Sidewalk Astronomers

Minutes
of the April, 2007 Meeting of the
Houston Astronomical Society

The April, 2007 meeting of the Houston Astronomical Society was called to order on March 30th at 8:05 p.m. by HAS President, Bill Leach.

General Announcements:

- Bill Leach introduced himself and welcomed everyone to the meeting.
- Bill provided some general information about HAS and welcomed the new member present at the meeting.

Announcements:

- Bill Leach urged everyone to attend the 2007 HAS banquet and introduced Banquet Chair, Judy Dye, who provided details regarding the banquet. It is scheduled for April 14th at the Hilton Houston Southwest. The speaker will be Dr. Mary Kay Hemenway speaking on the life of Galileo. Registration is ongoing and registration forms and instructions are in the GuideStar and up on the HAS website at http://www.astronomyhouston.org.
- Judy Dye announced that the 23rd Annual William F. Marlar Lecture will take place at Rice University's Keck Lecture Hall, Rm. 100 from 5:30 p.m. to 7:00 p.m. on Thursday, April 19, 2007. The speaker will be Prof. Edward C. Stone, David Morrisroe Professor of Physics and Vice Provost for Special Projects, CALTECH, and his presentation is entitled, "Exploring the Final Frontier of the Solar System." Anyone interested in attending should contact Judy at the number listed in the GuideStar.
- Field Trip/Observing Committee Chair, George Stradley, announced the observing field trip schedule for the rest of the year. Field Trips are scheduled at the Columbus Observing site on June 9th, September 15th (coinciding with the annual picnic), and December 1st. Members from other area clubs will be invited.
- Bill Leach announced that April is Earth Month, and introduced Barbara Wilson who announced that April 14th is Earth Day. There will be many interesting activities occurring at Brazos Bend State Park from 9 a.m. to 5 p.m. on the 14th including solar observing at the George Observatory. Barbara requested volunteers to provide and/or run solar telescopes at the George for the event.
- Barbara Wilson also announced that it's Space Day at the George Observatory on April 21st.
- Bill Leach announced an immediate schedule change for the Site Observatory Training class taught by Bob Rogers. For the past several years, the class has been taught every month at 7 p.m. prior to the General Membership Meeting. This class will now be conducted only in odd months at 7 p.m. prior to the General Membership Meeting or by special arrangement with Bob. This training is mandatory before members are granted access to the site.
- Don Pearce gave the Comet Report highlighting C/2006 P1 McNaught, now fading; a new comet discovered with a digital camera, C2007 E2 Lovejoy, which could reach 6.5 mag on April 25th; and C/2007 F1 LONEOS, which could become a binocular object in early November. For information on these comets and other comets of interest, see Don's Comet Corner on the HAS website.
- Bill Leach recognized Welcoming Committee Chair, Lee Lankford, and the membership thanked her for the refreshments she provided for the meeting.
- Awards Chair, Amelia Goldberg, presented Gordon Houston with the Astronomical League's Deep Sky Binocular Club Award, Certificate #238 and the accompanying pin, presented for observing the 60 deep sky objects on the club's list using binoculars.
- Steve Goldberg announced that the Texas Star Party is only 5 weeks away on the week of May 13th. All room deposits and registration fees are now due. HAS handles the Registration Desk at TSP, and Steve solicited volunteers for this duty.

Continued...

Minutes... *from previous page*

Program:

Steve Goldberg introduced the featured speaker for the evening, Robert Reeves, who delivered his presentation, Webcam Astrophotography. Upon completion of his presentation, Robert answered questions and was presented with a gift of appreciation from the society.

Closing Announcements:

- Bill Leach announced that the 19th annual Regional Clubs Astronomy Meeting is scheduled for October 19th. The speaker will be Stephen James O'Meara.
- Bill reminded the members that a volunteer sheet for the TSP Registration Desk was located at the front of the meeting room.
- Bill pronounced the meeting adjourned at 9:44 p.m.

Logo Sales

In addition to all the other cool stuff that Judy Dye has available in Logo Sales, the 2007 "Observer's Guide" is available. This book is a must-have for planning your observing in 2007, so if you don't have your copy come to the December meeting, see Judy, and buy one.

All checks should be made out to HAS for the correct amount, and mailed to Judy Dye, 12352 Newbrook, Houston TX 77072-3910. If there are any questions, please call. Our phone number is 281-498-1703.

Judy Ann Dye

Clouds from Top to Bottom

By Patrick L. Barry

During the summer and fall of 2006, U.S. Coast Guard planes flew over the North Pacific in search of illegal, unlicensed, and unregulated fishing boats. It was a tricky operation—in part because low clouds often block the pilots' view of anything floating on the ocean surface below.

To assist in these efforts, they got a little help from the stars.

Actually, it was a satellite—CloudSat, an experimental NASA mission to study Earth's clouds in an entirely new way. While ordinary weather satellites see only the tops of clouds, CloudSat's radar penetrates clouds from top to bottom, measuring their vertical structure and extent. By tapping into CloudSat data processed at the Naval Research Laboratory (NRL) in Monterey, CA, Coast Guard pilots were better able to contend with low-lying clouds that might have otherwise hindered their search for illegal fishing activity.

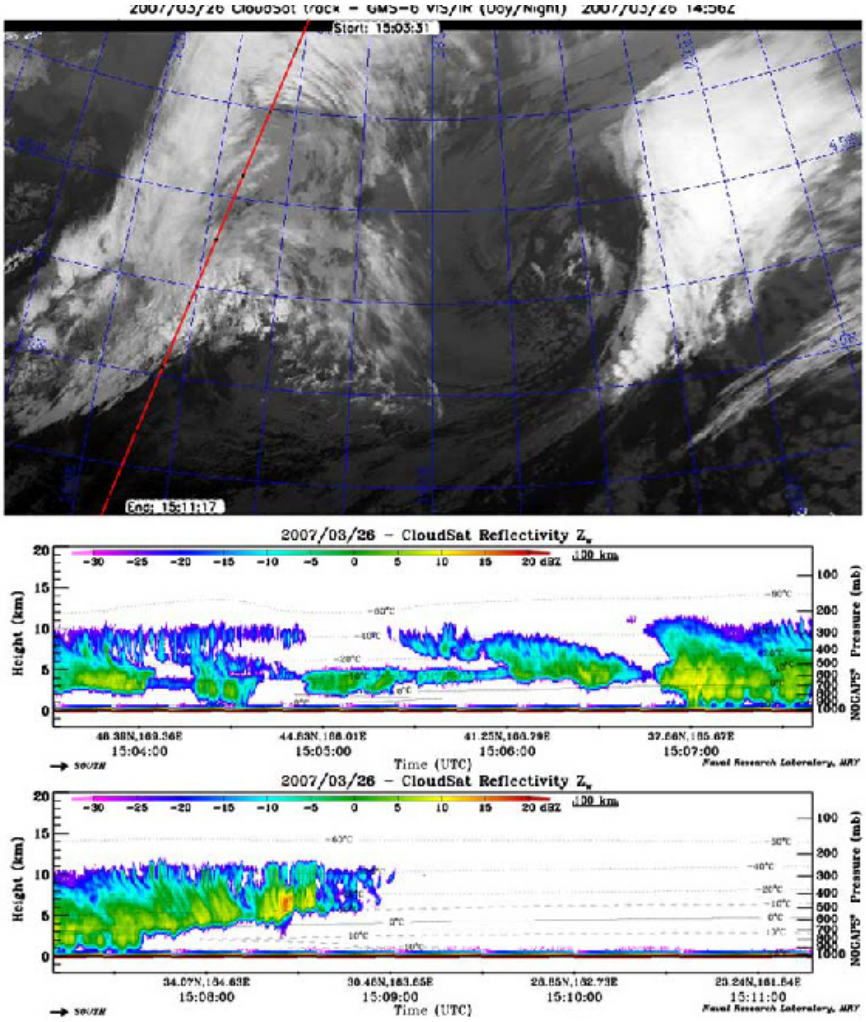
In the past, Coast Guard pilots would fly out over the ocean not knowing what visibility to expect. Now they can find out quickly. Data from research satellites usually takes days to weeks to process into a usable form, but NASA makes CloudSat's data publicly available on its QuickLook website and to users such as NRL in only a matter of hours—making the data useful for practical applications.

"Before CloudSat, there was no way to measure cloud base from space worldwide," says Deborah Vane, project manager for CloudSat at NASA's Jet Propulsion Laboratory.

CloudSat's primary purpose is to better understand the critical role that clouds play in Earth's climate. But knowledge about the structure of clouds is useful not only for scientific research, but also to operational users such as Coast Guard patrol aircraft and Navy and commercial ships at sea.

"Especially when it's dark, there's lim-

Continued...



A CloudSat ground track appears as a red line overlaid upon a GMS-6 (a Japanese weather satellite) infrared image. CloudSat is crossing the north-central Pacific Ocean on a descending orbit (from upper-right to lower-left) near a storm front. The radar data corresponding to this ground track (beginning in the center panel and continuing into the lower panel) shows a vertical cloud profile far more complex than the two-dimensional GMS-6 imagery would suggest. Thicker clouds and larger droplets are shown in yellow/red tones, while thinner clouds are shown in blue.

Mark Your Calendars!!!

Here is the schedule for future 2007 field trips to our Columbus observing site:

June 09
September 15
December 01

Each of these dates is a Saturday, and the September 15 outing will coincide with the HAS Annual Picnic.

We will be inviting members of all the area clubs to each event as we did in March (the turnout was great!).

There will be a laser tour of the constellations to begin the evening, and the observatory will be staffed for telescopic tours as the sky darkens. We will have "light windows" for those who bring families and would like to leave a little early.

Please mark your calendars, pack your gear and observing list, and come on out. Our website www.astronomyhouston.org will keep you up to date on details as they are developed.

See ya' there,

George Stradley
Field Trip/Observing Coordinator
stradley@sbcglobal.net

Clouds... *from previous page*

ited information about storms at sea," says Vane. "With CloudSat, we can sort out towering thunderclouds from blankets of calmer clouds. And we have the ability to distinguish between light rain and rain that is falling from severe storms." CloudSat's radar is much more sensitive to cloud structure than are radar systems operating at airports, and from its vantage point in space, Cloudsat builds up a view of almost the entire planet, not just one local area. "That gives you weather information that you don't have in any other way."

There is an archive of all data collected since the start of the mission in May 2006 on the CloudSat QuickLook website at cloudsat.atmos.colostate.edu. And to introduce kids to the fun of observing the clouds, go to spaceplace.nasa.gov/en/kids/cloudsat_puz.shtml.

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

Observatory Corner

By Bob Rogers, Observatory Chairman

Hello everyone. Well the March 31st Boy Scout weekend was once again cancelled due to bad weather and once again, I'm trying to reschedule them back to the site to do some work and have some fun. The Fence repair party was also cancelled due to the bad weather. Hopefully, when I get the Boy Scouts out there, I can also get the fence repair done.

On March 31st, Kirk Kendrick, Jerod Kendrick and Theresa (didn't get her last name) came out to the Site and with their help, we were able to get the cooking area ready for the new cover. A special thanks to all of you for your help. Also, I worked on the riding mower getting it ready for the mowing season by replacing the fuel and air filter and changing the oil and oil filter and greasing the mower. Yes, the mowing season is upon us again.

One other special note of interest here, HAS member Larry Wadle donated to the Observatory Committee $695.00 to go towards a 18' x 21' cover for the Bar-B-Que Pit area. I plan to have this cover installed in April. On behalf of everyone in HAS, a BIG Thank You for Larry for his donation.

UPDATE: On April 9th, a Monday, I took the day off from work and after waiting all day, Carolina Carports finally made it to the site around 6:30 p.m. to install the new cover. You could tell that these guys have been doing this for awhile because it took the crew about 45 minutes to get the cover installed. They did a great job and the cover looks great. Thanks again Larry for the Donation. It will be enjoyed by everyone during this coming summer.

The Bar-B-Que Pit has a new cover thanks to Larry Wadle.

Some dates of interest here for everyone. George Stradley, our Field Trip and Observing Chairman, has set the following 2007 Field Trip Schedule – June 9th, September 15th (HAS Picnic) and December 1st. Keep an eye out on the Web site and here at the Observatory Corner for future updates for these Field Trips.

If you have any suggestions or thoughts for the site, let me know.

I hope to see everyone at TSP.

Thanks,
Bob Rogers
Observatory Chairman

Observatory Duty Roster

by Bob Rogers, Observatory Chairman

The site is in great shape thanks to the many, many volunteers who help maintain the site. Bob Rogers, Mike Edstrom and Ken Carey , and the site teams did a great job.

May Supervisor - Kirk Kendrick - 281-633-8819

Volunteers:
Brian Cudnik
Gary Delzer
George M.Dolson
Kenneth Drake
Victor Flores
Fred Garcia
Clif Goldman
Kay Sandori

Projects for May:
Site Cleanup
Weed Eater Control
Field Maintenance

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

June Supervisor - TBA

Volunteers:
Nelson Hagelgans
David L. Herlinger
John Huff
Clayton L Jeter
Stanley G. Jones
Keith A Jurgens
Arnie Kaestner
David Kahlichi

July Supervisor - Ken Carey - 281-488-2765

Volunteers:
Daniel Lambert
Howard Leverenz
Jay Levy
Mary Lockwood
Doug McCormick
Robert Menius
Larry Mitchell
Debbie Moran

Want new information in the *GuideStar*? Write it!!

You, too, can be published here.

- What are you doing that's new and exciting?
- What have you read recently (book report!)?
- What new and interesting software are you using?
- Did you have an observation that was especially interesting?
- Any 'lessons learned' from observing attempts?
- What are you looking forward to at the Texas Star Party this year?

Send your materials to Bill Pellerin, the GuideStar editor at: *BillPellerin@sbcglobal.net*

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 iinterested 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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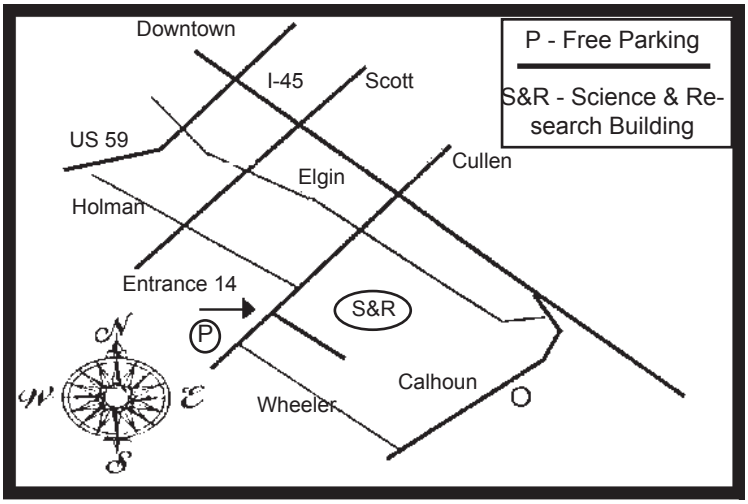

Houston Astronomical Society
Meeting
Meeting on May 4, 2007

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.