



**August, 2002**

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At the **August 2** meeting...

**Joseph F. Dolan**

*University of San Diego, Department of Astronomy*

***The Search for Evidence of  
Black Holes***

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*Houston Astronomical Society*

***GuideStar***

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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.

Observatory Site Telephone: 979-732-8861

★★★★★ **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: Kirk Kendrick ..... H: 281-391-3834      Treasurer: Debbie Moran ..... H: 713-666-9428  
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Liaison responsibility

Bill Flanagan ..... 713-699-8819  
 Howard Leverenz ..... 713-957-8667  
 Jay Levy ..... 281-557-4920 ..... Field Trip and Observing, Program  
 Christopher Mendell .....  
 Steve Sartor .....

★★★★★★★★★ **Committee Chairpersons** ★★★★★★★★★★

Audit ..... Matt Delevoryas ..... 713-666-9428	Program ..... Scott Mitchell ..... 713-461-3020
Education ..... Richard Nugent ..... 713-524-1993	..... Don Pearce ..... 713-432-0734
Field Tr./Obsg. .... Steve Grubbs ..... 713-455-5701	Publicity ..... Warren Wundt .....
Novice ..... George Stradley ..... 281-376-5787	Telescope ..... Darin Palmer ..... 713-223-3123
Observatory ..... Michael Dye ..... 281-498-1703	Welcoming ..... Marg Nunez ..... 713-529-2549
	..... Hannah Lange

★★★★★★★★★ **Ad-Hoc Committee Chairpersons** ★★★★★★★★★★

Historian ..... Leland Dolan ..... 713-688-0981	Publ. Star Party ..... Marg Nunez ..... 713-529-2549
Librarian ..... Peggy Gilchrist ..... 281-443-8773	Rice U. Coord. .... Matt Delevoryas .... 713-666-9428
Logo Mds Sales ..... Judy Dye ..... 281-498-1703	Schedule Obs'v'ty ..... Steve Goldberg ..... 713-721-5077
Long Range Plan ..... Bill Leach ..... 281-893-4057	Texas Star Pty ..... Steve Goldberg ..... 713-721-5077
Parliamentarian ..... Kirk Kendrick ..... 281-391-3834	

★★★★★★ **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.

★★★★★★★★★ **Dues and Membership Information** ★★★★★★★★★★

Annual Dues: Regular ... \$33.00	Student ..... \$5.00
Associate .... \$5.00	Honorary ..... None
Sustaining . \$50.00	

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 \$29.95/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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**Check the web site:**

**<http://www.astronomyhouston.org>**

## Welcome to New Members!

The Houston Astronomical Society encourages you to join our group of active amateur astronomers and take advantage of the benefits of membership. As a member you'll have access to the club observing site near Columbus, Texas. (You're required to participate in a site orientation meeting before you get the gate lock combination.) The site has concrete pads for setting up your telescope, restroom and bunkhouse facilities, and areas set aside for camping. You'll get monthly issues of the *GuideStar* newsletter, you'll get to vote and to serve the organization as an officer, and you will be supporting the local amateur astronomy community.

## 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 Flanagan .....	713-699-8819
Comets .....	Don Pearce .....	713-432-0734
Lunar & Planetary .....	John Blubaugh .....	713-921-4275
Occultations & Grazes ...	Wayne Hutchison .....	713-827-0828
Advanced .....	Bill Leach .....	713-863-8459

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## *Observations... of the editor*

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*by Bill Pellerin, GuideStar Editor*

How was July for your observing program? I managed to get in a little observing on the evening of Saturday July 6, and, as always, it was nice to be out under the stars. I had downloaded an article from the *Sky and Telescope* archives that described a process for making double star measurements (separation and position angle). The article that I used is titled "Double-Star Measurements Made Easy" by Thomas Teague, and I was determined to make some double star measurements. (The article is from the July 2000 *Sky and Telescope* magazine. If you want to download it from the archive site, you'll have to pay a small fee to *S&T*.)

Using the techniques described in the article, I was able to make some measurements, and I was satisfied that I got close enough to the accepted values that, in general, the technique was working. There are some prerequisites to making the measurements, as you might guess. You have to be using an equatorially mounted telescope with a motor drive, and you must be accurately polar aligned. Accurate polar alignment is a time consuming process. You also need a MicroGuide eyepiece (Celestron and Meade make these).

After polar alignment, you have to calibrate the system to determine the scale factor for the eyepiece. My telescope turned out to be about 8" per division on the long scale; this is when using a x5 barlow. Assuming that I shouldn't try to measure separations smaller than one scale division, this sets a lower limit on the separation that I can measure.

If this sounds like fun to you, get the article from *S&T*'s web site (or from the stack of previous *S&T*'s on your bookshelf), and go for it. *S&T*'s web site is [www.skyandtelescope.com](http://www.skyandtelescope.com).

The skies this summer have not been outstanding. There has been a lot of moisture in the air and this tends to obscure the views of the stars. Last night (Saturday, July 20) was 'clear' but with some significant extinction of the stars as the result of stuff in the sky. The moon was waxing gibbous last night as well, and shone quite brightly on my observing site.

*Continued on page 14...*

# ***Houston Astronomical Society***

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***Meeting Notice  
For Friday, August 2, 2002***

***Joseph F. Dolan  
San Diego State University  
Department of Astronomy***

General Relativity predicts that black holes have an event horizon surrounding them. No information can escape from the region inside the event horizon to the outside world.

Material spiraling into a black hole through the event horizon would appear to emit a series of pulses having decreasing separations and intensities. These dying pulse trains are a signature of a black hole alone. Detecting dying pulse trains from an object would positively identify it as a black hole, and provide another successful test of General Relativity. Dolan will describe a search for dying pulse trains in Hubble Space Telescope and X-ray satellite data; the results are encouraging

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## **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.**

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

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

**See the inside back cover for a map  
and more information.**

# August/September Calendar:



Photo by Scott Mitchell

<i>Date</i>	<i>Time</i>	<i>Event</i>
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## August 2002

1	5:22 a.m.	Last Quarter Moon Neptune at opposition
2	7:00 p.m.	Novice Presentation - U of H.
	8:00 p.m.	General membership meeting U of H. Joe Dolan will be our guest speaker.
3		Members Observatory Night- Columbus
8	2:15 p.m.	New Moon
10		Prime Night-Columbus
12-13		until sunrise Perseid meteor shower peaks.
13	7:30 p.m.	Advanced SIG Mtg. Rice Univ., contact Bill Flanagan, 713-699-8819
15	5:12 a.m.	First Quarter Moon
19		Uranus at opposition
22		Venus at greatest eastern elongation in western sky
22	5:29 p.m.	Full Moon
30	9:31 p.m.	Last Quarter Moon

## September 2002

6	7:00 p.m.	Novice Presentation - U of H.
	8:00 p.m.	General membership meeting U of H.
	10:10 p.m.	New Moon
7		Prime Night-Columbus
13	1:08 p.m.	First Quarter Moon
17	7:30 p.m.	Advanced SIG Mtg. Rice Univ., contact Bill Flanagan, 713-699-8819
21	8:59 p.m.	Full Moon
22	11:55 p.m.	Autumnal Equinox, Fall begins
28		Members Observatory Night- Columbus
29	12:03 a.m.	Last Quarter Moon

*Send calendar events to [JBlubaugh@aol.com](mailto:JBlubaugh@aol.com)  
or call 713-921-4275.*

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## ***Holst's "The Planets"***

### ***Special offer for H.A.S. Members***

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The Cynthia Woods Mitchell Pavilion is pleased to extend a special **two-for-one offer to all members of the Houston Astronomical Society** for its upcoming event, Gustav Holst's "The Planets."

Taking place **Thursday, August 22 at 8:00 p.m.**, this interstellar event presents the latest images from deep space, choreographed to a live performance by the Houston Symphony of Gustav Holst's majestic 1916 suite, "The Planets." Produced in cooperation with the Jet Propulsion Laboratory, you'll see spectacular computer animation and dramatic, high-resolution film and photo images from NASA's unmanned spacecraft - Mariner, Viking, Magellan, Voyager and the Hubble Space Telescope. Making the event even more memorable is that the narrator and tour guide for the evening is Alan Bean, a NASA astronaut from the Apollo XII and Skylab II space missions.

Before the journey through space begins, six exhibits from the Johnson Space Center in Houston will be available for viewing. These include the Apollo EMU Spacesuit Mockup, a space shuttle model, Apollo photographs, moon rock replicas, a space shuttle orbiter with a spacelab model, and a panel featuring the solar system. When darkness falls over the outdoor venue, telescopes will provide space enthusiasts a closer look at the wonders of the sky. Prices for the event are \$22/\$18/\$15 for reserved seats and \$10 for lawn tickets. Tickets are available at all Ticketmaster Ticket Centers, including Foley's, Fiesta and Warehouse Music, or by calling 713-629-3700. They also are available at The Pavilion Ticket Office, open Monday-Friday 10 a.m. to 6 p.m., Saturdays 10 a.m. to 4 p.m., and show days through intermission, or by calling 281- 363-3300.

For more information about Gustav Holst's "The Planets" or The Cynthia Woods Mitchell Pavilion, visit [www.woodlandscenter.org](http://www.woodlandscenter.org) or call 281-363-3300. We look forward to seeing you under the stars!

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# ***Novice Star Party***

The Novice Group is planning an instructional star party August 03 with a rain date of August 17 at Ken Miller's Rafter M Ranch in Hockley.

These dates have been selected to avoid conflict with Columbus prime viewing.

The event is open to all HAS members.

Members with experience will be expected to volunteer assistance to inexperienced observers.

Contact me for more details if needed.

George Stradley  
Novice Program  
stradley@hal-pc.org



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***Minutes of the Houston Astronomical Society  
General Membership Meeting  
05 July 2002***

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Kirk Kendrick called the meeting to order at 8:05pm.

The introduction of visitors results in six; each is asked how each heard about the H.A.S.

New members: 6. Each is asked to introduce their names and what they like most about astronomy.

There are 70 members present, enough for a vote to be taken. Don Pearce introduces the circumstances resulting in a motion to move the October general meeting from 4 October to 11 October, to coincide with the all-clubs meeting on the evening before Astronomy Day. Brad Schafer will be able to speak in October, but only on the second Friday, not the first. His topic will be entitled "Crescent Wars" with additional material on anomalies of the Greek constellations. In summary, this talk will be a new spin on his TSP talk.

The President makes a motion to the general membership to move the October meeting to the 11th. It is also noted that 12 October is Astronomy day at George Observatory, with the 11th being a planned all-club meeting (the four area clubs get together annually to meet).

Matt Delavoryas amends the motion to give the President a choice of meeting location.

The first choice of location is the regular meeting location, but this is subject to the chemistry exam schedule. The President proposes to move the meeting location to Kingwood college if the present room is not available. Questions about the motion and its amendment from the general membership are fielded as the floor opens for debate.

A motion is made from the membership to table the decision, and this is seconded. A vote on this motion is taken, and the number opposed is much greater than those in favor.

*Continued...*

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## ***Minutes... from previous page***

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A vote is taken on the main issue, and the majority votes in favor of moving the October general membership meeting date from the 4th to the 11th.

The Board Meeting is on July 25th in Duncan Hall, Rice University, at the same location as the last Board Meeting.

Amelia Goldberg awards the Messier Certificate to Robert Bolley (not present) and Steve Sartor, who accepts Certificate number 1969.

The President gives information on the H.A.S. Club Site, which is wet. He suggests to those visiting the site this weekend.

Don Pearce gives the Comet Report, sharing only those comets observable from the Dark Site.

- Comet Ikeya-Zhang is at 9th magnitude, moving south from Serpens Caput to Libra It will pass a little more than a degree from C2002 J4 (NEAT, mag. 16.1) on July 13/14.
- Comet 7P/Pons-Winnecke is at magnitude 12 and rises at 2am local time.
- Comet Snyder-Murakami, magnitude 13, is circumpolar in Camelopardalis.
- Comet C2000SV 57 (LINEAR) is 14th magnitude and in Draco, receding.
- C2000 WM1 (LINEAR) is fading in Coronae Borealis
- C2002 F1 (Utsonymia) is at magnitude 10.5, fading as it remains invisible near the Sun in Canis Major.
- Comet 29P/S-Wachmann 1 is in outburst, moving west in Capricornus, at magnitude 12.5.

A question is raised on how to get the orbital elements, with the answer being to go to the website and download the software and position. Don then credits the two individuals for success in last-month's challenge.

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## **Minutes... from previous page**

Rich Nugent presents the Science Fair winners. Winners were selected from the Science and Engineering Fair held annually at the Astroarena; there were nine awards total. Winners include Beth Turner, Rachel Zhou, John Delgado, and Josh Schaumberger. John Delgado was not able to be present, but the other three were, and gave their presentations to the general membership:

- Josh Schaumberger (17) gave his presentation entitled “Mars IV”
- Rachel Zhou (15) gave her presentation entitled “Fractal Description of Planetary Orbits”
- Beth Turner (14) talks about the “Orbital Trajectory of Saturn’s Moon Titan”

Steve Goldberg gives the second part of the evening’s presentation with the “Texas Star Party Review”. Steve answers the common questions concerning TSP: “What is TSP”, “Where is TSP”, “Why is TSP”. (Secretary’s Note: TSP will be held from April 27 to May 5, 2003; the drawing for housing will begin early—November 15).

Marg announces that there will be no door prizes this evening, but reminds the membership about the Camp Deerfield Star Party to be held on July 20.

The meeting adjourns at 9:40pm.

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# *Observatory Corner*

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*By Michael B. Dye Observatory Chairman*



Another month, another *GuideStar*. This month looks to be a really fun month because as I write this article, we don't have anyone to put the *GuideStar* together and mail it. It looks like the only the members with web access will get to read this article. Anyway, enough with the good news, lets get on with the article.

First off is the Annual Picnic. Nothing has changed; we are still having it on September 28<sup>th</sup> at the Observatory Site. In keeping with the practices of the past, this is also the same night as the Members Observatory Night. Instead of the Observatory Committee again supplying the meat (hamburgers and hot dogs), buns (also hamburger and hot dog), Ice Tea and maybe some soda (Coke, Pepsi, etc.) and other good stuff for free, we are going to ask for a small donation on a per person basis. At this point I am thinking of asking for Donations of \$5.00 per person or \$10.00 per family. I am asking the membership to attend the picnic and bring a covered dish of some sort (salad, vegetable, or desert) large enough to feed a few extra people. Please E-mail or phone me if you are coming to the picnic. We need this information for planning the food to buy. I need to point out to non-members that in order for non-members to come to the picnic, you have to be a guest of a member. It is actually easier if one is a member and has taken the Site Orientation course given by Bob Rogers the same night as the General Meeting is from 7:00 PM to 7:45 PM in room 121. There will be signs at the door to point to the room where the class will be given.

The week before the Annual Picnic will be used by a group of volunteers and me to clean and paint the outside of the Observatory. I am looking for about five to ten members to help. This will be done on a weekday, so unless you have weekdays off you will most likely have to take a day off from work. We are going to rent a sand pot (blaster) and compressor to do all the hard work and Dana Lambert has volunteered to spearhead

*Continued...*

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## ***Observatory Corner... from previous page***

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the painting activity. If you would like to help with this activity please E-mail or phone me to let me know if you are going to help.

We will not be able to install the retrofitted C-14 into the Observatory until August instead of late July as I stated before. Kirk Kendrick and I are planning the new tables to be installed in the Observatory to support the new computers and to make the Observatory more user friendly. This will most likely happen during the week before the Picnic also. As I stated before, I am seeking donations from the membership to fund the C-14 retrofit activity. I am expecting this to cost to be on the order of \$2,000.00. One thousand for the actual retrofit and one thousand for incidentals (like tables, other electronics) that always seem to crop up when trying to plan a major activity. If any members would like to contribute to this worthy cause, please make you check payable to the Houston Astronomical Society and in the memo line indicate that the donation is for the Observatory Committee. All contributions to the Houston Astronomical Society are tax deductible and we will send a receipt at the end of the year. Please send any contributions to the H. A. S. to the P. O. Box address on the *GuideStar*.

I went out about three weeks ago and fixed the door to the bunkhouse. I hope it will stay fixed. I would like to thank Debbie Moran for acting as my safety observer while I wired the high voltage stuff. I had to replace the door timer electronics (which had become a carbonized piece of printed circuit board), the battery charger/power supply and the sealed Lead acid battery. Actually I am surprised the electronics have lasted this long. We installed this stuff back in 1989 or 1990.

Just before I started this article, Ed Szczepanski called me to inform me that the water well had failed. This will most likely require me to drive back out to the Site this week to see what will be required to get water running again. More about this problem next month. Speaking of Ed, I would like to congratulate Ed on how well the new grass is starting to look. I was out at the Observatory Site this last weekend (07/19 & 07/20) and the place is starting to green up. The field grass had not been cut yet but Allen and Peggy Gilchrist had been using the Observatory

*Continued...*

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## ***Observatory Corner... from previous page***

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Site riding lawn mower to cut the grass in the picnic/camping area and the pad area. Ed bought a new push (actually a self-propelled type) lawn mower and was also mowing the pad area. I again would like to thank Ed Szczepanski for the donation of the new lawn mower and the work he does out at the Observatory Site cleaning the bathrooms and mowing the lawn.

The Society continues to benefit from members who shop at Randalls. For this we (the Society) thank you. Please link your Randalls card to the Houston Astronomical Society so that the society can benefit from the Randalls program. Our number is #6618. This is very easy to do, just go to the Courtesy Booth and tell the person there what you what to do. We are also in the process of getting a Kroger number that does the same thing for Kroger but this activity does not seem to be moving along very fast. I think I need to talk to someone.

Please fill out the appropriate log form when you use the site. Remember we use these forms as attendance records and to report Observatory Site problems such as broken toilets.

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## ***Observations... from page 4***

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On another subject... here's hoping that this month's *GuideStar* finds its way into your hand. Our president, Kirk Kendrick is organizing an ad-hoc team for this month. Our regular printing and mailing guy had an emergency, and couldn't do the work for us this month.

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

***..Bill***

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# *Membership Renewals...*

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Please check the mailing label on your copy of the *GuideStar*.

It'll tell you when your membership expires. If it expires soon, please send your renewal to the address on the outside cover of *GuideStar*. The dues information is on the inside front cover.

Membership in the Houston Astronomical Society is one of the great bargains in Astronomy. For a regular membership of \$33 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.

*Thanks!*

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## *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://rampages.onramp.net/~binder/>

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

**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](mailto:bill.leach@nhmccd.edu). Web site: [www.astronomyclub.org](http://www.astronomyclub.org)

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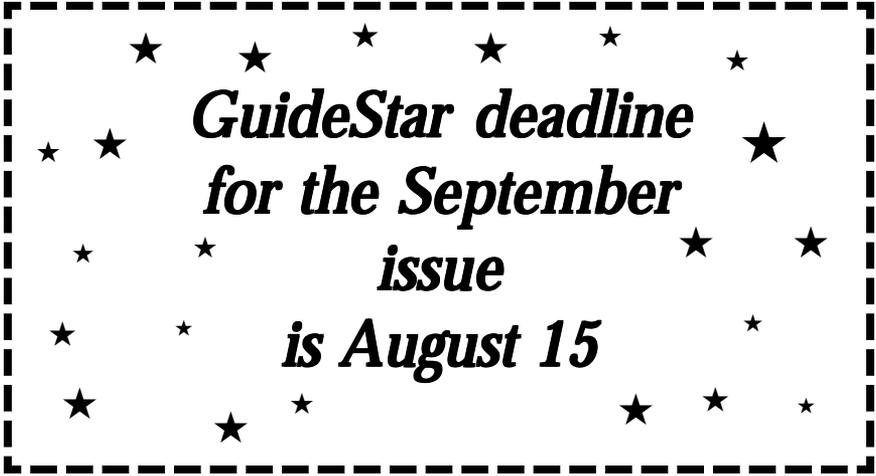
## ***HAS Web Page***

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

The address is: <http://www.astronomyhouston.org>

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 [goldberg@sccsi.com](mailto:goldberg@sccsi.com). (You can click on my name on the HAS home page). Or, you can call Steve Goldberg (WebMaster), at 713-721-5077.

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***GuideStar deadline  
for the September  
issue  
is August 15***

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# *Observatory Duty Roster*

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by Michael B. Dye, Observatory Chairman

This is the duty list for August, September and October. If you are listed in this roster, please be sure to contact your supervisor for any information that you may need and the date and time to be at the site. You may change from site duty to open house or from open house to site duty by pre-arrangement with the Site Supervisor for that month. Changes between months require Observatory Chairman coordination.

**August Supervisor ..... Logan Rimes ..... 713-681-5397**  
Barbara Wilson ..... Members Observatory Night08-03-02  
Buster Wilson ..... Members Observatory Night08-03-02  
John Blubaugh ..... Site  
Ken Carey ..... Members Observatory Night08-03-02  
John Chauvin ..... Site  
Art Ciampi ..... Site  
Brian Cudnik ..... Site  
George Dolson ..... Site  
Ken Drake ..... Site

**September Supervisor ..... Dana Lambert ..... 281-304-6400**  
Mark Egan ..... Members Observatory Night09-28-02  
John Fennell ..... Site  
Jean-Marc Follini ..... Site  
Fred Garcia ..... Members Observatory Night09-28-02  
John Garza ..... Site  
Clifton Goldman ..... Members Observatory Night09-28-02  
David Granadino ..... Site  
Chai Heng ..... Site  
David Herlinger ..... Site

**October Supervisor ..... Allen Gilchrist ..... 281-443-8773**  
Clayton Jeter ..... Members Observatory Night10-26-02  
Stanley Jones ..... Site  
Keith Jurgens ..... Site  
Arnie Kaestner ..... Members Observatory Night10-26-02  
David Kahlich ..... Site  
Howard Leverenz ..... Site  
Jay Levy ..... Members Observatory Night10-26-02  
Mary Lockwood ..... Site  
Christopher Mendell ..... Site

Please remember that Site work can be done anytime and does not have to be done just before Members Observatory Night. Contact your Site Supervisor for details. Names are selected for Site Duty using the current Alphabetical listing for Observatory Key Holders. If any member knows of a conflict please call me before your name is listed.

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# Logo Sales

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For H.A.S. Logo merchandise, call:  
Judy Ann Dye - 281-498-1703

## Hooded Sweatshirts

M .....	\$31.00
L .....	\$31.00
XL .....	\$31.00
XXL .....	\$33.00

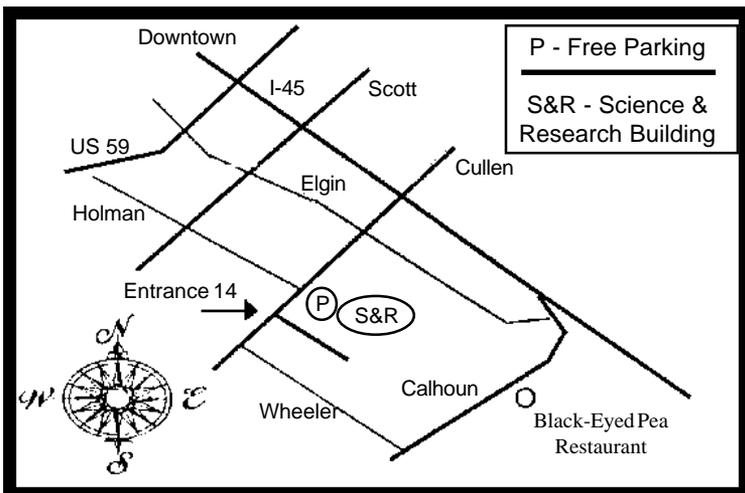


These are the prices for our new hooded sweatshirts. These are made from heavy sweatshirt material and were very popular at the previous meetings. If you want one, come to the meeting -- cash and checks accepted.

Books available:

- Observe the Herschel II Guide \$17.00**
- Observe and Understand the Sun \$14.00**
- Astronomy, The Teachers Handbook \$12.00**
- ALPO's Mars Observer's Handbook \$12.00**
- Observe Variable Stars \$17.00**
- Observe Eclipses \$17.00**

Orders will be taken for the 16 inch Levy Planisphere. It sells for \$24.00.



### **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.

### **Board of Directors Meeting**

The Board of Directors Meeting is held on dates scheduled by the board at 7:00 p.m. in Room 106 of the Space Science Building at Rice University. Call StarLine for Board Meeting information. 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*s 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*s sent via bulk rate mail to Regular, Student, and Honorary Members of H.A.S., selected individuals and recent visitors to the General Membership Meeting. Contributions to *GuideStar* by members are encouraged. Electronic submission is helpful. Submit the article in ASCII text, MS-Word (preferred), or WordPerfect format on an IBM format floppy or via AOL (BILLP10566). Mail copy to the address shown on the outside cover or to the editor at 256 East 5th Street, Houston, TX 77007. Copy must be received by the 15th of the month for inclusion in the issue to be mailed 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.

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AOL: BILLP10566; Internet: BILLP10566@AOL.COM

Reproduction and Mailing: Jeff Cooper, jcooper@velaw.com

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