

Houston Astronomical Society

# GuideStar



June, 2005

*At the June 3 meeting...*

## Science Fair Winners

A yearly favorite

Yan Hui Lye – *Tree Growth and Sunspot Activity*  
Mark Connell – *Kepler's 3rd Law – Saturn's Size,  
Mass and Density*  
Emilia Stepinski – *Meanders on Mars*

## Texas Star Party Recap

The 2005 Texas Star Party is over, but we'll be talking about it for months to come. At the June meeting, you'll get to see the highlights of this year's Star Party and you'll see some of the Amateur Telescope Maker entries.



The North Observing Field at the Texas Star Party

### Highlights:

Thin Crescent Moon Observation ..... 3  
Observatory Corner - 2005 TSP ..... 6  
Seeing with Sptizer (Space Place) ..... 9

### 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.  
Richard Nugent - "Using Your Digital Setting Circles"

Site orientation meeting: ..... 7:00 p.m.  
Classroom 12145

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 Sartor ..... H:281-370-3544  
 Vice Pres: Bill Leach ..... H: 281-893-4057  
 Secretary: Brian Cudnik ..... H: 832- 912-1244  
 Treasurer: Bill Flanagan ..... H:713-699-8819

### Additional Board Members

	Liaison responsibility
Steve Goldberg .....	713-721-5077
Don Pearce .....	713-432-0734
Jay Levy .....	281-557-4920 ..... Field Trip and Observing, Program
Kenneth Miller .....	936-931-2724
Kent Francis .....	

### Committee Chairpersons

Audit .....	Don Selle .....	281-391-5470
Education .....	Richard Nugent .....	713-524-1993
	Susan Kennedy .....	281-376-3262
Field Tr./Obsg. ....	Kenneth Miller .....	936-931-2724
Novice .....	George Stradley .....	281-376-5787
Observatory .....	Michael Dye .....	281-498-1703
Program .....	John Blubaugh .....	713-921-4275
Publicity .....	Joe Khalaf .....	713-660-8219
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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## 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 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.ghgcorp.com/cbr/jscas.html>

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

# A "World Class" Thin Crescent Moon Observation

By Don Pearce

Sunday night, May 8<sup>th</sup>, presented an excellent opportunity to observe a "world class" first crescent Moon over much of North America.

The Texas Star Party ended on Saturday night and I thoroughly enjoyed the programs and camaraderie, but for the most part, the skies were persistently cloudy and disappointing. Then, late Saturday night, the skies began to clear, and upon waking Sunday morning I saw some of the most pristine skies I had seen in a long time. It was if someone attending TSP had very bad karma, and his/her departure changed everything. Thanks to Bill Flanagan's wireless internet connection, we were able to ascertain that fact on Saturday night, through locating the cloud cover/ transparency prediction models (Clear Sky Clock) indicating that the Davis Mountains region would likely be clear on Sunday night.



Sun, Moon, Venus at time of observation

Earlier in the week we had scoped out the summit of Mt. Locke (elev.2054 m), the home of the Mc Donald Observatory, as a good location with a zero degree western horizon obstruction at the Sun/Moon setting azimuths.

One of holy grails of observing thin crescents is observing "opposing crescents" (the last old and first new *on successive days*). It is much more difficult than one might think. I remember that John Bortle, a veteran thin crescent observer, waited almost 20 years to accomplish the feat, and I waited 10 years to accomplish my record observation of opposing crescents on Jan. 27<sup>th</sup>-28<sup>th</sup>, 1998. This May offered an excellent chance to observe the May 7<sup>th</sup> old crescent and the May 8<sup>th</sup> new one, but, although I had scouted out a good location on the Prude Ranch for the morning event (near the summit of the hill on the western side of the football field), it was not to be as clouds prevented any attempt.

Bill and I arrived at the summit of Mt. Locke (N 30 40 17 W104 01 25) about a half hour before sunset on the 8<sup>th</sup>, and set up our equipment. Bill had a pair of 11x80 binoculars on a tripod, plus a camera. I had a pair of mounted 10x70 binoculars plus an 8-inch f 4.5 Newtonian with an eyepiece giving me 28x and 2.25 degree field. The Sun set at 8:39 pm, and the quest began in earnest.

One of the characteristics of the twilight sky is the frequent appearance of low, thin wispy clouds and the atmospheric pollution band hugging the horizon that is, at other times, invisible. Even though the daytime sky appeared absolutely pristine, these ever-present features became apparent only with the onset of twilight. I had carefully noted the position of Venus relative to the Moon long before the event, but as we began the hunt, for some reason I had forgotten about Venus. After about 10 minutes Bill swept up Venus in his binos, and then it all fell in place for me. At exactly 9:00 pm (CDT) I spotted the ultra-thin crescent in my 10X70 Fujinons, and

Bill acquired the crescent at 9:06 pm in his binoculars. The illuminated arc was only about 60 degrees spanning from about 5 to 7 o'clock, and while it should have appeared slightly tilted to the left, I observed it as being straight up and down. There were times when it appeared slightly broken; however, we observed the tenuous crescent continuously, which I thought was unusual, until it became entirely invisible at 9:19 pm as it approached the horizon, just before moonset at 9:21 pm. Both of us also observed it in the 8-inch Newtonian, but, other than appearing larger, I wouldn't say it appeared appreciably better.

The age of the Moon at my first observation was 17 hrs. and 15 minutes, and for Bill, 17 hrs.21 min., and while these are very young Moon observations, it is not anything close to a timing "record", but consider the following. When I first started observing thin crescents in 1988, the age factor was paramount, but since then it is generally recognized that the most important factor is the solar-lunar elongation, since there can be a fairly wide variation in times due to the varying speed of the Moon in its orbit, and other factors. Based on the difficulty according to elongation, my observation and Bill's rank, with elongations of 8° 5' and 8° 8', respectively, as, perhaps, the 4<sup>th</sup> and 5<sup>th</sup> most difficult binocular observations ever, according to the Bradley Schaefer list in the February, 2004 Sky and Telescope article.

According to that list there were 3 telescopic observations more difficult, and it easily beat my own binocular record of 13 hrs.47 min. (8° 27') set on May 5,1989. Oddly enough, it only barely beat Kenneth Drake's binocular sighting of a thin crescent on March 10 of this year which was 8° 11'. Of course, none of these observations were seen naked eye as the naked eye record is 9° 8', set by Stephen O'Meara on May 24,1990. The tenuous lunar image does appear on the images we took with Bill's camera, and may be an image of the Moon with one of the closest elongations ever, if not the youngest .....

# June/July Calendar:



Photo by Scott Mitchell

Check the web site:  
[www.astronomyhouston.org](http://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**

## June 2005

3	7:00 p.m.	Novice Presentation - UH
	8:00 p.m.	General membership meeting - UH
		TSP Recap and Science Fair Winners, Steve Goldberg and Richard Nugent.
		TSP review: Texas Star Party vs. Winter Star Party: The Good, The Bad, The Differences.
4		Prime Night-Columbus
6	4:55 p.m.	New Moon
14	8:22 p.m.	First Quarter Moon
21	1:46 a.m.	Summer solstice. Summer begins in northern hemisphere.
	11:14 p.m.	Full Moon
25		Members Observatory Night- Columbus
28	1:23 p.m.	Last Quarter Moon

## July 2005

1	7:00 p.m.	Novice Presentation - UH
	8:00 p.m.	General membership meeting - UH
		Bill Leach "Epoch of Stars"
2		Prime Night-Columbus
6	7:03 a.m.	New Moon
14	10:20 a.m.	First Quarter Moon
21	6:00 a.m.	Full Moon
27	10:19 p.m.	Last Quarter Moon
30		Members Observatory Night- Columbus

Send calendar events to [JBlubaugh@aol.com](mailto: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 because of the construction in the parking lot of the Science and Research bldg.**

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**GuideStar deadline**

**for the June**

**issue**

**is May 15**

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## Observations... of the editor

by Bill Pellerin, GuideStar Editor

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### Texas Star Party 2005

I had a great time at the 2005 Texas Star Party. There was the usual accumulation of amateur astronomers from all over the country and all over the world, the vendors showing new equipment, the lectures, and the door prizes (I won one — more later).

The organizers, all of them, did an outstanding job. Steve and Amelia Goldberg were working hard to keep the registration process on track, Jayne Lambert coordinated the vendor area, Barbara Wilson lined up the evening speakers, and the radio amateurs worked hard to assure that Internet access was available from the observing field. Many other folks worked on this event as well and deserve my (our) thanks.

### Vendors

#### TeleVue

Al Nagler of Televue was at the TSP after an absence of a few years. It was great to see Al back with all of his old favorites.

Astigmatism corrector  
60 mm refractor with focus micrometer (see web site for pics)



Bill Pellerin and Al Nagler

Sunday night Al Nagler observed with me and my TeleVue NP101. It was great. He brought over his zoom eyepieces and we tried these on various planets and clusters. We looked at M46 and M47 (same field) and M44 (beehive). We also looked at Castor, a very nice double star. Saturn was beautiful in the telescope with the zoom eyepiece and the ability to change the magnification on-the-fly was

very helpful. When looking for deep sky objects, we all know that you should choose a magnification that darkens the sky background and provides the best opportunity to see the foreground object. This darkening is readily apparent with the zoom eyepiece, because you can adjust your eyepiece focal length to the optimum point of sky darkening on the fly.

Al now has an astigmatism corrector that he was showing off at the TSP. The idea is that focus problems in your eye can be adjusted out by the focus of the telescope, however, astigmatism of your eye cannot. By dropping an astigmatism corrector on the eyepiece you can correct for your astigmatism error and continue to observe without glasses. I don't have a large astigmatism in my observing eye, so I didn't try this out.

Reports by others were that the device was very effective, though.

TeleVue has had a 60mm refractor for a while, but Al has posted some images taken with the little 60mm on his web site ([www.televue.com](http://www.televue.com)) that are quite remarkable for such a small telescope.

#### Meade

Meade was showing a RCX 400, 12" telescope in the vendor area. As far as I know it was never on the observing field, but it attracted a LOT of interest. The consensus is that the Richey-Chretien line is best suited for imaging with a lot of features that imagers will love. The focusing is done by moving the secondary mirror / corrector plate, not the mirror, so there's no image shift associated with focusing.



Meade 12" RC Telescope

Meade has an advanced imager now available. It's monochrome, but it includes a color filter slide and a set of filters (optional to purchase but essential if you want to take color pictures). The technology in the area of imaging is moving forward rapidly and lower cost imagers are becoming available to amateurs.

#### Coronado Instruments

Coronado showed up with several of their solar telescopes, including a PST. Their PST had the additional filter attached to the end and the view was considerably improved over the telescope without the filter. The normal telescope, with the internal filter, has a passband of approximately 1 angstrom; when the add-on filter is attached, the passband is

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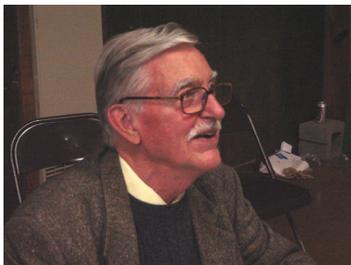
## Observations... from previous page

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reduced to less than .6 angstrom. The change is dramatic. There's much more 'surface' (actually the chromosphere) detail visible with the filter and the view is easily the equal of some of their larger solar telescopes. There's bad news, of course. The cost of the additional filter is more than the cost of the PST! The PST is a \$500 purchase, and the add-on filter (now, during a sale) is \$800. I think that my PST will have to go without the filter for a while.

## Speakers

**Halton Arp** was the Tuesday night speaker. It was great to have him return to the Texas Star



Dr. Halton Arp

Party, especially since I didn't see him the last time he attended. Dr. Arp has been a controversial figure for some time. His theory is that quasars are objects ejected from galaxies and have a high redshift not

because they are a long way from us, but because of the nature of the objects. This theory is not accepted by the general astronomical community, but Dr. Arp holds fast to it and presents evidence that supports the theory. Dr. Arp was very well received and kind enough to give autographs and pose for pictures with TSP attendees.

Dr. Arp's catalog of unusual galaxies has been observed by many folks at TSP.

**Stef McLaughlin** gave a presentation on Friday on amateur observing opportunities for the NASA deep-impact mission to comet 9P/Tempel1. The comet may brighten by several magnitudes on impact of the deep-impact system, and this may be observable by amateurs. Groups are not forming to head for dark skies during the impact.

**David Eicher** of *Astronomy* magazine presented on Saturday. His subject was "Deep-Sky Objects Off the Beaten Path". David showed us amateur images of various deep-sky objects that are rarely observed and challenged us to observe them.

There were interesting daytime speakers as well. Robert Reeves talked about astro-imaging, Larry

Mitchell talked about his observing list, and there were other presentations as well.

## Awards

HAS member **Alan Gilchrist** won the TSP award for best astronomical image (pardon me if the award name isn't precisely right). See it at the HAS web site.

**Mike & Judy Dye** were recognized in the ATM (amateur telescope maker) awards for building a fold-up light box.

## Prizes

Jayne Lambert did her usual outstanding job getting prizes for the Friday and Saturday night giveaways. The grand prize was an 8" LX-90, but many other outstanding prizes were given — including eyepieces from TeleVue (courtesy of Al Nagler), star charts, books, and gadgets. I won a copy of "The Universe: 365 Days" donated by the North Houston Astronomical Association. Thanks!!! It's a great book with a beautiful picture of an astronomical object for each day of the year.

## Observing

**John Waggoner** had a very nice program this year that included some naked eye objects, and some telescopic objects. Our own Clayton Jeter developed a daytime observing list (objects you can observe in daylight) and this was available, too.

**Larry Mitchell**, in honor of the visit of Halton Arp, developed an Arp galaxy list for the dedicated observer with a large telescope.

Now... the bad news... The weather this year wasn't great. Over the week that I was there there was the equivalent of, perhaps, 2 good nights of observing. There were several nights of chasing clouds away, but there were also several of complete overcast. The humidity was way up, too. It's the first time that I've seen significant amounts of dew collect on my telescope at the TSP. That said, there were 30+ people who got Larry's pin, a number (unknown to me) of folks who got John Waggoner's pin, and some who completed

*Continued...*

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## Observations... from previous page

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Clayton Jeter's daylight list. The lists can be used next year to earn the pin from this year, so if you didn't complete the list this time, pick up where you left off in 2006.

### Hawaiian Shirt Day

Thursday is Hawaiian Shirt Day at the TSP, and if there had been a prize for this, Mike and Judy Dye would have won hands-down. Check this out!!



Judy & Michael Dye

### The Prude Ranch

The Prude Ranch doesn't change much, and that's good for the Texas Star Party participants. Patricia was still in charge of the kitchen this year and did an excellent job keeping us all fed. During Star Party, breakfast isn't

served, but one day, Patricia put on a breakfast buffet for lunch. It was great, with eggs, meat, pancakes, muffins, toast, potatoes.



Chicken Wellington

Her 'signature' dish for the star party is Chicken Wellington, each one served with a star on top. Very nice. Here is a picture of my plate on Thursday evening.

### Membership Renewals...

**Your membership is renewable on January 1 of each year.**

Total yearly dues are \$36.

If you paid your dues after the first of 2004, you will only owe for the fraction of the year remaining in 2005. For example, if your dues are paid through March, 2005, you'd owe for 75% of 2005, or \$24.

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!**

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# Observatory Duty Roster

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by Michael B. Dye, Observatory Chairman

This is the duty list for June, July and August. 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.

**June Supervisor ..... Matt Delevoryas ..... 713-662-2939**  
Kelly Biggs ..... Site  
John Blubaugh ..... Site  
Ken Carey ..... Site  
John Chauvin ..... Site  
Art Ciampi ..... Members Observatory Night 06-25-05  
Brian Cudnik ..... Members Observatory Night 06-25-05  
Gary Delzer ..... Site  
Kay Sandor ..... Site  
George Dolson ..... Members Observatory Night 06-25-05

**July Supervisor ..... Brett Maiwald ..... 281-259-3694**  
Kenneth Drake ..... Site  
Victor Flores ..... Site  
Fred Garcia ..... Members Observatory Night 07-30-05  
Cliff Goldman ..... Members Observatory Night 07-30-05  
David Herlinger ..... Site  
Bob Menius ..... Site  
Clayton Jeter ..... Members Observatory Night 07-30-05  
Stanley Jones ..... Site  
Keith Jurgens ..... Site

**August Supervisor ..... Preston Engebretson ..... 713-270-9574**  
Arnie Kaestner ..... Site  
David Kahlich ..... Site  
Jerod Kendrick ..... Site  
Howard Leverenz ..... Site  
Jay Levy ..... Members Observatory Night 08-27-05  
Kenneth Miller ..... Site  
John Missavage ..... Members Observatory Night 08-27-05  
Larry Mitchell ..... Members Observatory Night 08-27-05  
Debbie Moran ..... 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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## ❧ Want Ads ❧

**For Sale: 7.5 dob, Coulter optics**, home made telescope. A drive platform copied form Al Kelly. With over a thousand dollars in 2 inch eyepieces. All for one thousand dollars. Contact Joe Parker, 979-964-3999 hm, [jhp49@hotmail.com](mailto:jhp49@hotmail.com)

**For Sale: 2 year old Meade ETX-70AT** Digital Telescope with Autostar Computer Controller. Package includes field tripod, dew shield, AC adapter, 9mm and 25mm eye-pieces, carrying case for tripod and scope. \$175.00 Contact Dave at [dderosa@houston.rr.com](mailto:dderosa@houston.rr.com)

**Wanted: High quality photographs** of the constellations Andromeda, Cassiopeia, Orion, and Ursa Major for use by my company. Call Richard Braastad at 713-529-4050.

**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](mailto:beley8@houston.rr.com).

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# Seeing in the Dark with Spitzer

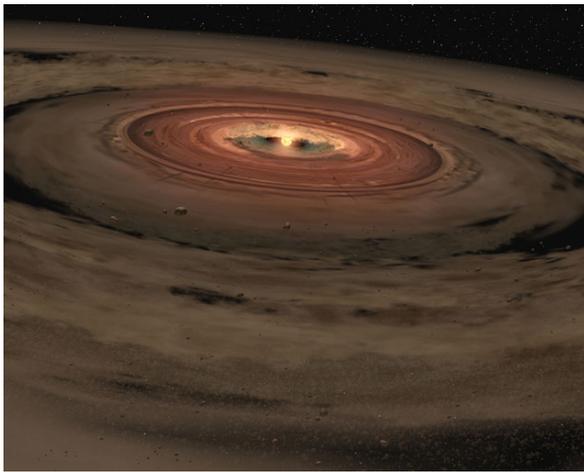
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by Patrick Barry and Tony Phillips

Have you ever gotten up in the middle of the night, walked to the bathroom and, in the darkness, tripped over your dog? A tip from the world of high-tech espionage: next time use night-vision goggles.

Night vision goggles detect heat in the form of infrared radiation—a “color” normally invisible to the human eye. Wearing a pair you can see sleeping dogs, or anything that’s warm, in complete darkness.

This same trick works in the darkness of space. Much of the exciting action in the cosmos is too dark for ordinary telescopes to see. For example, stars are born in the heart of dark interstellar clouds. While the stars themselves are bright, their birth-clouds are dense, practically impenetrable. The workings of star birth are thus hidden.



*Artist's rendering of brown dwarf OTS44 with its rotating planetary disk.*

dog stars: infrared radiation reveals both.

There is one problem, though, for astronomers. “Infrared telescopes on the ground can’t see very well,” explains Michelle Thaller, an astronomer at the California Institute of Technology. “Earth’s atmosphere blocks most infrared light from above. It was important to put Spitzer into space where it can get a clear view of the cosmos.” The clear view provided by Spitzer recently allowed scientists to make a remarkable discovery: They found planets coalescing out of a disk of gas and dust that was circling—not a star—but a “failed star” not much bigger than a planet! Planets orbiting a giant planet? The celestial body at the center of this planetary system, called OTS 44, is only about 15 times the mass

of Jupiter.

Technically, it’s considered a “brown dwarf,” a kind of star that doesn’t have enough mass to trigger nuclear fusion and shine. Scientists had seen planetary systems forming around brown dwarfs before, but never around one so small and planet-like. Spitzer promises to continue making extraordinary discoveries like this one. Think of it as being like a Hubble Space Telescope for looking at invisible, infrared light. Like Hubble, Spitzer offers a view of the cosmos that’s leaps and bounds beyond anything that came before. Spitzer was designed to operate for at least two and a half years, but probably will last for five years or more.



For more about Spitzer and to see the latest images, go to <http://www.spitzer.caltech.edu/spitzer>. Kids and grown-ups will enjoy browsing common sights in infrared and visible light at the interactive infrared photo album on The Space Place, [http://spaceplace.nasa.gov/en/kids/sirtf1/sirtf\\_action.shtml](http://spaceplace.nasa.gov/en/kids/sirtf1/sirtf_action.shtml).

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

### 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

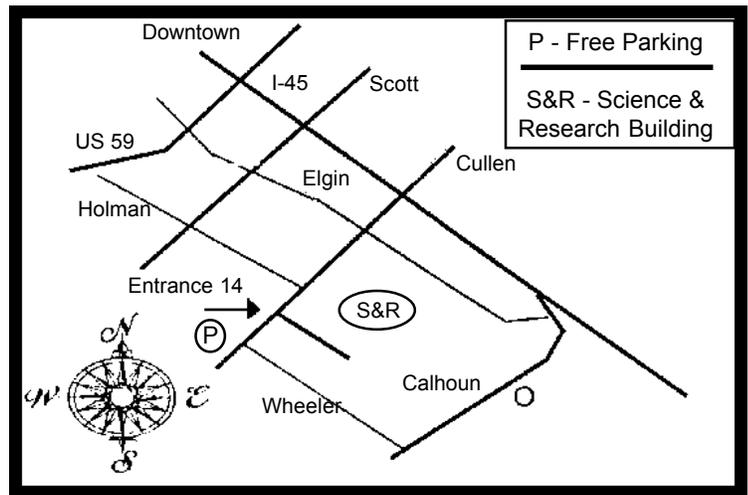
The Board of Directors Meeting is held on dates scheduled by the board at 7:00 p.m. at the University of St. Thomas. Information provided to GuideStar will be published. The meetings are open to all members of the Society in good standing. Attendance is encouraged.

### 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](mailto: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.

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## **Houston Astronomical Society**

### **Meeting**

**June 3, 2005**

**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.**