



GuideStar

April, 2006

At the April 7 meeting...

Stellar Life Cycles

Brian Cudnik

The stars light up the night sky, but stars have a birth, midlife, and death. Our sun, for example, is enjoying its midlife right now (and we're the beneficiary). It's 5 billion years old and is expected to burn in its present form for another 5 billion years.

Also, you'll hear about upcoming events:

- *Texas Star Party (April)*
 - *Alcon in Dallas/FW*
 - *and lots more*
-

Highlights:

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HAS Web Page:

<http://www.AstronomyHouston.org>

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

Schedule of meeting activities:

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

Novice meeting: 7:00 p.m.
Kirk Kendrick -- "Basics of Binoculars and Telescopes - Before Buying Your First Telescope"

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

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

See last page for a map and more information.

The Houston Astronomical Society

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

Officers & Past President

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

Additional Board Members

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

Committee Chairpersons

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

Ad-Hoc Committee Chairpersons

Historian	Leland Dolan.....	713-688-0981
Librarian.....	Peggy Gilchrist.....	281-443-8773
Logo Mds Sales.....	Judy Dye.....	281-498-1703
Long Range Plan.....	Bill Leach.....	281-893-4057
Parliamentarian	Kirk Kendrick.....	281-633-8819
Publ. Star Party	Richard Nugent.....	713-524-1993
Rice U. Coord.....	Matt Delevoryas.....	713-666-9428
Schedule Obs'v'ty	Steve Goldberg.....	713-721-5077
Texas Star Pty.....	Steve Goldberg.....	713-721-5077

Special Interest Groups & Help Committees

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

Advisors

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

Dues and Membership Information

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

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

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

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Special Interest Group Listing

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

Advanced.....	Bill Leach.....	281-893-4057
Comets	Don Pearce	713-432-0734
Lunar & Planetary.....	John Blubaugh.....	713-921-4275
Occultations & Grazes.....	Wayne Hutchison.....	713-827-0828
Advanced.....	Bill Leach.....	281-893-4057

Other Meetings...

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

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

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

April/May Calendar:



Photo by Scott Mitchell

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

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

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

Date Time Event

April

2	2:00 a.m.	Daylight Savings Time begins Move clock forward 1 hour
5	6:01 a.m.	First Quarter Moon
7	7:00 p.m.	Novice Presentation - UH
	8:00 p.m.	General membership meeting - UH
13	10:40 a.m.	Full Moon
20	9:28 p.m.	Last Quarter Moon
27	1:44 p.m.	New Moon

May

3		Jupiter at opposition
5	0:13 a.m.	First Quarter Moon
5	7:00 p.m.	Novice Presentation - UH
	8:00 p.m.	General membership meeting - UH
13		Comet Schwassmann-Wachmann 3 at .073 a.u.
13	1:51 a.m.	Full Moon
20	4:21 a.m.	Last Quarter Moon
27	1:26 p.m.	New Moon

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

Special "Help" Volunteers

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

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

★

★ ★ ★

★ GuideStar deadline ★

★ for the May ★

★ issue ★

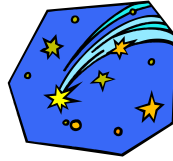
★ is April 15 ★

★ (tax day - yikes!) ★

★

Observations... of the editor

by Bill Pellerin, GuideStar Editor



.....

I only *wish* that I had move variable star observations to report. I don't. I can offer up the usual excuses -- other things to do, clouds, full moons, etc. Observing sessions are too few and too far between. Somewhere (was it in *Sky and Telescope* magazine?), someone calculated the cost of observing each object taking into account the cost of the equipment required to make the observation. I don't remember the result, but I'd have to say that each observation is, as they say, 'priceless'.

Astromart

Speaking of equipment.. you're probably already aware of the Anacortes Telescope & Wild Bird sponsored site called 'Astromart'. It can be found at www.astromart.com, and it provides a place for you to buy and sell astronomy stuff at no cost to you. (You *can* contribute to the cost of running the site, but it's not mandatory.) It's a bit like EBay, but without the costs. You're responsible for making any deals happen, so it's more like the old days when people used to put items for sale on the bulletin board at the grocery store.

Take a look... you might find a bargain. I've bought and sold several things on the site. In fact, last year, I posted a Losmandy plate for a C-8 telescope on the site. I was practically deluged with email from interested buyers and I sold the plate within a few days. I figured that this item would be on the site for a few weeks before anyone bought it!

Texas Star Party

Wow... TSP is **this** month. I can't wait. I'm already working on my equipment list, and wondering whether it'll all fit in the car. I'll be taking my variable star measuring equipment (Losmandy mount, Pronto, DSI imager), and my Celestron C-8 SCT if it'll fit in the car. Of course, the computer has to go, plus power cords, power supplies, a table, cables, warm clothes, cool clothes, etc., etc. I'll use the C-8 for visual observing of the objects on the TSP list.

I got an email recently with a list of evening speakers and topics. It looks great. The main attraction is the observing, of course. If we get good skies this year, the site is unbeatable. You'll be *amazed* what you can see at a site this dark.

I need to work on my observing list for the week. The TSP list that John Wagoner puts together is always fun. Larry Mitchell puts together an advanced list suited for observers with good experience and larger telescopes. Just now, I printed the TSP observing list. It's on the TSP web site at:

www.texasstarparty.org

HAS Banquet

It was great to see so many of you at the HAS banquet last month. Judy Dye did an outstanding job putting the event together and deserves our congratulations for her efforts. Dr. Schultz gave us an excellent presentation on the Deep Impact mission -- how it worked, and some information on results from the mission.



Dr. Peter Schultz

Until next time...

clear skies and new moons!

..Bill

Logo Sales

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

Astronomical League Convention

August 4-5 - Dallas

ALCon/Expo 2006, the Astronomical League Convention, will take place in Dallas - Fort Worth, Texas, August 4-5, 2006.

There will be an astronomical trade show and vendor exposition, guest speakers, and a public observing star party.

Attendees will have an opportunity to attend presentations by well-known astronomers.

A public star party and vendor fair will take place on Friday night. The annual Astronomical League Awards Banquet will be held on Saturday night.

<http://www.alconexpo.com/>

New Site Combination!!!

The gate combination at the HAS observing site changes this month.

Contact Kirk Kendrick if you are trained and do not have the combination!

NOTE: You must have attended a site orientation meeting before you will be given the combination. These classes are taught at 7:00pm on meeting nights or by special appointment with Bob Rogers.

Want Ads

For Sale:

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

Wanted to Buy

Will pay top price for quality .965" eyepieces. Any brand or design (excluding Ramsden and Huygens). I am trying to piece together a set of these oculars for a vintage reflector. Contact Clayton Jeter at: 713-569-7529 or email at stonebloke@houston.rr.com

For Sale: 13.1" Colter "Odyssey"

13.1" Colter "Odyssey", 1.8 tele-vue barlow, 32mm plossl tele-vue 10.5mm Tele-Vue, 21.5mm rke Edmonds, Lumicon

UHC filter, Celestron eyepiece filter set, 7 x 50 finder scope, Telrad finder, tube cap, light box and Skyatlas 2000 maps, Burnham's Celestial Handbook, vol 1,2,3., That's the details, everything for \$600.00.

E-mail: roy60@ev1.net
Phone: 713-434-2647

For Sale: Meade ETX 90EC Telescope, and Meade tripod Used once. Includes Autostar controller. Paid \$850 new 6 months ago - no time for a new hobby. Includes all original boxes and manuals, and carrying case for scope and tripod. Before I put it on eBay, I'd like someone local to enjoy this scope. I'll take \$500 or any reasonable offer. Contact Bill at beley8@houston.rr.com.

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

Special "Help" Volunteers

Any member who wants specific information on a subject listed below may call the individual listed. If you have a moderate knowledge of a special subject and would be happy to have others ask you about that subject, let the editor know and your subject, name and phone will be listed in *GuideStar* in the future. Note that we have listed a few possible areas where you might volunteer, but, of course, you are not limited to these. You can also have a specialty which is a sub-group of another. Note that the number of names for any subject is not limited to only one person. Also see the "Ad Hoc Committee Chairpersons" on the inside front cover and the "Special Interest Groups Listing" article.

Asteroids	Barbara Wilson	281-933-1289	History, Astro'y - General	Leland Dolan	713-688-0981
Astrometry	Richard Nugent.....	713-910-5945	Ricardo Palmeira	713-669-1409
Astrophotography	Steve Goldberg	713-721-5077	History, Astro'y - Amateurs...	Tom Williams	713-526-2868
Beginning in Astronomy	Peggy Gilchrist	281-443-8773	Mathematics, Astronomical ..	Richard Nugent.....	713-910-5945
.....	Amelia Goldberg	713-721-5077	Messier Objects.....	Novice Committee (see	
CCDs & Astrophotography...	Randy Brewer.....	281-421-1550	Photometry	Open	
Comets	Kenneth Drake.....	936-890-3735	Radio Telescopes.....	John Hiatt	713-464-4010
.....	Don Pearce	713-432-0734	Satellites, Artificial.....	Open	
Computers.....	Matt Delevoryas	713-795-0808	Solar Observing	Larry Mitchell.....	281-448-8700
.....	Leland Dolan	713-688-0981	Spectroscopy	Open	
.....	Ricardo Palmeira	713-669-1409	Thin Crescent Moons.....	Don Pearce	713-432-0734
Cosmology	Ricardo Palmeira	713-669-1409	Telescopes	Clayton Jeter.....	281-573-1337
Deep Sky	Larry Mitchell.....	281-448-8700	Variable Stars	Barbara Wilson	281-933-1289
.....	Barbara Wilson	281-933-1289	Tom Williams	713-526-2868
Double Stars.....	John Blubaugh.....	713-921-4275	Video	Larry Mitchell.....	281-448-8700
Drawing (Sketching).....	Scott Mitchell	713-461-3020			
Herschel Objects	Larry Mitchell.....	281-448-8700			

Membership Renewals...

Your membership is renewable on January 1 of each year.

Total yearly dues are \$36.

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

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

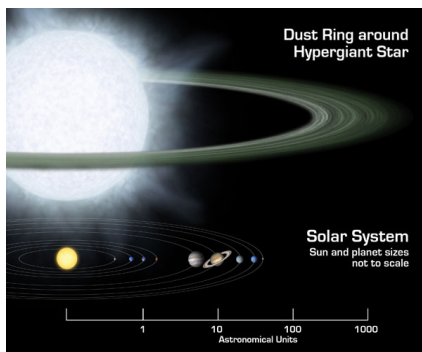
Membership in the Houston Astronomical Society is one of the great bargains in Astronomy. For a regular membership of \$36 you get the opportunity to support an active and growing organization, you get the monthly *GuideStar* newsletter, and you get access to the outstanding H.A.S. observing site near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

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

Thanks!

Planets in Strange Places

By *Trudy E. Bell*



Artist's rendering compares size of a hypothetical hypergiant star and its surrounding dusty disk to that of our solar system.

Red star, blue star, big star, small star—planets may form around virtually any type or size of star throughout the universe, not just around mid-sized middle-aged yellow stars like the Sun. That's the surprising implication of two recent discoveries from the 0.85-meter-diameter Spitzer Space Telescope, which is exploring the universe from orbit at infrared (heat) wavelengths blocked by the Earth's atmosphere.

At one extreme are two blazing, blue "hypergiant" stars 180,000 light-years away in the Large Magellanic Cloud, one of the two companion galaxies to our Milky Way. The stars, called R 66 and R 126, are respectively 30 and 70 times the mass of the Sun, "about as massive as stars can get," said Joel Kastner, professor of imaging science at the Rochester Institute of Technology in New York. R 126 is so luminous that if it were placed 10 parsecs (32.6 light-years) away—a distance at which the Sun would be one of the dimmest stars visible in the sky—the hypergiant would be as bright as the full moon, "definitely a daytime object," Kastner remarked.

Such hot stars have fierce solar winds, so Kastner and his team are mystified why any dust in the neighborhood hasn't long since been blown away. But there it is: an unmistakable spectral signature that both hypergiants are surrounded by mammoth disks of what might be planet-forming dust and even sand.

At the other extreme is a tiny brown dwarf star called Cha 110913-773444, relatively nearby (500 light-years) in the Milky Way. One of the smallest brown dwarfs known, it has less than 1 percent the mass of the Sun. It's not even massive enough to kindle thermonuclear reactions for fusing hydrogen into helium. Yet this miniature "failed star," as brown dwarfs are often called, is also surrounded by a flat disk of dust that may eventually clump into planets. (Note: This brown dwarf discovery was made by a group led by Kevin Luhman of Pennsylvania State University.)

Although actual planets have not been detected (in part because of the stars' great distances), the spectra of the hypergiants show that their dust is composed of forsterite, olivine,

aromatic hydrocarbons, and other geological substances found on Earth.



These newfound disks represent "extremes of the environments in which planets might form," Kastner said. "Not what you'd expect if you think our solar system is the rule."

Hypergiants and dwarfs? The Milky Way could be crowded with worlds circling every kind of star imaginable—very strange, indeed.

Keep up with the latest findings from the Spitzer at www.spitzer.caltech.edu/. For kids, the Infrared Photo Album at The Space Place (spaceplace.nasa.gov/en/kids/sirtf1/sirtf_action.shtml) introduces the electromagnetic spectrum and compares the appearance of common scenes in visible versus infrared light.

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

Remember --

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

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

Minutes
the March, 2006 Meeting of the
Houston Astronomical Society

The March, 2006 meeting of the Houston Astronomical Society was called to order at 8:08 p.m. by Steve Sartor.

General Announcements:

- Steve Sartor welcomed everyone to the meeting.
- Steve recognized and welcomed the two new members and one guest present at the meeting.

Announcements:

- Steve Sartor reminded everyone that we still need a volunteer to serve the remainder of Mike Hamlin's term as Loaner Telescope Chairman. Mike is moving and must step down.
- Steve reminded the members that if they haven't paid their 2006 dues by now, they are way past due.
- Mike Dye and Don Pierce reminded the membership that the HAS Banquet is scheduled for March 11 at the West Loop Marriot, and we need more members to come to the banquet. The speaker will be Peter Shultz, professor at Brown University and co-investigator of NASA/JPL's Deep Impact mission.
- Mike Dye announced that he and Bob Rogers would be in the back of the room handing out the new combination to the observatory site to those members present that have completed the required site orientation.
- Clayton Jeter announced the first HAS field trip/star party for this year. This *2006 Spring "Members Night" Observing Session* will be held March 25th from 7p.m. until midnight on the rooftop of the U of H Science and Research Building (the same building in which our General Meetings are held). In addition to the 14" classical cassagrain telescope (which, in fact, belongs to HAS) housed in the observatory dome, members are encouraged to bring their own telescopes to set up on the roof. Power will be available, and the roof edges will be barricaded for safety. The rain/cloud cover reschedule date is Saturday, April 1st. RSVP's are requested. Contact Clayton at 713-569-7529 or email him at stonebloke@houston.rr.com.
- Steve Goldberg announced that The Texas Star Party (TSP) is coming up next month. Deposits are now due for those members planning to attend, and there is a waiting list for covered housing on the Prude Ranch. For more information visit the TSP website at <http://www.texasstarparty.org>
- Amelia Goldberg presented the Astronomical League's Double Star Observing Club Certificate #318 and Pin to Clayton Jeter for ob-

servicing 100 of the finest double and multiple stars in the heavens.

- Judy Dye announced the Twenty Second Annual William F. Marlar Lecture sponsored by the Rice Space Institute, scheduled for Thursday, March 9th at the Keck Lecture Hall, RM. 100 from 4:30p.m. to 5:45p.m. The speaker will be Professor John C. Brown, Astronomer Royal for Scotland, University of Glasgow, Scotland, U.K., delivering his presentation entitled, "*Black Holes and White Rabbits.*"
- Several members discussed that the Lunar and Planetary Institute Conference is occurring this month
- Bill Molinar announced that a Total Eclipse of the Sun is occurring on March 29th, observable in Africa and Central Asia.
- Susan Kennedy announced that the 47th Annual Science and Engineering Fair is scheduled for March 24 and 25th at the George R Brown Convention Center. Volunteers for judges are needed, and any member interested in serving as a judge should contact Susan at 281-376-3262.
- Fred Garcia introduced his sons, long-time scouts, Anthony and Ben. They are working on an Eagle Scout project refurbishing benches in Herman Park on March 25th and need portable generators. They are also soliciting donations to the Herman Park Conservancy, either in the form of cash or old cell phones.

continued...

Minutes... from previous page

- Don Pierce gave the Comet Report highlighting the following:
 - o C/2006 A1 Pojmanski, now near naked eye visibility and fading in the morning sky before dawn in Aquila. It will be in Lacerta by end of March.
 - o 73P/Schwassmann-Wachmann, poised to return to the inner solar system and according to some predictions could reach naked eye brightness from mid-May to early June.
For information on these and other comets of interest, see Don's Comet Corner on the HAS website at <http://www.astronomyhouston.org>.

Program

Steve Goldberg introduced the featured speaker for the evening, Walter Kiefer, of the Lunar and Planetary Institute, who delivered his presentation entitled, "A Brief Geologic History of the Moon." Upon completion of his presentation, Walter answered questions from the audience, and Steve Goldberg presented him with a gift of appreciation from the society.

Closing Announcements

- Steve Sartor reminded everyone that Judy Dye would be at the Logo Sales table registering people for the banquet and Mike Dye would be at the rear of the room handing out new observatory site combinations at the conclusion of the meeting.
- Steve pronounced the meeting adjourned at 9:55 p.m.

Claim Your Fame Write for GuideStar

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

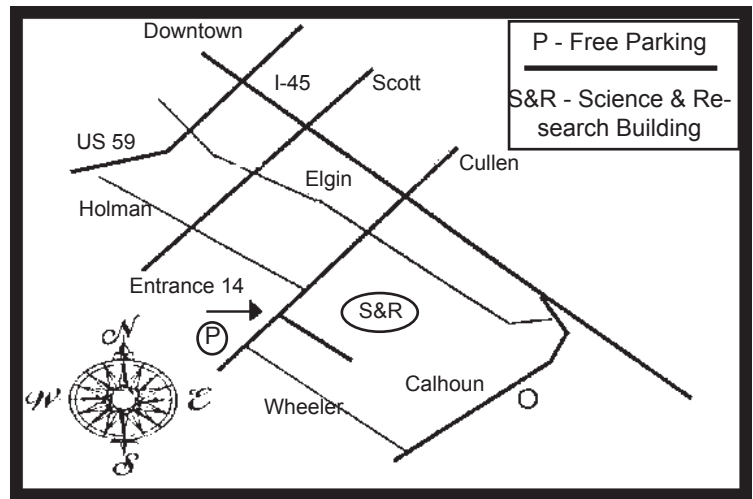
The Board of Directors Meeting is held on dates scheduled by the board at 7:00 p.m. at the University of St. Thomas. Information provided to GuideStar will be published. The meetings are open to all members of the Society in good standing. Attendance is encouraged.

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 interested in the organization's activities. Contributions to *GuideStar* by members are encouraged. Electronic submission is helpful. Submit the article in text, MS-Word format via email BillPellerin@sbcglobal.net. Copy must be received by the 15th of the month for inclusion in the issue to be available near the end of the same month. Or, bring copy to the General Membership Meeting and give it to the Editor, or phone to make special arrangements.

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

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



Houston Astronomical Society Meeting

April 7, 2006

7:00 Novice & Site Orientation

8:00 General Meeting

University of Houston

Houston Astronomical Society

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



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

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

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