Texas Star Party Roundup & Science Fair Presentations

Every year we review the events of the Texas Star Party. This year's TSP will end the weekend before the meeting and you'll hear all about it at this meeting. If you were there, you'll re-live the experience, if you weren't, you'll see what you missed.

Also, we have an opportunity each year to hear from the winners with astronomy related projects from the Science Fair. Many HAS members have volunteered to judge the Science Fair.

HAS Banquet Announcement in this issue

Nobel Prize Winner Steven Weinberg of UT to speak!!

Highlights:

Cynthia Gustava - George Observatory Volunteer Coordinator .................. 5
HAS Banquet Announcement .................. 8
Steven Weinberg - Biography .................. 10
Minutes of the May Meeting .................. 14

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.
Wes Whiddon (FBAC) - "Video Astronomy"

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: Bill Leach .............................................. H: 281-893-4057
Vice Pres: Ken Miller ............................................ H: 936-931-2724
Secretary: Doug McCormick .................................... H: 281-996-0177
Treasurer: Bill Flanagan ........................................... H: 713-699-8819
Past President: Steve Sartor ....................................

Additional Board Members

Steve Goldberg ............................................. 713-721-5077
Don Pearce .................................................. 713-432-0734
John Missavage ................................................
Clayton Jeter ..................................................
Bram Weisman ................................................

Committee Chairpersons

Audit .............................................................. Tom Blocker
Education ...................................................... Richard Nugent
Field Tr/Obsg. ............................................... George Strady 281-376-5787
Novice .......................................................... Justin McCollum
Observatory ..................................................... Bob Rogers 281-460-1573
Program .......................................................... Brian Cudnik
Publicity .......................................................... John Missavage
Telescope ......................................................... Bram Weisman
Welcome ........................................................ Paul & Kay McCallum

Ad-Hoc Committee Chairpersons

Historian ......................................................... Leland Dolan 713-688-0981
Librarian ......................................................... Peggy Glickstein 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
Rice U. Coord. ................................................ Matt Delevoryas 713-666-9428
Schedule Obs/Yt ................................................ Steve Goldberg 713-721-5077
Texas Star Pfy .................................................. Steve Goldberg 713-721-5077

Special Interest Groups & Help Committees

These are now listed on the inside front cover and the "Special Help Volunteers" listing (not in every issue).

Any member who wants specific information on a SIG listed below may call the listed individual. Also, see the "Ad Hoc Committee Chairpersons" section in every issue.

Ad-Hoc Committee Chairpersons

Historian ......................................................... Leland Dolan 713-688-0981
Librarian ......................................................... Peggy Glickstein 281-443-8773
Logo Mds Sales ................................................. Judy Dye 281-498-1703
Long Range Plan .............................................. Bill Leach 281-893-4057
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Schedule Obs/Yt ................................................ Steve Goldberg 713-721-5077
Texas Star Pfy .................................................. Steve Goldberg 713-721-5077

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10 ......... HAS 2000 Banquet - Signup form
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12 ......... Want-Ads
13 ......... Astronomical League
14 ......... Ozone, the Greenhouse Gas
15 ......... Membership renewals
16 ......... Minutes of the May Meeting

Special Interest Group Listing

Advanced ....................................................... Bill Leach 281-893-4057
Comets .......................................................... Don Pearce 713-432-0734
Lunar & Planetary ........................................... John Blubaugh 713-921-4275

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 Lee & Planetary Institute on the 2nd Friday of each month. Web site: http://www.ghs.net/cbr/jscas/

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

Web site: www.astronomyclub.org

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 and Astronomy magazines are available to members at a discount.

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.
### June Calendar:

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>3</td>
<td>2:23 p.m.</td>
<td>New Moon</td>
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<tr>
<td>10</td>
<td>10:02 a.m.</td>
<td>Moon at First Quarter</td>
</tr>
<tr>
<td>13</td>
<td>7:00 p.m.</td>
<td>HAS Novice Meeting, U of H</td>
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<td></td>
<td>8:00 p.m.</td>
<td>HAS General Meeting, U of H</td>
</tr>
<tr>
<td>18</td>
<td>12:30 p.m.</td>
<td>Full Moon</td>
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<tr>
<td>20</td>
<td>11:00 a.m.</td>
<td>Minor Planet Pluto @ opposition</td>
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<td></td>
<td>6:59 p.m.</td>
<td>Summer Solstice</td>
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<tr>
<td>26</td>
<td>7:10 a.m.</td>
<td>Moon at Last Quarter</td>
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<tr>
<td>27</td>
<td></td>
<td>June Bootid Meteors Peak</td>
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<td>28</td>
<td></td>
<td>Star Party, Columbus Observing Site</td>
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### July Calendar:

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<th>Time</th>
<th>Event</th>
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<tr>
<td>1</td>
<td>1:00 p.m.</td>
<td>Mercury at greatest elongation west</td>
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<tr>
<td>3</td>
<td>9:19 p.m.</td>
<td>New Moon</td>
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<tr>
<td>9</td>
<td>3:00 a.m.</td>
<td>Jupiter at opposition</td>
</tr>
<tr>
<td></td>
<td>11:34 p.m.</td>
<td>Moon at first quarter</td>
</tr>
<tr>
<td>11</td>
<td>7:00 p.m.</td>
<td>HAS Novice Meeting, U of H</td>
</tr>
<tr>
<td></td>
<td>8:00 p.m.</td>
<td>HAS General Meeting, U of H</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>See ancmt Astronomer’s banquet sponsored by the HAS Speaker will be Nobel winner Steven Weinberg</td>
</tr>
<tr>
<td>18</td>
<td>2:59 a.m.</td>
<td>Full Moon</td>
</tr>
<tr>
<td>25</td>
<td>1:42 p.m.</td>
<td>Moon at last quarter</td>
</tr>
<tr>
<td>27</td>
<td></td>
<td>Delta Aquarid meteors peak</td>
</tr>
<tr>
<td>31</td>
<td>7:30 p.m.</td>
<td>HAS Board of Directors Meeting, Houston Chronicle Building</td>
</tr>
</tbody>
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**Check the web site:**

[www.astronomyhouston.org](http://www.astronomyhouston.org)

**Webmaster:** Kay McCallum

kaym@mcclibrary.net

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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 kaym@mcclibrary.net.

---

**Publicity Suggestion Box**

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

Let’s grow.

Please drop me a note at the following address.

itjdm0@yahoo.com

John Missavage—HAS Publicity Chair

---

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

---

Send calendar events to Doug McCormick

- skygazer10@sbcglobal.net

GuideStar, Page 3
by Bill Pellerin, GuideStar Editor

What do the following things have in common?:

- 22 mm eyepiece
- Crowbar
- Laptop computer

They're all going with me to the Texas Star Party next week (as I write this). The crowbar will be used to remove ground cover stakes (nails, really) when the star party ends on June 8. The laptop computer will be this one, the one I'm using to produce your GuideStar, for controlling the telescope.

I sincerely hope that I see you there. Gasoline prices are a real inhibitor this time around... we can expect to spend $200 on gas for the trip. It's worth it though, to attend the premier star party in the country for a full week. John Wagoner' "Globular Glory" list for this year has 25 of the best summer globular clusters listed for our viewing pleasure. There's an observing pin available for those of us who complete the list at the star party.

His list from last year "Be a SAP (Shapley-Ames Person)" is available this year as well. I was able to finish the SAP list last year, primarily because I did the whole list on Sunday night, the first night of the 2007 TSP. From then on, clear weather was in short supply so many observers who intended to complete this list weren't able to.

I'll also be taking Sue French's book, Celestial Sampler: 60 Small-Scope Tours for Starlit Nights and Sissy Haas' book, Double Stars for Small Telescopes: More Than 1,100 Stellar Gems for Backyard Observers.

By the way, one of the best observing (equipment) accessories that I've found is the heavy duty zip-lock freezer bag. I have one bag containing some small telescope parts that I just may need in west Texas.

Steven Weinberg - July 12 banquet speaker!!!

Have you heard this?? Steven Weinberg, Nobel Prize winner at the University of Texas will be our featured speaker at the annual HAS banquet. Look elsewhere in this issue of the GuideStar for more information on the banquet and for a form to enter your reservation.

You'll want to sign up early for this one...

No Shallow Sky Object This Month

Sorry, but I'm not finding the time to write a 'Shallow Sky' item this month. Getting ready for the TSP is taking up quite a bit of time, and I want to get the GuideStar published before I go.

In the meantime, keep watching R Cor Bor (see last month's article). The latest information is that the star is still dim. I'll be watching it at the Texas Star Party.

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

..Bill

billpellerin@sbcglobal.net

Remember --

All HAS memberships are due for renewal in January. Pay your 2008 dues now! Our membership year now corresponds to the calendar year.

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

GuideStar, Page 4
Cynthia Gustava is fast becoming a household name in Houston’s astronomy community. It seems that every meeting, star party, or lecture I attend...she’s there!!

Cynthia is an expressive public speaker and she knows astronomy. She says she’s a bit shy...but don’t believe it for a second. This young lady knows the night skies. She is Houston’s astronomy communicator.

I was so delighted to obtain this interview from her. I think all of you will really enjoy hearing her thoughts and opinions as I have. Meet Cynthia...

The Cynthia Gustava Bio...

I grew up in rural Indiana, at the tip of Lake Michigan and according to my mother, from an early age was fascinated with the Sun and Moon. My early childhood drawings have the Sun over houses and mountains (which we don’t have in Indiana!), or sinking down into the waters of Lake Michigan. At age 11, I attempted a crude lithograph of the Sun.

My first real experience with the night sky was during my five years of living “down under.” The Large and Small Magellanic clouds...the Southern Cross...were objects I was used to seeing naked eye. A trip to Ayers Rock in the outback provided a week’s worth of beautiful, dark Australian night skies.

Life proceeded with school and career, and a job traveling overseas, but no further gazing towards the night sky until one hot night in August of 1996. I drove down to the Brazos Bend State Park and attended Astronomy Day activities. That very night I joined the Fort Bend Astronomy Club and shortly thereafter, became a volunteer and building manager/lecturer.

As a building manager and lecturer for the George Observatory, I was stretched to learn all I could about our cosmos and the objects in it in order to give talks to the public on my assigned Saturday nights. Within a couple of years, I began filling in on Friday nights and conducting lectures for special groups. I especially enjoy working with the scout troops and the school groups that come out for stargazing on Friday nights.

I progressed from being a volunteer on Astronomy Day at the George to being on the planning committee and operating as a building manager for the event. The Regional “All-Club’s” meeting was a brainstorm of mine in 2001 and it has become an annual event the night before Astronomy Day. For a few years, I was also on the planning committee for the Deep South Texas Stargaze held near Alice, Texas. Besides hauling a telescope down there for nighttime "Continued ..."
stargazing, I was fortunate to be able to give lectures during the afternoon activities.

My first telescope in the late 1990’s was a tracking Meade 8” which has since been sold. For solar observing, I own a small refractor with a solar filter on the skyward end, which is also used for bird watching...sans the filter, of course. I now own a completely manual 8” Orion.

Current writing assignments include a monthly newsletter for the Kingsville Astronomical Society and a George Observatory article for The Dashing Diplodocus, the bi-monthly Houston Museum of Natural Science newsletter.

The Cynthia Gustava interview...

Clayton: It’s a great pleasure to have you here, Cynthia, for this interview. For starters, how do I get a copy of the “The Dashing Diplodocus” (now there’s a name for a newsletter!)? I’d like to read some of your articles.

Cynthia: Everyone registered with the Houston Museum of Natural Science as a George Observatory volunteer gets a copy of the The Dashing Diplodocus. I have been the George’s “Roving Reporter” for a number of years now reporting on happenings at the George, and exceptional volunteers and their contributions.

Clayton: As a building manager and lecturer for the George Observatory, can you tell us about a typical day/night of your many activities? You must be busy!

Cynthia: All George Observatory building managers work as a team of two every Saturday night. The afternoon starts with opening up the observatory and planning the night’s activities. Lectures are planned in advance so that we are presenting objects that the scopes can be on. And to provide maximum enjoyment for the public, we try to ensure that each of the domed scopes will not be on the same object. Volunteers operating deck scopes are pretty much on their own. Winter nights will usually see a lot of deck scopes on the Orion Nebula and if there’s a moon or a planet, you can be sure quite a few will be focused there. At the end of a public night of observing, it is the responsibility of the building manager team to ensure that all observatory property is secured before we leave.

Clayton: I first heard you speak at one of Jason Fry’s “Deep South Texas Stargaze” afternoon lectures several years ago. I was impressed with your ability of being able to speak on astronomy, making it so easy for a novice. Where or how did you get the gift of public speaking?

Cynthia: I taught classes for Compaq Computer Corporation in the United States, Europe, Australia and New Zealand for seven years. I also participated in Compaq new product launches with technical presentations on our upcoming “bigger, better, faster” hardware releases. I was coached by Steve Goldberg when I first joined the building manager team on the proper way to give talks at the George and just refined it from there. The next leap for me was to give talks to local astronomy clubs and in front of all the people that had been in astronomy a lot longer than me and that I was sure, knew more than me! It’s a great way to learn.

Clayton: I heard through the grapevine that the “Deep South Texas Stargaze” is to be no more. Why is that... bad weather in recent years? I loved that star party and I’ll miss it.

Cynthia: We miss it, too. We were snake bit for two years in a row with weather. A lot of planning goes into these events, along with commitments by vendors for door prizes, plus travel and expenditures by the attendees. The road into Escondido Ranch, a very remote location in the deep south of Texas, becomes a 4-wheel-drive-only road with one good hard rain. A couple of years ago, it rained so much in February that even caretakers were stuck on the ranch because of road conditions. Dry weather could precede the star party, but if it turned bad while everyone was there, we’d never make it out. So long-term weather planning was critical. The search is on for another location, so it’s possible the DSTS will be back. We hope so.

Clayton: Are you a visual observer only? Tell us about a typical observing session.

Cynthia: Due to the expenses involved with photography, I am still visual when I observe. I am qualified to run the 18” FBAC scope at the George and did so quite a bit for many years. With my administrative and building manager duties, I don’t get out with a scope near enough anymore, but in years past, I was working on drawing Messier objects, so observing sessions revolved around setting up and hunting them down.

Clayton: What was the gift of public speaking? I’m impressed with your ability of being able to speak on astronomy, making it so easy for a novice. Have you been coaching others on the art of public speaking? I noticed you were quite a good speaker.

Cynthia: I have been the George’s “Roving Reporter” for a number of years now reporting on happenings at the George, and exceptional volunteers and their contributions.

Clayton: I heard you speak at one of Jason Fry’s “Deep South Texas Stargaze” afternoon lectures several years ago. I was impressed with your ability of being able to speak on astronomy, making it so easy for a novice. Where or how did you get the gift of public speaking?

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Clayton: In your Bio, you mentioned your love of the Sun and the Moon. Thinking back, what was your fascination with these particular celestial objects as a youngster? Do you still sometimes observe/sketch these objects?

Cynthia: Without a telescope, the Sun and Moon are the sky objects we all have available to us. My parents pointed them out to me, but didn’t have the money to buy me something like a telescope, so I did what I could visually. Funny…I don’t remember any admonitions about not looking at the sun with my naked eyes! I was always drawing everything when I was small…and once in junior and high school, my major was art. I purchased a solar filter when I was working at Land Sea & Sky, and have a series of sunspot drawings from a couple of years ago. I hope to add to those when the solar cycle brings us something to look at again. I don’t know anywhere near as much about the Moon as others do (for example, Dennis “The Moon Man” Borgman, the subject of one of my Dashing Dip articles), but it is fascinating to observe. And it’s a great object to show the public.

Clayton: What’s new at the George observatory?

Cynthia: If you haven’t been out to look through the 11” refractor, you are missing something! It is mounted on the side of the 36” Research Telescope and is truly a sight to behold. I use a picture of the two scopes, which includes the man who donated the refractor, at the beginning of my presentations at the George. We also have a “radio” telescope called a SID Antenna built by FBAC member, Leonard Ferguson. It is up on top of the roof of the Challenger Center and is connected to a pc downstairs. SID stands for Sudden Ionospheric Disturbance and it measures the effects of solar flares by tracking changes in VLF (very low frequency) transmissions as they bounce off Earth’s ionosphere. Leonard and his SID antenna was the subject of another Dashing Dip article.

Clayton: Do you have an amateur observing mentor?

Cynthia: You could say that the whole core group of the Fort Bend Astronomy Club was my mentor in the beginning: Keith Rivich, Dennis Borgman, Jack McKaye, Leonard Pattillo, Tracy Knauss and others. When I first joined FBAC, we used to go to Krausse Springs, Kendleton, or to late arrival in the Brazos Bend State Park for observing sessions. Bill Dillon and Keith Rivich introduced me to the fun of hunting for asteroids. Keith and I co-discovered six in all. Bill Dillon’s “A-Team,” which now includes Joe Dellinger, has discovered over 400 asteroids to date.

Clayton: Any new ideas for “Astronomy Day 2008” up your sleeve?

Cynthia: We have already secured our main speaker for the All-Club’s meeting and he will also do a couple of talks at Astronomy Day. This year it will be David Levy. I feel he will be a good draw to the public as his name is fairly well known because of his comet discoveries. With increased marketing and advertising efforts, we might just exceed the 4,000 visitor mark we hit last year!

Clayton: How do you envision amateur astronomy in the next 25 years?

Cynthia: More and more photography. More remote observing using telescopes around the world from your own pc. But for those doing ground-based visual, advanced technology and more power will allow deeper and deeper observing into our universe.

Clayton: Do you have any helpful advice to pass on to observers just starting out in astronomy?

Cynthia: Buy books, read, study and learn. This hobby of ours is a fascinating subject and there are many and varied aspects of astronomy and cosmology to capture the imagination. Early on, I spent months learning about Mars. For a long time after that, I focused on planetary nebulae and learned all I could about them. Then I moved on to understanding all I could about the Orion constellation and its objects. What I find most helpful now are the DVD’s and audio cd’s being produced. I have a couple of sources I buy from. And audio cd’s are what keep me sane driving in Houston’s morning and evening rush hour traffic!

Clayton: Is there an email address where a novice could contact you for a question or two?

Cynthia: I’m always available at cynm31@comcast.net... A few years ago, I was part of a small group of amateur astronomers who coached and mentored by email young people who were taking astronomy classes. We were available through email to help them with any questions they had. It’s amazing how much you yourself can learn while helping others to learn.

Clayton: Thanks Cynthia for taking the time to share your interest and thoughts with us for our monthly HAS newsletter, the GuideStar. We wish you luck with all of your astronomy interests. Please come visit our society, we’d love to see you. And remember, we are just down the road. Clear skies, always.
HAS 2008 BANQUET

Hilton Houston Southwest
6780 Southwest Freeway
July 12, 2008

Dr. Steven Weinberg
Other Uses of Astronomy

AGENDA

6:30  Registration & Cash Bar
7:45  Meal
8:30  Other Uses of Astronomy

Menu
Salad with Rolls & Butter

Choice of one entree:
Prime Rib of Beef w/Au Jus
Char-grilled Chicken w/Wild Mushroom Glaze
or Vegetarian Plate

Chef’s choice of potato, rice, or pasta
Chef’s choice of vegetable

Italian Cream Cake
Iced Tea, Coffee, Water

Committee Chairman: Judy Dye,
Committee Members: Michael Dye, Laura Overturf, Don Pearce, Steve Goldberg
Houston Astronomical Society Annual Banquet  
July 12, 2008

Registration Form

Name: ____________________________________
Address: ___________________________________
City: _____________________________________ zip: _____________
State: ____________________

Number of people in your party: _____

Home Phone: ______________
Work Phone: ______________

Club Affiliation: □ HAS □ FBAC □ NHAC □ JSCAS □ ASSET

Names of other persons in your party:

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Dinner choices (mark the number of each meal)

Prime Rib
Char-grilled Chicken
Vegetarian Plate

Total number of meals: ____
Total Due: (# of meals x $30.00) ____ Payment received by July 1
Total Due: (# of meals x $35.00) ____ Payment received July 2-9

Dinner includes Chef’s choice of dessert, coffee or tea, gratuity, tax

Make checks payable to Houston Astronomical Society.

Mail this form to:
Houston Astronomical Society
Attn: Judy Dye, Banquet Chairman
12352 Newbrook
Houston TX 77072-3910
281-498-1703
jadye@rice.edu
2008 Houston Astronomical Society Banquet

**The Uses of Astronomy**

*Steven Weinberg, Ph.D.*

Jack S. Josey-Welch Foundation Chair in Science and Regental Professor at University of Texas, Austin
Director, Theory Research Group

**Nobel Prize (Physics), 1979**

**Biography**

1979 Nobel Prize in Physics
1991 National Medal of Science
Author: *The First Three Minutes*

*Steven Weinberg holds the Josey Regental Chair in Science at the University of Texas at Austin,* where he is a member of the Physics and Astronomy Departments. His research on elementary particles and cosmology has been honored with numerous prizes and awards, including in 1979 the Nobel Prize in Physics and in 1991 the National Medal of Science. In 2004 he received the Benjamin Franklin Medal of the American Philosophical Society, with a citation that said he is "considered by many to be the preeminent theoretical physicist alive in the world today."

He has been elected to the US National Academy of Sciences, Britain's Royal Society, and the Royal Irish Academy, as well as to the American Philosophical Society and the American Academy of Arts and Sciences.

He is the author of over 300 articles and 12 books on elementary particle physics, cosmology, and other subjects. His prize-winning book, *The First Three Minutes*, is an introduction to cosmology for general readers, and has been translated into 22 foreign languages. His latest book, *Cosmology*, a graduate level treatise on modern cosmological research, has just been published.

His articles for general readers appear from time to time in The New York Review, the Times Literary Supplement of London, and other periodicals. He is currently a senior advisor to the JASON group of defense consultants and he has testified several times before committees of Congress on matters of science or security policy. He has also served as consultant at the U. S. Arms Control and Disarmament Agency, President of the Philosophical Society of Texas, and member of the Board of Editors of Daedalus magazine, the Council of Scholars of the Library of Congress, and many other boards and committees.

He received his A. B. degree from Cornell, worked for a year at the Niels Bohr Insitute in Copenhagen, and received his Ph.D. from Princeton; he also holds honorary doctoral degrees from sixteen other universities, including Chicago, Columbia, McGill, Padua, Salamanca, and Yale. He taught at Columbia, Berkeley, M.I.T., and Harvard, where he was Higgins Professor of Physics, before coming to Texas in 1982.
How can I learn more about the Astronomical League?

Amateur astronomers from across the country benefit from perusing the many pages of the Astronomical League’s website, www.astroleague.org. Naturally, this is the place to go if you’re looking for information about upcoming events and League news. But there is so much more...

Want to learn all about one of the great League observing programs? Go to www.astroleague.org/observing.html.

Do you know of a worthy candidate for one of the many League awards? Look at http://www.astroleague.org/al/awards/awards.html.

Are you interested in buying a particular book about our fascinating hobby? Then go to www.astroleague.org/al/bookserv/bookserv.html.

There is even something to help your club function better. Try www.astroleague.org/al/socaid/socaidid.html.

Make the most of your Astronomical League membership! To find out more about what the Astronomical League offers you, why not log on to www.astroleague.org today?
Ozone, the Greenhouse Gas

We all know that ozone in the stratosphere blocks harmful ultraviolet sunlight, and perhaps some people know that ozone at the Earth’s surface is itself harmful, damaging people’s lungs and contributing to smog.

But did you know that ozone also acts as a potent greenhouse gas? At middle altitudes between the ground and the stratosphere, ozone captures heat much as carbon dioxide does.

In fact, pound for pound, ozone is about 3000 times stronger as a greenhouse gas than CO2. So even though there’s much less ozone at middle altitudes than CO2, it still packs a considerable punch. Ozone traps up to one-third as much heat as the better known culprit in climate change.

Scientists now have an unprecedented view of this mid-altitude ozone thanks to an instrument aboard NASA’s Aura satellite called the Tropospheric Emission Spectrometer—“TES” for short.

Most satellites can measure only the total amount of ozone in a vertical column of air. They can’t distinguish between helpful ozone in the stratosphere, harmful ozone at the ground, and heat-trapping ozone in between. By looking sideways toward Earth’s horizon, a few satellites have managed to probe the vertical distribution of ozone, but only to the bottom of the stratosphere.

Unlike the others, TES can measure the distribution of ozone all the way down to the heat-trapping middle altitudes. “We see vertical information in ozone that nobody else has measured before from space,” says Annmarie Eldering, Deputy Principal Investigator for TES.

The global perspective offered by an orbiting satellite is especially important for ozone. Ozone is highly reactive. It is constantly being created and destroyed by photochemical reactions in the atmosphere and by lightning. So its concentration varies from region to region, from season to season, and as the wind blows.

Data from TES show that ozone’s heat-trapping effect is greatest in the spring, when intensifying sunlight and warming temperatures fuel the reactions that generate ozone. Most of ozone’s contribution to the greenhouse effect occurs within 45 degrees latitude from the equator.

Increasing industrialization, particularly in the developing world, could lead to an increase in mid-altitude ozone, Eldering says. Cars and coal-fired power plants release air pollutants that later react to produce more ozone.

“There’s concern that overall background levels are slowly increasing over time,” Eldering says. TES will continue to monitor these trends, she says, keeping a careful eye on ozone, the greenhouse gas.

Learn more about TES and the science of ozone at tes.jpl.nasa.gov/. Kids can get a great introduction to good ozone and bad ozone at spaceplace.nasa.gov/en/kids/tes/gases.

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

Your membership is renewable on January 1 of each year.

Total yearly dues are $36.

Your payment for 2008 is due as of January 1, 2008.

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 regularly, 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!
Minutes of the May, 2008 Meeting of the Houston Astronomical Society

Opening Announcements:

• The May, 2008 meeting of the Houston Astronomical Society was called to order on May 2nd at 8:03 p.m. by HAS Vice President, Ken Miller.

• Ken Miller introduced himself and welcomed everyone, including two new members and 5 guests, to the meeting.

Announcements:

• Tony Sellers informed the membership that famous physicist, Dr. John Archibald Wheeler passed away on April 13, 2008 at the age of 96. Among Dr. Wheeler’s notable achievements were his foundational work in particle physics and his advancement of the theory of general relativity. Among his many accomplishments, Dr. Wheeler will perhaps be most remembered as the man who coined the term “black hole” in 1967.

• Banquet chair, Judy Dye, announced that we have a prospective speaker for the 2008 HAS Banquet. The venue will be the same as last year, the Hilton Houston Southwest. More details will be forthcoming as they develop.

• Awards chair, Amelia Goldberg, presented Larry Wadle with the Astronomical League’s 36 hour Meteor Club certificate #125 and pin. In order to qualify for this award, Larry completed 36 hours of meteor observation and submitted his logs to the Astronomical League. Congratulations Larry. To see all the awards earned by HAS members, visit the Astronomical League Certificates page of the HAS website, www.astronomyhouston.org. For more information on the Astronomical League observing programs, go to the AL website, http://www.astroleague.org/

• Telescope Loaner Program Co-Chair, Bram Weisman, introduced his co-chairs, Paul and Kay McCallum, and reviewed the details of the Loaner Telescope Program and pointed members to the HAS website for more information.

• Bram related that he is also produces the name badges members wear at our meetings. Bram asked anyone who needs a new badge to let him know after the meeting.

• Steve Goldberg announced that the Texas Star Party was set to start June 1st and asked for a show of hands from those attending this year. Steve asked anyone with questions regarding TSP to contact him.

• Field Trip/Observing Committee Chair, George Stradley, announced that there will be a novice star party on Saturday, May 24th. George encouraged novices to take advantage of this opportunity to become familiar with the Columbus observing site. George encouraged more experienced observers to attend as well, both to mentor the novices and to enjoy a night with friends under the stars. George asked those planning to attend to notify him via his email address posted on the HAS Website. This will enable George to contact people if the event has to be cancelled due to poor weather.

Program:

Brian Cudnik introduced the featured speaker for the evening, Cynthia Gustava, of Fort Bend Astronomy Club, who delivered her presentation, “New Worlds…Extrasolar Planets.” Larry Mitchell also presented on the methods used to discover extrasolar planets. At the conclusion of their presentation, Cynthia and Larry answered questions, and Brian presented each of them with a gift of appreciation from the society.

Closing Announcements:

• Leland Dolan reminded members that the next two General Meetings have been moved to the second Friday of the month to avoid conflicts with Texas Star Party in June and the July 4th holiday. The June meeting will be held on June 13th, and the July meeting will be on July 11th.

• Ken Miller pronounced the meeting adjourned at 9:39 p.m.
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
Meeting on June 13 - (SECOND Friday)
7:00 Novice & Site Orientation
8:00 General Meeting

University of Houston

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.