



# GuideStar

**September, 2006**

*At the September 1 meeting...*

## **Results from the 3rd High-Energy Astrophysics Workshop**

**Bill Dillon returns to the H.A.S. to talk to us about high-energy astrophysics.**

## **Time Capsule Contents Review**

**Steve Goldberg will talk about plans to bury a new time capsule to be opened in 25 years. Do you have something you want to put in the capsule?**

**Don't miss this meeting.**

## **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.  
Bill Flanagan --Selecting and Learning to Use My Finder

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 Sartor .....H:281-370-3544  
 Vice Pres: Bill Leach.....H: 281-893-4057  
 Secretary: Doug McCormick.....H: 281-996-0177  
 Treasurer: Bill Flanagan .....H: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/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 Kingwood College. Call 281-312-1650 or E-mail [bill.leach@nhmccd.edu](mailto:bill.leach@nhmccd.edu). Web site: [www.astronomyclub.org](http://www.astronomyclub.org)



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## Observations... of the editor

by Bill Pellerin, GuideStar Editor



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### Pluto is Not a Planet Anymore

You know by now that the IAU has declared that Pluto is no longer one of the 'major' planets. As expected, this story set off a virtual blizzard of email via the HAS mail list. I don't get excited about this. I think it was the right decision. Any other decision would have obliged the IAU to declare other objects that are comparable to Pluto as planets, and it could have become messy.

### Chi Cyg

One HAS mail list that I got was interesting to me. There was information on the brightness of Chi Cyg. Chi Cyg is a variable star which goes from virtually invisible to easily visible. A few times, its peak has been brighter than other times.

From information that I gathered on the AAVSO web site I found two instances between January 1, 1996 and now for which Chi Cyg was brighter than usual.

End February, 2002	4.2
Mid May, 2004	4.3

I got this information by plotting a light curve on the AAVSO web site from January 1, 1996 to the present and visually examining the curve. The 2002 peak and the 2004 peak clearly stood out from the other peaks. The other maximum brightnesses were at magnitude 5.5 or slightly brighter. The period (peak to peak) according to the AAVSO is 408 days.

Current observations (August 17), again, from the AAVSO.org web site put the star at brighter than 4th magnitude, possibly around 3.7 or 3.8.

You can observe Chi Cyg and make an estimate yourself!! Get a finder chart at [www.aavso.org](http://www.aavso.org). This chart includes the official comparison stars. You can also find information on making visual variable star estimates at the AAVSO web site. If you have an AAVSO observer ID, you can even submit your observation! Check the web site for details.

### Walking Zero - By Chet Raymo

I just finished reading the book *Walking Zero* by Chet Raymo. The subtitle of the book is *Discovering Cosmic Space and Time Along the Prime Meridian*. The book is generally about

a walk that Chet Raymo took along the prime meridian, the line that defines the reference point from which time is measured. When we say "Greenwich Mean Time" we mean the time along the prime meridian and which is measured at the Greenwich Observatory in London.

Chet Raymo is such a fine writer that it's easy to get lost in the prose but it's also easy to get carried along and pulled-in by the prose too. He talks about Darwin, Newton, and the Greenwich Observatory and museum in London. It makes me really want to see these places; they sound fascinating! Did you know that the prime meridian wasn't established until 1884? And, that before 1884 time was a fairly ad-hoc process -- being defined locally or by the state?

Raymo does an excellent job summarizing the history of everything into this small book and makes the experience worth your while. I recommend this book to you. It's under \$15 at Amazon.com.

### GuideStar is Late

The *GuideStar* is later this month than normal. We were having some work done at our house and I had limited access to the computer on which I compose the *GuideStar*.

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

..Bill

[billpellerin@sbcglobal.net](mailto:billpellerin@sbcglobal.net)

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# *Just Looking*

A GuideStar Interview by Clayton L. Jeter

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## *An Interview with Bob Gent, Immediate Past President of the Astronomical League*

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### *Biographical Sketch for Robert L. Gent*

Robert L. Gent is the President of the Astronomical League, a non-profit federation of 275 astronomical societies and 16,000 members. He also serves as the Vice-president of the Board of Directors for the International Dark-Sky Association (IDA). IDA's goal is to preserve the nighttime environment and protect our heritage of dark skies through improved quality outdoor lighting. IDA has over 11,000 members in 75 countries.

Mr. Gent graduated with a BA in Mathematics at Arizona State University, and, shortly thereafter, was commissioned as a 2nd Lieutenant in the USAF as a space systems officer. Nearly two decades before the Hubble Space Telescope was launched, he performed research using



*Bob Gent, standing at a viewpoint in Shenandoah National Park, November 15, 1999. It was a very cold and windy late afternoon, and Brent Archinal and Bob drove from Washington DC to observe the Mercury Transit.*

He taught astronomy at Pima Community College in Tucson, Arizona (1997-98), and also taught astronomy at Gulf Coast Community College in Florida (1992-93). He taught mathematics at the university level in 1982-83. During 1995, he was the chair of Astronomical League's annual convention in San Antonio, Texas. In 2001, he again chaired the annual convention of the Astronomical League in Frederick, Maryland.

He holds a Master of Science in International Relations from Troy State University's German campus, and a B.A. in Astronomy from the University of Texas. He is a graduate of the USAF Air Command and Staff College and has completed graduate equivalent studies in

computer science through a several Department of Defense graduate schools. He has traveled widely visiting all 50 US states and 40 countries. Mr. Gent has a passion for sharing the wonders of our night sky, and he has given more than 200 "volunteer" astronomy talks to schools, scout groups, churches, national parks, and other organizations.

At their 2000 annual awards ceremony, the IDA announced that minor planet "1986 RG3" was renamed "Bob Gent" by the International Astronomical Union. This award was given to him for his volunteer service protecting the nighttime environment and preserving our heritage of dark skies. At their 2001 annual meeting, the IDA presented the first annual Hoag-Robinson Award to Robert Gent for outstanding service. He received many other awards including the Texas Star Party's Omega Centauri Award.

Mr. Gent is listed in "Who's Who in America" and "Who's Who in the World."

### *Questions and Answers:*

**Clayton:** What first sparked your interest in astronomy and when?

**Robert:** I have been an astronomer since I was a small boy growing up in a little town called Phoenix, Arizona. We moved to Arizona in 1947, and the town had about 60,000 people and very few streetlights. I was "wowed" almost every night under the clear, dark skies of southern Arizona. I asked so many questions about astronomy, it drove my parents and teachers crazy.

*Continued...*

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## *Just Looking... from previous page*

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“How many stars are there? Can we visit them? What are they made of? How far away is the last star? Could there be a last star? Etc....”

**Clayton:** Tell me about your personal telescopes that you have owned through the years.

**Robert:** My first telescope was a gift from my Grandfather almost 50 years ago. It was a small, metal tube, 40mm Jupiter refractor. I discovered the rings of Saturn, the moons of Jupiter, and much more with that little scope. It had a fixed 30X eyepiece, and I still own it. Currently, I have several telescopes including a Meade 6600, 6-inch clock drive Newtonian, a Celestron 8-inch NGT Newtonian with computer controls, and I have an AstroSystems 14.5 inch Dob. The 14.5-inch was on a heavy Parks mount, but I converted it to a Dob so it was easier to carry around. Now that we have retired back to Arizona I plan to build an observatory with these and perhaps other scopes.

**Clayton:** What scope design do you generally use and what kind of observing do you prefer (visual, astrophotography, sketching, etc)?

**Robert:** I have always liked Newtonian designs on equatorial mounts. But I had lots of enjoyment with Dobs mounts and Refractors or all types. I also had the honor of observing through the McDonald Observatory 107-inch one dark night. This was thanks to the generosity of the TSP staff and the McDonald Observatory’s support for those fighting light pollution.

**Clayton:** Working as president of our association, have you found that you have become more interested in observing?

**Robert:** Serving as President of the Astronomical league, a federation of about 16,000 astronomers has been a challenge. I also serve as Vice-President of the Board of Directors of the International Dark-Sky Association. These jobs have become so demanding that they impacted my observing time. Fortunately, I just completed my second term as AL president, and we have two-term limits. My presidency ends on August 31, 2006. I can’t wait to get back to observing under southern Arizona’s dark skies.

**Clayton:** Are any of your family members interested in your hobby?

**Robert:** If I have everything set up and tracking, my wife will observe an object from time to time, if it’s not too late. Other than that, my family is not too interested other than as an occasional observer. My wife did explore Mexico with me for the Great 1991 solar eclipse.

**Clayton:** What are some of your favorite astronomical objects?

**Robert:** There are so many wonders of the night sky that it is hard to pick a favorite. I still remember our trip into Mexico for the July 11, 1991 “Great eclipse.” During totality in the small village called Nachi, the roosters were crowing, dogs were howling, and the night sky exploded into view during totality. It was an amazing experience my wife and I will never forget.

I’ve also always liked globular clusters. One night in the early 1990s, I was invited to an observing session of the Hawaiian Astronomical Society on Oahu. I was traveling on business and didn’t have a scope. From this lower latitude, I noticed Omega Centauri high in the sky. I asked a person with a 13-inch Dob to point at Omega Centauri and asked for a view. It was absolutely amazing. It seemed to sparkle in a tree-dimensional field.

At my first TSP in 1992, a kind gentleman named Al, let me look through his 32-inch (I think that was the size) Dob. The view of the Orion nebula (M42) blew me away. I could see color for the first time, and it also appeared almost three-dimensional.

I am also a member of the AAVSO, and was an active observer for a few years back in the mid-1990s. I will never forget seeing my first cataclysmic variable go into outburst. It was SS Cyg, and it was almost as exciting as an eclipse. It went from 12th to 8th magnitude in only a few hours.

**Clayton:** Have you ever observed in the southern hemisphere?

**Robert:** Yes, once from Australia, but only briefly. I was a guest speaker on light pollution at a meeting of the International Astronomical Union in Sydney. I didn’t have much time for observing. Compared to our northern views, the sky looks really different from down under. One of these days, my wife and I need to return so we can explore the night skies better.

**Clayton:** Where is most of your observing performed?

**Robert:** We just retired to southern Arizona, and

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## *Just Looking... from previous page*

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I have not completed the construction of my observatory yet. When it's done, it will be in my "Milky way skies" back yard.

**Clayton:** Do you have an amateur observing mentor?

**Robert:** I had an AAVSO mentor, Gene Hanson. He is truly one of the very best observers I have known. Variable star estimates can be exciting, but they are also very challenging. He stepped me through the science of variable star estimates. Other than that, most of my observing skills were self taught, or I attended talks at meetings like the Texas Star Party.

**Clayton:** You told me recently that you will soon be traveling to Europe. What are your plans there and will you observe any while visiting?

**Robert:** In my role as Vice-President of the board of Directors of the International Dark-Sky Association, I will be speaking in Portsmouth England for the 6th European Symposium for Protection of the Night Sky. Among other activities, I will be presenting IDA Europe awards. As it now stands, I will not be observing much.

**Clayton:** What do you envision for changes to amateur astronomy in the next 25 years?

**Robert:** Every year, I am amazed by changes taking place in the field of amateur astronomy.

CCDs, web cams, computer controls, and so much more make this an exciting hobby. I just attended a talk at the annual Astronomical League Convention in Dallas by a young lady who built her own spectroscope. She was first place winner of the Astronomical League's National Young Astronomer Award for 2006. No doubt, manufacturers will be offering similar equipment soon. The sky is the limit, and I can't wait to see what's next.

**Clayton:** Thanks Bob for taking the time to share your interest and thoughts with us for our monthly HAS newsletter, the *GuideStar*. We wish you luck with your astronomy interests. Please come visit HAS if you ever in the Houston area, we'd love to see you. Thanks also for serving the astronomy community as president of the Astronomical League. Your column will surely be missed in the *Reflector* magazine.

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## *Shallow Sky... from page 9*

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vary by almost a full magnitude and return to its original brightness. Fortunately, for us city dwellers, Delta Cep is rather bright even at its dimmest. Here's how to observe the variation.

You'll need to be able to find 3 stars:

Delta Cep (of course)

Zeta Cep -- a non-variable, shining at magnitude 3.6

Epsilon Cep -- a non-variable, shining at magnitude 4.2

All three of these stars fit easily into most binocular fields. I saw them last night from my Houston patio, three miles from downtown Houston. Use the finder chart in this article to find the stars.

Estimate the brightness of Delta Cep based on these comparison stars. Is Delta Cep halfway between the brightness of Zeta and Epsilon? Yes? Then, your estimate will be 3.9 magnitude. If you estimate the star over several hours and several days, you may be able to plot a light curve for the star, with time on the x axis and brightness (magnitude) on the y axis.

Do enough of this and you might get interested in submitting your observations to the AAVSO (American Association of Variable Star Observers) at [AAVSO.org](http://AAVSO.org).

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## *Want Ads... from page 12*

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**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).

**Email your ads to Bob Rogers, our Webmaster, at [siteworkerbob@hotmail.com](mailto:siteworkerbob@hotmail.com)**

# Delta Cep

by Bill Pellerin, GuideStar Editor

**Object:** Delta Cep  
**Class:** Star  
**Magnitude:** 4.07  
**R.A.:** 22h 29m 10s (year 2000 coordinates)  
**Dec** +58 24' 55"  
**Constellation:** Cepheus

## Why this object is interesting:

Delta Cep (Cepheus) is a star of great historical significance. Before I get into that, let me tell you briefly about the star. Delta Cep is a yellow-white F class supergiant (usually). It's a variable star which changes its spectral signature so that it's a G class star part of the time. As you might guess, being called a 'supergiant' it's a lot larger than our Sun, and it pumps out about 2000 times as much energy as the Sun.

Delta Cep is a variable star, and the namesake for the class of

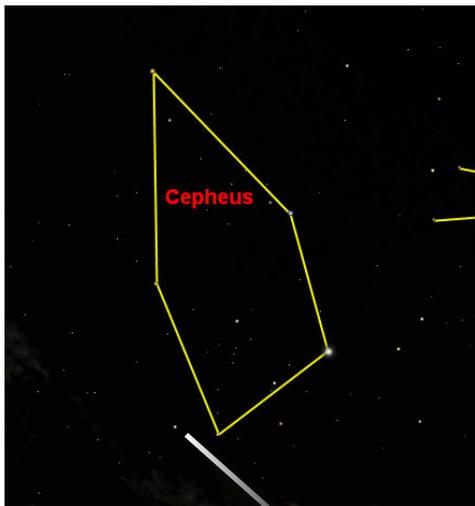


Image from TheSky by Software Bisque

stars called Cepheid variables. The fact that some stars vary in brightness was well known by the late 1700's and while further efforts were made to identify and catalog variable stars in the 1800's it wasn't until the early 1900's that work to identify and catalog variables was done in earnest.

In the early 1900's the Harvard College Observatory hired women with the job title of 'computer' to analyze astronomical data and record the results. One of these women was Henrietta Swan Leavitt. Henrietta Leavitt took the task of cataloging the variables she analyzed (over 2400 of them) and then sorted the catalog by the period (the interval from one bright/dim cycle to the next) and brightness. There was a remarkable result -- the brighter the Cepheid variable, the longer the period. In other words, if you know the period of the Cepheid variable, you know its intrinsic brightness.

This finding was the key that unlocked the door of understand-

ing of the scale of the universe. In the 1920's Edwin Hubble was making observations of what were then called spiral nebulae. We now know that what he was looking at were galaxies outside our own.

Hubble reasoned that if he could find a Cepheid variable in the Andromeda Galaxy and could measure the period of the variable, he'd know the star's luminosity. It's observed luminosity would be governed by the inverse square law, which says that for each doubling of distance from the object the observed brightness goes down by 4. Hubble pushed himself and the Mount Wilson telescope to the limit of its capability, but ultimately succeeded in identifying a Cepheid variable in the Andromeda Nebula.

The astonishing result was that the Andromeda Nebula came to be called the Andromeda Galaxy and was certain to be outside our Milky Way galaxy. Hubble estimated the distance to the galaxy as 900,000 light years, which is less than half of the value that's commonly accepted today. Edwin Hubble continued his research and reached conclusions that are now generally accepted:

The Universe is large  
The Universe is expanding

This led to the 'Big Bang' theory and revolutionized cosmology. So, as you look at Delta Cep, think about the history associated with this one star and what it has meant to the development of our understanding of the universe.

Variability -- how does the star 'work'?

Delta Cep is a high mass star with a Helium core. The star is regularly expanding and contracting.

Observing Delta Cep

Delta Cep varies from magnitude 3.5 to magnitude 4.3 with a period of 5 days, 8 hours, 47 minutes, and 32 seconds. This means that over this period you can observe the star

*Continued on page 8...*

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# *A Letter to the HAS*

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*Steve,*

I am forwarding the message below from the Scouts who were at the Observing Site this past weekend. Kevin Kregel, a former astronaut who has flown the Shuttle four times, was there and gave a presentation. I also gave a presentation. About 15-20 parents and 19 Scouts were there.

As you can see from the message below, the event was a huge success and gave both the Site and the HAS wonderful exposure. I can think of no better use for the Site than getting young people exposed to astronomy.

After all, we are going to need SOMEONE here to open up the next 25-year time capsule!!!

Best regards,

Ed (Szczepanski)

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## *Ed and Kevin*

Gary and I want to say THANK Y'ALL SO MUCH for giving of your time for the scouts. Ed and Kevin with your presentations and the boys working ahead of time on tracking the moon we had 19 boys complete both the Astronomy and Space Exploration merit badges.

Seeing the night sky from the HAS location was just such a treat and the FABULOUS meteor that passed over us around 9:30 was just on cue!! That one just seemed to be on tree top level and soooo bright. The boys seemed to be in awe most of the night and even outlasted many of the leaders. It was something special to hear the boys refer to various constellations and stars by the correct name. I heard many comment on how well you could see the surface of the moon and Ed they were intrigued that you built your telescope!! The boys wondered about the perspective Kevin must have had from space and how different it must have been from what we were seeing Saturday night.

I know for a fact y'all sparked an interest in several of the boys in various areas! One of the boys is showing an interest in rocketry. His parents are going to take him to the George Observatory next. You both helped the boys to realize the importance of setting a goal and aiming for it.

Kevin we appreciate so much your willingness to come and let the boys be able to visit with a real astronaut and national hero. We appreciate your sharing your knowledge, experiences, and explaining the benefits we enjoy due to the missions in space. I don't think any of us will watch the news briefs with the crews in the same way ever again. Thanks for encouraging them to earn the Eagle rank. Hope getting your daughter set up for college went well on Sunday.

Ed thanks for being our host, sharing your knowledge and and putting the universe into perspective in a way we could all understand. Lots and lots of salt grains!!!!

Great science class for all there!

Gary and Vam

*(Communication received by the HAS - Note has been edited slightly — Bill Pellerin, GuideStar Editor.)*

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# *Time Capsule - 2030 - Update!*

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*By Steve Goldberg*

Plans are under way for the Annual Picnic and the Time Capsule burying. Think about what you would like to see in the year 2030. The contents of the first capsule were mainly about the HAS and the Columbus site. For this capsule we want to focus on the Members of the HAS, of course other things, too.

Here is a "partial" list of things we are planning to put in the capsule:

- Information about Ed Szczepanski's Comet
- Information about Larry Mitchell's Supernova
- Information about Jay McNeil's Nebula
- HAS volunteers & committee chairman for TSP
- Members that have been officers of national organizations
- Copy of Universe Sampler
- Observing Certificate recipients for Astronomical League observing programs
- Current roster
- History of HAS

If you would like to donate something to be placed in the capsule, please bring it to this meeting, or contact Jayne or me. We would like some "objects" besides paper and pictures. It doesn't have to be astronomy-related. As our President said at the last meeting, when they open the time capsule we want them to say: What is this?? Remember, it must fit within a 6 inch pipe.

So, if you have something that you want to put in the time capsule, please contact either Jayne Lambert at [jdla-bert@houston.rr.com](mailto:jdla-bert@houston.rr.com), or me at [goldberg@infohiwy.net](mailto:goldberg@infohiwy.net).

We would like YOU to think about writing something to the membership of 2030. What are your predictions for astronomy, exploration or where the club will be in 2030, or other thoughts or comments that would be of interest in 24 years.

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## *Red River Star Party*

*Sept 21-24*

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The Red River Astronomy Club will host our Second Annual ArkLaTex Star Party beginning Sept. 21 - 24, 2006 near Nashville, Arkansas. Of course, the main attraction is the dark sky. This years presentations will include a Mission Specialist (name to be announced by AAS), a Cosmochemist, a presentation on the mysterious lights of Gurdon, Arkansas and a workshop on image processing by a panel of experts.

Rex's Astro Stuff will have a wide variety of accessories available for sale. We offer free camping, observing field power for laptops and scopes, a shower, T-shirts, swap meet, bottomless coffee pot, cocoa and snacks plus our now famous ArkLaTex give-away. This's BBQ will have a catering trailer on site. What has become the hallmark of the star party is the relaxed and friendly atmosphere. 4 days / 3 nights.

**For details / registration: [rrac.org](http://rrac.org)**

## 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](http://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](http://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](http://www.astroleague.org/al/bookserv/bookserv.html).

There is even something to help your club function better. Try [www.astroleague.org/al/soc aids/socaidid.html](http://www.astroleague.org/al/soc aids/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](http://www.astroleague.org) today?**

### ***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!***

## Want Ads

### **FREE: 8" mirror grinding kit with two glass blanks.**

Everything you need to complete a mirror for a new telescope project. Sweat and muscle are not included. Pick up only.

Call Clayton at....713-569-7529

### **For Sale: Orion Short Tube 80**

Orion ShortTube 80mm telescope - Optical tube with astronomical diagonal, carry bag, red-dot finder, magnifying finder, upgraded focusing knobs, two eyepieces. All for \$150. Bill Pellerin billpellerin@sbcglobal.net

### **For Sale: C8 / 17.5" Newtonian**

1977 vintage orange-tube C8 with \*excellent\* optics. Original spur-gear drive supplanted by highly accurate Saulietis worm-driven HDPE gear. Includes Lumicon NGC Sky Vector digital setting circles with 12,000 object database. For autoguided imaging, system includes a modified Meade drive corrector for dual-axis autoguiding utilizing ST4-compatible inputs. Employs a Meade tangent-arm DEC drive motor. Includes field tripod and equatorial wedge. Other accessories TBD. See my website for many images made with this system over the past 10-15 years.

Perfect for imaging or visual star parties. 17.5" f4.5 Newtonian telescope with highly accurate microprocessor-controlled, stepper-based alt-az drive system with focal plane rotator. Designed and built by Andy Saulietis and the owner. Accepts ST4-compatible inputs for autoguiding. Mechanical and calibration work done by the owner to optimize system accuracy for autoguided CCD imaging. Original 1981 Coulter mirror refigured to smooth 1/8th-wave surface by Sky Optical in late 80's. Primary and secondary recoated with enhanced coatings group by PAP in early 90's. Optics in excellent condition. 80mm f5 finder. Breaks down to numerous major pieces for transport. With modest effort, can be a traveling scope, but better as a semi-permanent observatory. See my website for many images made with this system over the last decade.

Price negotiable. For pickup/delivery, maybe can meet you halfway.

Call 281-482-5190 or E-mail Al Kelly.

### **For Sale: SCT Denkmeier II x PowerSwitch binoviewer and Eyepices**

Excellent condition, original aluminum case, along with a pair of TeleVue Nagler 6 7mm eyepieces and a pair of TeleVue Panoptic 24mm eyepieces, all four eyepieces in their original TeleVue boxes.

New the set retails for \$2500. Will sell the set for \$1500. All pieces are in excellent condition and little used. I will also toss in my 3 year old LX90, also in excellent shape, for an additional \$750, for a great binoviewer set up. The LX90 still has its original packing carton, as well as a Telrad finder and an 8x50 finder attached. I will toss in for free a Meade electronic focuser and an eyepiece tray that attaches to the LX90 base.

I can be contacted by telephone at 713 851 2861 or email

(james.morse@exxonmobil.com). I live and work in Houston and would prefer a hand delivery, but am willing to send by post. - Jim Morse

### **For Sale: Celestron Nexstar 8**

Like New Condition...Celestron Nexstar 8, Used only 2 times in back yard. Some extras include Solor filter, 1 1/4" star diagonal, 40 mm multi-coated nexstar plossel, 8-24 mm Z00 eyepiece, variable polarizing filter, 2X multicoated Barlow. \$ 850.00 Jack DeNina, Willis, Texas 936-856-0704, jjack9485@cs.com

### **For Sale: 20" Obsession**

I can no longer handle the weight, or trips up the ladder, and must sell the 20" Obsession. I would prefer this to be a Texas or Oklahoma deal in which both parties could drive a reasonable distance for the exchange.

Included with the basic telescope are:

1. The JMI NGC Max digital circles (never used, but the light comes on).
2. A Protostar diagonal holder with heating wiring attached (also never needed),
3. A 6-foot customized ladder with grab bar and intermediate steps up to 3 feet.
4. A battery "shelf" that bolts into the handlebar bushings.
5. An Astro Systems Scope Coat.
6. TelRad finder.
7. Lots of stainless replacements on the hardware.
8. Obsession light shroud.
9. JMI focuser upgraded to compression ring version drawtube.

The mirror is Galaxy, recoated by Galaxy with 96% coatings in 1998 and coatings remain in excellent condition. My 71-year old eyes saw one galaxy rated at 16.3 mag by Megastar at TSP and lots in the 15.7 mag. range.

The truss tubes have been equalized as best as possible so that when assembled in the field, collimation is never far off. There are about 18 pounds of fitted counterbalance weights, needed to accommodate an 80 mm finder. This finder is not a part of the sale, however. The UTA round box has a custom lid that can substitute as a table top in the field.

There are a few battle scars as this is a 1993 model,.

Overall, this is an excellent telescope, in great condition, and has been a joy to use.

I would like to get \$5,100 for everything listed above, based on Midland pickup, or \$5,250 for pickup at some intermediate point. The new replacement values for the above is in excess of \$7,000. Contact Don Judd at dkjudd@nts-online.net

### **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

*Continued on Page 7...*

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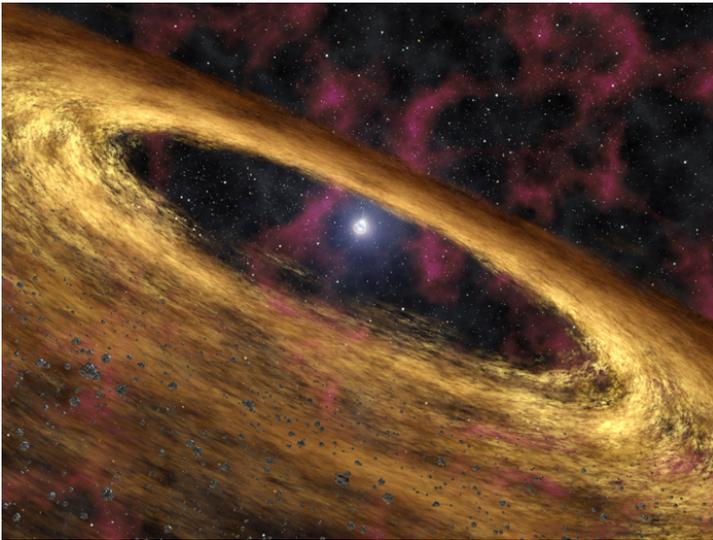
# Deadly Planets

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By Patrick L. Barry and Dr. Tony Phillips

About 900 light years from here, there's a rocky planet not much bigger than Earth. It goes around its star once every hundred days, a trifle fast, but not too different from a standard Earth-year. At least two and possibly three other planets circle the same star, forming a complete solar system.

Interested? Don't be. Going there would be the last thing you ever do.



*Artist's concept of a pulsar and surrounding disk of rubble called a "fallback" disk, out of which new planets could form.*

The star is a pulsar, PSR 1257+12, the seething-hot core of a supernova that exploded millions of years ago. Its planets are bathed not in gentle, life-giving sunshine but instead a blistering torrent of X-rays and high-energy particles.

"It would be like trying to live next to Chernobyl," says Charles Beichman, a scientist at JPL and director of the Michelson Science Center at Caltech.

Our own sun emits small amounts of pulsar-like X-rays and high energy particles, but the amount of such radiation coming from a pulsar is "orders of magnitude more," he says. Even for a planet orbiting as far out as the Earth, this radiation could blow away the planet's atmosphere, and even vaporize sand right off the planet's surface.

Astronomer Alex Wolszczan discovered planets around PSR 1257+12 in the 1990s using Puerto Rico's giant Arecibo radio telescope. At first, no one believed worlds could form around pulsars—it was too bizarre. Supernovas were supposed to de-

stroy planets, not create them. Where did these worlds come from?



NASA's Spitzer Space Telescope may have found the solution. Last year, a group of astronomers led by Deepto Chakrabarty of MIT pointed the infrared telescope toward pulsar 4U 0142+61. Data revealed a disk of gas and dust surrounding the central star, probably wreckage from the supernova. It was just the sort of disk that could coalesce to form planets!

As deadly as pulsar planets are, they might also be hauntingly beautiful. The vaporized matter rising from the planets' surfaces could be ionized by the incoming radiation, creating colorful auroras across the sky. And though the pulsar would only appear as a tiny dot in the sky (the pulsar itself is only 20-40 km across), it would be enshrouded in a hazy glow of light emitted by radiation particles as they curve in the pulsar's strong magnetic field.

Wasted beauty? Maybe. Beichman points out the positive: "It's an awful place to try and form planets, but if you can do it there, you can do it anywhere."

More news and images from Spitzer can be found at <http://www.spitzer.caltech.edu/>. In addition, The Space Place Web site features a cartoon talk show episode starring Michelle Thaller, a scientist on Spitzer. Go to <http://spaceplace.nasa.gov/en/kids/live/> for a great place to introduce kids to infrared and the joys of astronomy.

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

# Observatory Duty Roster

by Kirk Kendrick, Observatory Chairman

The site continues to be in GREAT shape thanks to the unending efforts from our chief grounds keeper – Ed Szczepanski – as well as Bob Rogers and a few other volunteers that keep tackling key jobs.

Major Projects for 2006 & 2007:

- Continued Site cleanup
- Annual Picnic – plant the new time capsule!
- Additional Camping sites with water and electricity
- Workshop & Tractor Storage building

Additionally:

Month	Prime Night	Members Observatory
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September....	23.....	16
October.....	21.....	14

- Please volunteer to help us keep the site in great shape! Contact Kirk Kendrick with your desires and let him know of any special skills you have that the club could leverage. Thanks!

September Supervisors Dana Lindstrom 713-862-6044

Gary Delzer  
 Kay Sandor  
 George Dolson  
 Ken Drake  
 Victor Flores  
 Fred Garcia  
 Clif Goldman  
 Nelson Hagelgans  
 David Herlinger

FOCUS THIS MONTH  
 PICNIC!!!  
 Anything needed to get ready or assist

October Supervisor Michael Edstrom 281-347-7267

John Huff  
 Clayton Jeter  
 Stanley Jones  
 Keith Jurgens  
 Arnie Kaestner  
 David Kahlich  
 Volunteer  
 Volunteer

FOCUS THIS MONTH  
 Weed eat, trim trees,  
 Poison ants

**H.A.S. Picnic**

Our annual picnic will be held September 23, 2006, new moon weekend, at the Columbus site. Our second time capsule will be buried at the picnic. This capsule will be opened on our 75th anniversary in 2030. H.A.S. will supply the food. Bring your own drinks.

In case of rain, we will reschedule for September 30th.

All of the area clubs are invited to join us for the picnic and a night of observing. Tents and RV's are welcome.

If you plan to attend, please RSVP to me at: [goldberg@infohiwy.net](mailto:goldberg@infohiwy.net) no later than September 19th.

### 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

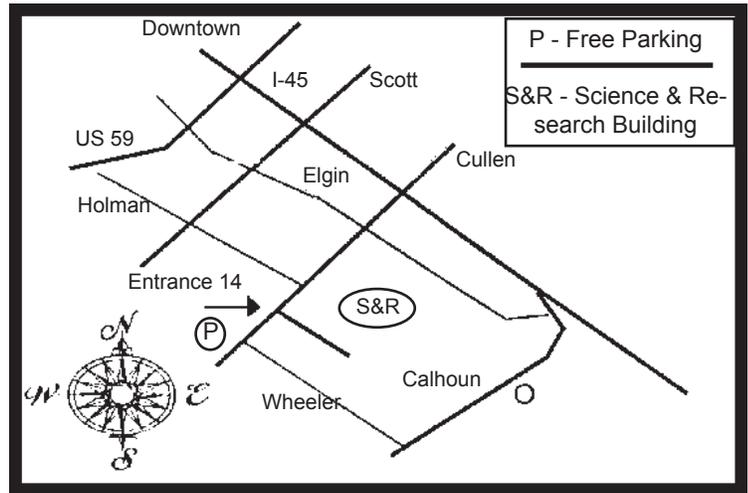
The Board of Directors Meeting is held on dates scheduled by the board at 7:00 p.m. at the University of St. Thomas. Information provided to GuideStar will be published. The meetings are open to all members of the Society in good standing. Attendance is encouraged.

### 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.

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

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## Houston Astronomical Society Meeting

September 1, 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.**