



December, 2002

At the **December 6** meeting...

Swap Meet

***Just like last year...
bring equipment, books, what-have-you
and plan to buy, sell, swap***

(See page 5)

Houston Astronomical Society
GuideStar

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.

★★★★★ **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
 Vice Pres: Bill Leach H: 281-893-4057 Past President: Don Pearce H: 713-432-0734
 Secretary: Brian Cudnik H: 832- 912-1244

★★★★★★★★★ **Additional Board Members** ★★★★★★★★★★

| | |
|--|-----------------------------------|
| | Liaison responsibility |
| Bill Flanagan 713-699-8819 | Telescope Loaner Program |
| Howard Leverenz 713-957-8667 | |
| Jay Levy 281-557-4920 | Field Trip and Observing, Program |
| Christopher Mendell 281-488-8906 | |
| Steve Sartor 281-370-3544 | |

★★★★★★★★★ **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 713-697-2960 |
| 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 832-715-7833 |

★★★★★★★★★ **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 | 281-893-4057 |

Observations... of the editor

by Bill Pellerin, GuideStar Editor

I didn't see the occultation of Pi Ari last Saturday/Sunday (November 9-10). It wasn't for the lack of trying, however. I was set up on mile line 42 (Paul Maley, who was coordinating the observations of the occultation defined lines along the path of the asteroid shadow and assigned observers to the various lines).

For anyone who might be unfamiliar with the event, here's what it was all about. An asteroid was on a path, as the result of its normal orbit, to come between us and a 5th magnitude star. The asteroid is small enough that an observer had to be at a specific place on earth in order to see this event. For this event, the interesting portion of the predicted path of the occultation was from San Antonio east to north of Houston.

Anyway.. as I was saying, I didn't see the occultation, even though I was in the predicted path. What happened? Two things. 1) Clouds rolled in about 10:30 p.m. Saturday and the occultation was to occur just after 12:30 a.m. Sunday. The clouds were moving rather fast, and there were, from time to time, a few breaks in the clouds which gave me some hope of being able to see this event.

The other good thing is that I found the star Pi Ari early, so the telescope was tracking the star the whole time. Had I waited until midnight to find the star, I would have been out of luck. By midnight there weren't enough stars available to allow me to find Pi Ari.

In addition, when the clouds were even only slightly transparent, the star would be visible in the eyepiece of the telescope. If you were to look at the sky with your naked eye you'd be sure that you couldn't see the star at all. It was surprising to me that there were many times when the sky appeared clouded over but I could still see the star.

2) Ok... the other thing that happened is that the path of the occultation (the shadow of the star, if you will) moved north by about 25 miles.

Continued on page 18...

Houston Astronomical Society

***Special Meeting Notice
For Friday, December 6, 2002***

Swap Meet

This informal swap meet is for you to sell, buy, or swap your equipment, books, software, tools, or anything of interest to amateur astronomers. Price your 'for-sale' items, bring a card table, and start swapping.

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.**

December/January Calendar:



Photo by Scott Mitchell

| <i>Date</i> | <i>Time</i> | <i>Event</i> |
|-------------|-------------|--------------|
|-------------|-------------|--------------|

December 2002

| | | |
|----|-----------|--|
| 4 | 1:34 a.m. | New Moon |
| 6 | 7:00 p.m. | Novice Presentation - U of H. |
| | 8:00 p.m. | General membership meeting U of H. Swap Meet! |
| 7 | | Members Observatory Night- Columbus |
| 11 | 9:49 a.m. | First Quarter Moon |
| 14 | 6:00 a.m. | Geminid meteor shower maximum; often bright, plentiful, and slow. |
| 17 | | Saturn at opposition |
| | 7:30 p.m. | Advanced SIG meeting, contact Bill Flanagan, 713-699- 8819 |
| 19 | 1:10 p.m. | Full Moon |
| 21 | 7:14 p.m. | Winter Solstice. Sun reaches furthest southern limit. |
| 26 | 6:31 p.m. | Last Quarter Moon |
| 28 | | Prime Night-Columbus |

January 2003

| | | |
|----|------------|---|
| 2 | 2:23 p.m. | New Moon |
| 3 | 7:00 p.m. | Novice Presentation - U of H. |
| | 8:00 p.m. | General membership meeting U of H. Brian Cudnik on Lunar Meteoritic Phenomenon |
| | 11:02 p.m. | Earth at perigee |
| 10 | 7:15 a.m. | First Quarter Moon |
| 14 | 7:30 p.m. | Advanced SIG meeting, contact Bill Flanagan, 713-699- 8819 |
| 18 | 4:48 a.m. | Full Moon |
| 25 | 2:33 a.m. | Last Quarter Moon |

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

Minutes of the Houston Astronomical Society General Membership Meeting 01 November 2002

President Kirk Kendrick called the meeting to order at 8:13pm. Approximately 65 members were present at the start of the meeting, which established a quorum.

The number of visitors was about five.

The announcements were given next:

- Bill Leach reported that Astronomy Day was successful, with 120 volunteers helping at the event. He also reported on the All Clubs meeting, with 220+ in attendance. Next year, Astronomy Day will be on October 4, and the All Clubs day, hosted by the Houston Astronomical Society, on October 3.
- Don Pearce gave an abbreviated comet report: Comet Hoenig faded suddenly on September 3, fading from 8th to 9th to 12th magnitude in only a day. It is currently only accessible with a CCD. Comet 2002 T7 LINEAR, now near magnitude 17.0, is expected to be a naked eye object from April to June of 2004, reaching perihelion on April 23, 2004 at a distance of 0.6AU from the Sun. Comet 2002 RX14, LINEAR, is relatively bright, at 10th to 11th magnitude. It reached perihelion on January 18, 2003 and makes its closest approach to the Earth on February 23.
- Steve Goldberg announced the start of the Texas Star Party registration period, which runs until November 19. The purpose of this is to get into a drawing for a slot to attend the TSP. Registration can either be done by e-mail or online at the TSP website.

Continued....

Minutes... from previous page

- Judy Dye talked about Logo Sales, and featured the following products: *Sky Almanac 2003* for \$25, and hooded sweat coats with the club logo for \$36 to \$38.
- Darrin Lewer announced the availability of the book by the evening's speaker *Storms in Space*. Dr. Freeman, the speaker, was willing and available to sign copies of the book, which are available at \$25 per copy.
- The *GuideStar* is back in the mail... Bill Molnaire asked about it. Two new volunteers have taken over the work.
- The Board meeting will be held on the 21st of November, with the exact location to be announced. When a location is decided upon, announcements will be sent to the membership. The date, time, and location of the annual December budget meeting will also be announced.
- The second annual Swap Meet will be held during the December general membership meeting—all members and guests and visitors are encouraged to come, buy, and sell.

The main order of business for the evening was the annual election. The current President gave a description of the offices and positions available, and the people currently holding these were recognized by the membership.

The initial candidate slate follows:

President: Kirk Kendrick
Vice President: Bill Leach
Secretary: Brian Cudnik
Treasurer: Debbie Moran
Observatory: Michael Dye

At Large Board Members:
Bill Flanagan
Jay Levy

Committee Chairpersons:
Education: Richard Nugent
Field Trip: Kenneth Miller
Audit: Matt Delevoryas
Novice: George Stradley
Program: John Blubaugh
Publicity:
Telescope: Clayton Jeeter
Welcoming: Marg Nunez
Hannah Lange

Continued...

Minutes... from previous page

Christopher Mendell
Steve Sartor

The floor was opened to nominations, which produced the following nominees:

Matt Delevoryas for Director at Large (at large Board membership)
Don Pearce for member of the At Large Board
Joe Khalaf for Publicity

The concern was raised that if Matt Delevoryas is elected for at large board membership, a conflict of interest develops due to his current position as audit committee chairperson. It was concluded that, technically, there is no rule within the by-laws prohibiting a member from simultaneously holding these two positions.

The nominations were then closed by majority approval. Michael Dye made a motion to accept all non-contested nominees to office by acclimation, which was seconded. The motion was unanimously approved by the membership.

The at large board members are then voted on and Bill Pellerin and Steve Goldberg are recognized for the work they have done.

Scott Mitchell introduced the speaker for the evening, Dr. Freeman of Rice University. His talk was entitled "Storms in Space". Dr. Freeman was available to sign books after the presentation.

The election results were returned, with the following elected to the Board of Directors:

Bill Flanagan, Christopher Mendell, Don Pearce, Jay Levy, and Steve Sartor.

After a ten-minute break, door prizes were awarded and Steve Goldberg gave one further announcement: Star parties in Sweeny Texas, and the rain date for the Clifton Middle School star party is November 8.

The meeting adjourned at 10:14 p.m.

Holiday Suggestions for Beginning Astronomers

Memberships

HAS

Houston Astronomical Society

<http://www.astronomyhouston.org>

Coupons:

From mom and dad

Offering to take them to a star party

Offering to go out and view with them

Offering to take them to a dark sky spot

Offering to take them to the science center

Observing tools:

Red light flashlight

<http://www.telescopes.com>)

Planisphere

For a nice plastic one about \$9.95

<http://skyandtelescope.com> (click on 'Shop at Sky')

Moon map

<http://skyandtelescope.com> (click on 'Shop at Sky')

Binoculars:

7x35 binoculars or 8x40 max size for small kids (Age 13 and below)

10x50's are okay they are heavy and hard to hold still for most kids.

A dry wall sander pole makes a wonderful and CHEAP way to balance the binoculars

Logbook ideas:

Notebook of black paper and gel pens. The light colored gel ink shows up nicely on black paper, kids love them. They are legible in the dark with red light

Continued....

Holiday Suggestions... from previous page

Computer program:

Starry Nights beginner or backyard

<http://www.starrynight.com> (all Starry Night programs)

Beginner: http://www.starrynight.com/new_snbegx.html

KITS:

The First Light Introductory Astronomy Kid by David Chandler Company contains everything you need except red flashlight.

<Http://www.astromax.com/chandler/kit.htm>

\$25.00

Book recommendations:

Terence Dickinson: **Exploring the Night Sky** (Firefly)

Leo Enright: **The Beginner's Observing Guide** (Royal Astronomical Society of Canada; order online <http://www.store.rasc.ca>

Highly recommend for beginners without a telescope. Best book for beginners that I have ever seen.

Harry Ford: **The Young Astronomer** (Dorling Kindersley)

Turn Left at Orion : (describes views from bino's and small telescopes. Star hopping skills, lists 100 deep sky objects of various types and the best season to view excellent book

Phil Harrington: **Star Ware**

Phil Harrington: **Touring the Universe Through Binoculars**

Ken Graun **Touring the Universe** This appears to be an outstanding book for beginning – intermediate level hobbyists. The star charts are the best I've ever seen for introducing someone to the night sky.

<http://makeashorterlink.com/?R20532C32>

Continued....

Holiday Suggestions... from previous page

Telescopes

Orion's XT4.5, \$199. (This one can be for any age very portable)
<http://www.telescope.com>

Astroscan Telescope by Edmund Scientific \$209 at the Hall of Science. They're very easy to use and it's great for looking at the moon
<http://www.scientificsonline.com/>

Orion's StarBlast \$139.00 **113 mm, also a red dot finder scope.**
<http://www.telescope.com/>

(This article was submitted via email. The author is unidentified...)

Happy Holidays

from the

Officers and Committee Leaders

of the

Houston Astronomical Society

Black Holes: Feeling the Ripples

Astronomers have finally confirmed something they had long suspected: there *is* a super-massive black hole in the center of our Milky Way galaxy. The evidence? A star near the galactic center orbits something unseen at a top speed of 5000 km/s. Only a black hole 2 million times more massive than our Sun could cause the star to move so fast. (See the Oct. 17, 2002, issue of *Nature* for more information.)



Still, a key mystery remains. Where did the black hole come from? For that matter, where do *any* super-massive black holes come from? There is mounting evidence that such “monsters” lurk in the middles of most galaxies, yet their origin is unknown. Do they start out as tiny black holes that grow slowly, attracting material piecemeal from passing stars and clouds? Or are they born big, their mass increasing in large gulps when their host galaxy collides with another galaxy?

A new space telescope called LISA (short for “Laser Interferometer Space Antenna”) aims to find out.



Designed by scientists at NASA and the European Space Agency, LISA doesn't detect ordinary forms of electromagnetic radiation such as light or radio waves. It senses ripples in the fabric of space-time itself—gravitational waves.

Albert Einstein first realized in 1916 that gravitational waves might exist. His equations of general relativity, which describe gravity, had solutions that reminded him of ripples on a

Continued...

Space Place... from previous page

pond. These “gravity ripples” travel at the speed of light and, ironically, do not interact much with matter. As a result, they can cross the cosmos quickly and intact.

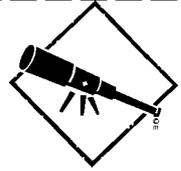
Gravitational waves are created any time big masses spin, collide or explode. Matter crashing into a black hole, for example, would do it. So would two black holes colliding. If astronomers could monitor gravitational waves coming from a super-massive black hole, they could learn how it grows and evolves.

Unfortunately, these waves are hard to measure. If a gravitational wave traveled from the black hole at the center of our galaxy and passed through your body, it would stretch and compress you by an amount far less than the width of an atom. LISA, however, will be able to detect such tiny compressions.

LISA consists of three spacecraft flying in formation—a giant triangle 5 million km on each side. One of the spacecraft will shoot laser beams at the other two. Those two will echo the laser signal right back. By comparing the echoes to the original signal, onboard instruments can sense changes in the size of the triangle as small as 0.000000002 meters (20 picometers).

With such sensitivity, astronomers might detect gravitational waves from all kinds of cosmic sources. The first, however, will probably be the weightiest: super-massive black holes. Will “feeling” the ripples from such objects finally solve their mystery, or lead to more questions? Only time will tell. Scientists hope to launch the LISA mission in 2011.

Observatory Corner



By Michael B. Dye Observatory Chairman



For those of you who were not at the last General Meeting (November), the annual elections took place. To no one's surprise, I was re-elected to my 14th term as Observatory Chairman. Again, I was the only one running. Last year (actually this year, as 2002 is not over yet), one of my goals for the year was to sandblast and paint the Observatory. Unfortunately this activity did not happen. I have decided to change my approach.

I am going to try to do it over a weekend instead of during a workweek in September. I am going to try and schedule the activity later in 2003, preferably sometime after things warm up.

The bad news for next year is that the Observatory Committee will have one Site Supervisor who will not be returning to the Observatory Committee for 2003. Dana Lambert has informed me that because his job is absorbing more and more of his time, he will not be able to perform as a Site Supervisor for 2003. This means that I am looking for a new volunteer for the Observatory Committee. If you are interested in working on the Observatory Committee, please contact me as soon as possible. The lineup for the Observatory Committee for 2003 looks like this:

Michael B. Dye
Kirk Kendrick
John Hiatt
Matt Delevoryas
Allen Gilchrist
Logan Rimes
Robert Rogers
B. Cooper Walls
Open
Edward Preston
Steve Goldberg
Ed Szczepanski

Chairman - MBDye@aol.com
Vice Chairman
Advisor
Site Supervisor
Financial Records
Scope Assignment
Grounds Keeper

Observatory Corner... from previous page

As of the time I write this article I have still not set a date for the Annual Observatory Committee meeting. When I set the date, I will announce it on the Web site for those who interested in attending. Also I have not yet worked up a schedule for Prime Night and Members Observatory Night dates. When I get this done I will publish it in the *GuideStar* for all to see.

Allen Gilchrist reports that he and Chuck Shaw went to the Observatory Site on November 18th and worked on final alignment of the C-14 Telescope Mount and electronics. They found a problem with the declination motion at the guiding rate. The problem was solved with the addition of a spacer and some shims to the declination worm gear mounting. They performed a few other small repair/calibration activities to the scope. They were able to make a couple of passes at establishing the PEC file for the system. Allen also made some measurements, for plotting, with his ST-10. Allen reports that the mount is fully operational, but there are still a few issues as follows.

1. There is a very slight, but detectable, error in the polar alignment. The misalignment is not bad enough to prevent further tuning of the system or its use by other qualified Observatory Key holders. We (the Observatory Committee) can take care of this problem without Chuck's help.
2. There appears to be excessive free play in the declination bushing at the end of the west fork arm. This causes a slight movement in the RA when making declination guiding corrections. This is a small effect, but one that should be corrected. This will most likely require Chuck's help and he has volunteered to work with us on this.

Allen and Chuck have agreed to start training key holders on the use of the C-14 upgrade. The first people trained will most likely be training the rest of the Key Holders. Contact Steve Goldberg to get on the Training List. The first class is planned for December 13th with other training classes will be

Continued...

Observatory Corner... from previous page

held after the first of the year. I know the first Key Holders on the list to be trained will be Kirk Kendrick and Bob Rogers.

The Society continues to benefit from members who shop at Randalls. For this we (the Society) thanks 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.

Marg's Star Parties

Here's your chance to share your enthusiasm for astronomy with some school kids. Marg Nunez has planned events for the near future. Bring your telescope, or just come by... Either way, you'll have a great time.

Call or Email Marg. for more details. 713-529-2549
Marg10@flash.net

Observations... from page 4

Therefore, even if was able to see the star continuously I would not have seen it disappear behind the asteroid.

At 00:32, I began continuous observation (as suggested by Paul Maley), and there were several times when I could see the star, and there were times when I couldn't. At no time, however, did I see the star wink out, which is what I'd expect to see if I was in the path of the occultation.

Later on Sunday, the 10th, emails were flying around with many observers indicating that they were 'clouded-out'. A few observers managed to get enough data to make some determination of the asteroid size and shape.

It was fun to make the attempt to observe the occultation and disappointing to not be able to complete the task. There's always the next time. I have observed an occultation of Saturn by the moon and the occultation of bright stars by the moon, and those events have been fun.

If you want to observe an occultation, you can do so on many nights. Occultations of Jupiter's moons by the main planet occur frequently and are identified in *Sky and Telescope* magazine, as well as other places.

Last night, the 16th, I spent a few minutes sitting out under the sky watching for asteroids (the Leonids are supposed to peak tomorrow night, Monday / Tuesday). The moon was nearly full (92%) and significantly lit up the sky. It's remarkable how bright the moon is when it's full or nearly full. It was easy to walk outside by the light of the moon and clearly the moonlight could have masked some meteors. The Leonids are supposed to be very good (perhaps a meteor storm) this year. The moon will be 99% of full at midnight on Tuesday (Monday night), so there will be plenty of light in the sky. I haven't decided whether to try to observe the shower or not. My experience of last night was not especially encouraging.

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

..Bill

Membership Renewals...

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!

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.ghgcorp.com/cbr/jscas.html>

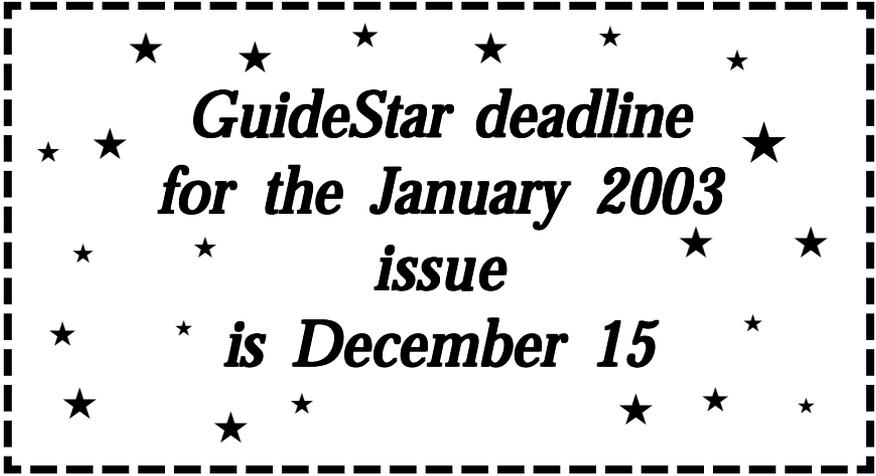
North Houston Astronomy Club meets at 7:30 p.m. on the 4th Friday of each month in the Teaching Theatre of the Student Center at Kingwood College. Call 281-312-1650 or E-mail bill.leach@nhmccd.edu. Web site: www.astronomyclub.org

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@infohiwy.net. (You can click on my name on the HAS home page). Or, you can call Steve Goldberg (WebMaster), at 713-721-5077.



***GuideStar deadline
for the January 2003
issue
is December 15***

Observatory Duty Roster

by Michael B. Dye, Observatory Chairman

This is the duty list for December '02, January '03 and February '03. 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.

December Supervisor Robert Rogers 281-997-9682

| | | |
|-----------------------|---------------------------|----------|
| Richard Nugent | Site | |
| Ralph Overturf | Site | |
| Don Pearce | Site | |
| Sim Picheloup | Members Observatory Night | 12-07-02 |
| Steve Simpson | Members Observatory Night | 12-07-02 |
| Henry Schneider | Members Observatory Night | 12-07-02 |

January Supervisor To be announced xxx-xxx-xxxx

| | | |
|----------------------|---------------------------|----------|
| Marge Nunez | Site | |
| Steve Simpson | Site | |
| Larry Wadle | Site | |
| Mark R. Watson | Members Observatory Night | 01-xx-03 |
| Barbara Wilson | Members Observatory Night | 01-xx-03 |
| Buster Wilson | Members Observatory Night | 01-xx-03 |

February Supervisor To be announced xxx-xxx-xxxx

| | | |
|------------------------|---------------------------|----------|
| Warren Wundt | Site | |
| Joe Blubaugh | Members Observatory Night | 02-xx-03 |
| John Chauvin | Site | |
| Art Ciampi | Members Observatory Night | 02-xx-03 |
| Brian Cudnik | Members Observatory Night | 02-xx-03 |
| George M. Dolson | Site | |

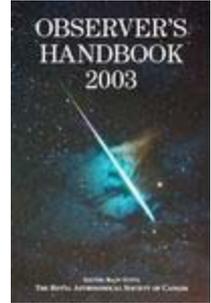
Please remember that Site work can be done anytime and does not have to be done just before Members Observatory Night. Contact your Site Supervisor for details. Names are selected for Site Duty using the current Alphabetical listing for Observatory Key Holders. If any member knows of a conflict please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

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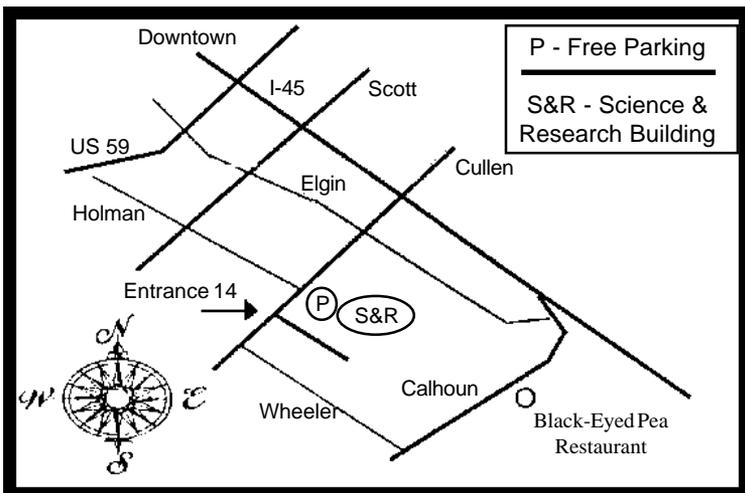
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General Membership Meeting

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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