



# GuideStar

**April, 2009**

*At the April 3 meeting...*

## The Hadron Collider

**Dr. Larry Pinsky**  
University of Houston

The Large Hadron Collider has the potential for simulating what was going on at the moment of the Big Bang. Physicists now understand what happened just after the moment of the Big Bang, but not at the moment of the Big Bang. How close will the Hadron Collider take us? Perhaps to within a trillionth of a second after the Big Bang.

Physicists believe that many of the forces we see today will be unified if we can look back far enough.

Dr. Pinsky will give us his insights into this area of research.



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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.

*Alicia Tristan - Seeing Red: Observing the Carbon Stars*

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: Open  
 Treasurer: Bill Flanagan .....H:713-699-8819  
 Past President: Steve Sartor .....

### Additional Board Members

Steve Goldberg.....713-721-5077  
 Don Pearce.....713-432-0734  
 Doug McCormick.....  
 Alan Grissom.....  
 John Missavage.....

### Committee Chairpersons

Audit ..... Tom Blocker .....  
 Education..... Richard Nugent .....  
 Field Tr./Obsg..... Mike Edstrom .....281-347-7267  
 Novice..... Justin McCollum.....  
 Observatory..... Bob Rogers .....281-460-1573  
 Program..... Brian Cudnik.....  
 Publicity..... John Missavage.....  
 Telescope..... Bram Weisman.....  
 Welcoming..... Susan Bruneni.....

### 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't'y ..... 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* 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.

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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

## 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: [www.jscas.net](http://www.jscas.net)

**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)

# April/May Calendar:



Photo by Scott Mitchell

Check the web site:  
[www.astronomyhouston.org](http://www.astronomyhouston.org)  
**Webmaster: Kay McCallum**  
[kaym@mcclibrary.net](mailto:kaym@mcclibrary.net)

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](mailto:kaym@mcclibrary.net).

Date	Time	Event
<b>April</b>		
2	9:33 a.m.	Moon at first quarter
3	7:00 p.m.	HAS Novice Meeting, U of H
	8:00 p.m.	HAS General Meeting, U of H
9	9:55 a.m.	Full Moon
15	4:00 a.m.	Mars 0.43 deg SSE of Uranus
17	8:38 a.m.	Moon at last quarter
19		Texas Star Party begins
22		Lyrid meteors peak
25	10:23 p.m.	New Moon
		Prime Night, Columbus Observing Site
26	3:00 a.m.	Mercury at greatest elongation east
		Texas Star Party ends
30	5:00 p.m.	Mercury 1.4 deg S of center of Pleiades
<b>May</b>		
1	3:44 p.m.	Moon at first quarter
	7:00 p.m.	HAS Novice Meeting, U of H
	8:00 p.m.	HAS General Meeting, U of H
6		Eta Aquarid meteors peak
8	11:01 p.m.	Full Moon
16		HAS Booth @ Live Oak Festival, Columbus, TX
17	2:27 p.m.	Moon at last quarter
23		Prime Night, Columbus Observing Site
		All Clubs Star Party, Columbus Observing Site
24	7:11 p.m.	New Moon
31	10:22 p.m.	Moon at first quarter

## Columbus Field Trips 2009

**Mike Edstrom**  
*Field trip/Observing committee chair*

The schedule is as follows:

- May 23 - All clubs BBQ
- September 19 - Annual picnic / all clubs/BBQ
- October 17 - All clubs BBQ
- December 19 - HAS Observing

Send calendar events to Doug McCormick

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**GuideStar deadline**

**for the May**

**issue**

**is April 15**

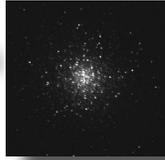
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## Observations... of the editor

by Bill Pellerin, GuideStar Editor



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### My Novice Presentation

Murphy was attending the Novice presentation in March (as in Murphy's Law). Murphy's Law says that if anything can go wrong, it will. The bottom line is that I couldn't get my laptop to 'connect' with the projector, so my lovely PowerPoint slides weren't projected on the screen. Fortunately, I had a hard copy and I was able to do the presentation without benefit of PowerPoint.

After a significant effort, I've figured out the following:

- The Fn-F4 key which is supposed to toggle the laptop screen to the projector doesn't work, and I was unable to make it work. Other Fn keys work, so not all of them are malfunctioning.
- There's another way to get there. If you're running Microsoft Windows Vista, here's how to do it. Click this sequence of items: Start -> Control Panel (not in 'classic view') -> Mobile PC, Adjust Commonly Used Mobility Settings -> Connect Display
- Once you're there you can choose whether you want the display on the external display (the projector), the internal display, or both.
- I've sent the PowerPoint presentation and a PDF of the presentation to our webmaster to post on the site

I have another chance. I'll be giving a presentation at the Texas Star Party on building a home observatory. Our AV (audio-visual) expert, Steve Goldberg will be there to help me make the system work.

### Texas Star Party Begins April 19

Enough of that. By now you know that the Texas Star Party is this month. If you planned on staying home because you didn't have a place to stay on the ranch, it may not be too late. Check the TSP web site ([www.texasstarparty.org](http://www.texasstarparty.org)). If you are going for the first time, and don't know what to pack, I have my packing list on the HAS web site (under Novice presentations). While you and I almost certainly have different telescopes, some of the other items on the list may prompt you to remember something that you need to take. For example, I take a crowbar (yes, a crowbar) to remove the nails that I use to tie down my ground cloth.

It'll be soooo nice to get out under the stars (yes, stars, not clouds) for a week. My observing time has been close to zero for a while now. If the clouds don't get me, the winter temperatures do. Last Saturday night (March 21) was reasonably good, but not great. The transparency was rather poor, but I *could* see stars. I hope

the economic conditions aren't keeping you from attending the TSP this year. If they are, I understand; believe me, I understand. It seems that we've been going through a period in which the hole in our economic bucket is only getting bigger. There are a few optimistic signs showing up, but it'll be a long time until we get out of this mess.

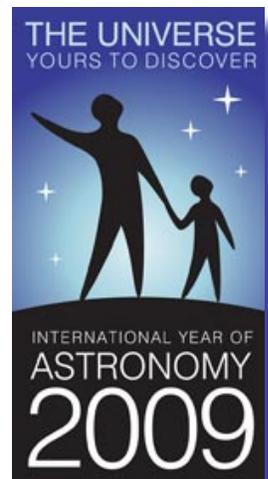
I just hope that all our equipment suppliers survive. There are lots of great, innovative products in the market today, and it would be a shame if some of these companies were to decide that they can't afford to stay in business or can't afford to do the r&d required to bring new products to the market.

**I hope to see you at the Texas Star Party!!**

***Until next time...***

***clear skies and new moons!***

*..Bill*



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# *Observatory Corner*

*By Bob Rogers, Observatory Chairman*



Hello everyone;

Not much to report except to say that the Tractor Shed is now 95% complete. On February 20th, La Grange Overhead Door Inc. came out and installed the new garage door on the Tractor Shed. All that is left to do now is a little finishing work on the front and some light painting. I would like to thank everyone involved in getting the Tractor Shed completed, especially Ed Fraini.



A note to everyone, the gate combination at the Observatory site will be changed on April 4th, 2009. Make sure that you have paid your dues by the April HAS General Meeting in order to get the new combination. I will start passing out the new combination at the January, February and March meetings using the database that Treasurer Bill Flanagan will provide me showing current paid members.

If you have a Randalls card, and have not done so, please have it coded for the Houston Astronomical Society. Our number is #6618. The Society gets 1 percent of the gross sales that members spend at Randalls. Randalls totals up the amount spent each quarter and will send us a check if the amount goes over \$2,500.00, otherwise the total rolls over to the next quarter or zeros out at the end of the calendar year. So please link your Randalls card to the Houston Astronomical Society so that the society can benefit from this Randalls program. Our number is #6618. This is very easy to do, just go to the Courtesy Booth and tell the person there what you want to do.

If you have any suggestions or thoughts for the site, let me know.

*Thanks,*

**Bob Rogers**  
**Observatory Chairman**  
**281-460-1573**  
**[siteworkerbob@hotmail.com](mailto:siteworkerbob@hotmail.com)**



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# *My Fellow Astronomy Nerds*

by Sean Keefe

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Editor's Note:

This was written by a member of the JSCAS before their annual spring trip to Fort McKavett . The weather forecast for the event had turned bad, and several members decided not to go.

A pall has been cast upon the weather for the Fort McKavett star party. \*sigh\*

*To go, or not to go: that is the question:  
Whether 'tis nobler in the mind to suffer  
The slings and arrows of outrageous fortune,  
Or to take arms against a sea of clouds,  
And by opposing end them?*

No perfectly dry, clear forecast?! What happened? Well, things changed. They often do...

I'm a weather geek myself, and a scientist, and a rationalist, and very pragmatic. I love to get info on the predicted weather ahead of a star party, and I'm glued to the weather radar loops perhaps a bit too much, but...please let me share a few thoughts on weather and star parties.

I recall from my days with the HAS in Honolulu that some members of our astronomy club were reluctant to drive the 45-minute drive from Honolulu to Dillingham Airfield (long drive by Oahu standards), an abandoned airfield along the north shore of Oahu, if the weather was cloudy. Not worth the risk. Being foolishly optimistic, I usually drove out anyway. I was often rewarded with a later clearing and good seeing, or long-duration "sucker holes" when everyone was really busy at their scopes looking at stuff. Those were rewarding times.

And I also recall times when the sky was perfectly clear, and people went round visiting at each other's scopes, waxing philosophical, or discussing their plans for new scopes, lenses, careers...talking cosmology...and not looking up. Those were rewarding times, too. I recall one cloudy night when we were hanging out and had a great sucker hole to enjoy. It was my best view ever of the Beehive Cluster. Stunning. Better than from atop Mauna Kea. Never better.

It was during another cloudy night in August of 1996 that some of us at Dillingham saw a huge bolide along the horizon over the Pacific Ocean . That is a sight that I will never forget. The meteor was bright green, wide, amazing...it lit up the sky and lasted 15 seconds, at least. We turned our heads in unison to watch it. It left a long smoke trail and a retinal afterburn. A moment afterwards, we realized what we had just seen. Lucky us! The folks who didn't drive out that night because of threats of clouds were regretful. I never would have seen it if I wasn't stubbornly (some

would say stupidly) optimistic.

Some of the reasons I'm going to the Fort are astronomical, and some are fraternal, philosophical, and—okay, I admit—Hobbital. I imagine that the Lesters and other folks at the Fort will be disappointed if many of us bow out after all their hard work to arrange this event. Not to mention the scouts, who can always have fun learning and looking at a very few objects. There's a point where people might say, "well, if She isn't going, then I'm not going, either." Then you get shrinkage of "critical mass." Then there's the local economy to support for future "perfect-weather" trips to the Fort, etc. Many of our NASA and other aerospace colleagues simply cannot go to this star party because of a mission that may or may not happen. But they'd sure like to. I also imagine that Chris Randall would like to be going to this event, but cannot, because he's serving his country.

So, for those of us who can go, let's give this our best shot with no regrets and have a fabulous spring star party, as planned. If we get one night of good viewing and a few cloudy nights, but have fun catching up and renewing friendships, check out the new scopes, do some bartering, make some great memories for the kids, and inspire some scouts, won't that be worth the drive?

This club doesn't have many opportunities for star parties, being in Humid Houston ...and this is one of the few of those opportunities. So, while I understand and respect the fact that everyone has to make their own personal decision whether to go or not, I just want to say that I hope to see many of you there at the Fort with your techno-gear and your party-on Texas attitude.

Clear Skies

*-Sean*

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## *Just Looking*

A GuideStar Interview by Clayton L. Jeter

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## **Ron Keating - Dew Buster**

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I met Ron Keating on the observing field at this year's Kisatchie Star Party which is an annual star party held by the Baton Rouge club in central Louisiana. This star party has very dark skies and is located in a beautiful national forest. Ron is the owner, operator, and brain-child of the popular "DewBuster", an electronic control for the prevention of dew build-up on your telescope optics.

Ron says this about his product, "It's the ultimate telescope dew controller. Fully automatic temperature control of your telescope



to keep you dew free all night long. Easy to operate, stingy on power, built tough and reliable, and backed with a 2 year warranty".

At the star party I asked

him about problems with the prevention of dew on my optics... well, this guy knows EVERYTHING about dew. I was in awe of his knowledge on this subject. Get ready for a learning curve.

### **Meet Ron Keating...**

Ron Keating was born in New Orleans in 1960. Growing up in the space age, Ron passionately followed the Apollo Missions. In second grade he purchased "Find the Constellations" by H.A. Rey and was soon identifying the brighter constellations on his own. He got his first look through a telescope at age 10 and wouldn't stop bugging Mom and Dad until Santa brought him a Jason 60mm f/12 alt-az refractor the next Christmas. Ron used the new telescope every clear night and his interest in astronomy continued to grow. In high school he assembled a 6" f/8 Newtonian reflector from mail order parts and he still remembers his first Jovian shadow transit through it. Ron also delved into astrophotography and developed his own B&W film. Unable to afford an enlarger, he purchased the lens and built the rest himself.

After high school Ron worked construction by day and attended electronics school at night leaving no time for astronomy. After graduation he went to work as an Instrument and Control System Technician at a power plant. He married Teresa and they had two children Eric and Stephanie. Teresa's grandfather owned a farm in northeast Mississippi and the dark skies there

made him miss the hobby. The return of Halley's Comet sparked his fever and he built a 6" f/5 rich field Newtonian on a fork mount. Although very stable, it was not compact enough and usually got left behind on trips to the farm. Comets Hyakutake and Hale-Bopp sparked his interest again and with Teresa's encouragement he decided to end the frustrations with mediocre equipment and buy a good telescope that he could enjoy. In hopes of getting some hands on with the more popular telescopes available, he sought out the Pontchartrain Astronomy Society (PAS), a New Orleans based club with approximately 200 members. At the first meeting he discovered that most of the members were "just like him" and he immediately joined the club. Ron finally purchased a Celestron 11 with Losmandy G-11 mount, but he came to the realization that it was not the telescope but rather his friends in the PAS that revitalized his interest like never before. Ron became very active in the club and was elected PAS President in 2006 and is now in his third term.

When he first joined the PAS, Ron was unknown in the astronomy world, but that would soon change. SCT's were notorious for dewing up, but after seeing several failures of commercial controllers within the PAS Ron decided he would build his own rather than buy. He found many plans on the internet but none fulfilled his idea of the perfect dew controller. Ron knew that sharp high magnification images required not only excellent optics, but the telescope must also be cooled down to the air temperature and continue cooling as the night air temperature drops. On the other hand, if the telescope's optics drop below the air temperature then dew will form. The only way to achieve both goals was with a temperature sensing controller that could constantly adjust power to the heater in order to keep the optics just a few degrees above

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

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air temperature. This may sound simple, but common methods of measuring temperature are not as accurate as one would expect, especially when the temperature drops below zero in the winter. The controller had to be accurate over wide temperature extremes and could not lose calibration as it aged. An error of just a few degrees Fahrenheit was unacceptable and with two temperature inputs any inaccuracies would compound themselves. With 25 years of control systems experience under his belt, Ron knew he could handle the challenge, but he never dreamed it would evolve into a product that is now known and used worldwide.

After learning about Ron's project, several PAS members asked if they could build a controller too. Ron decided a workshop would be fun as well as a good way to get to know more members of the PAS. He expected a few might be interested, but he never expected that about 30 people would sign up. At the first meeting to set design goals, when Ron mentioned cost one participant said "Don't worry about the cost, we want the best!" Ron took this to heart and has never allowed cost to interfere with making the DewBuster Controller "the best" it can be. The swamps of Louisiana proved the best possible place to develop a dew control system and the vast experience of the PAS provided valuable feedback on the design which resulted in many extra features such as low battery shutoff, manual operation in case you forget the temperature sensor at home, dew burn off mode, lots of outputs, and heavy duty power connections. PAS members tested the DewBuster Controller on every possible telescope and tests on C14's uncovered and solved several problems unique to big SCT's.

Ron never intended to start selling the DewBuster, but as word of the project spread to other clubs he was soon inundated with requests for a kit. The PAS workshop had taught him that the design was too complex for a kit so Ron started selling complete DewBuster Controllers to those who asked. As DewBuster owners told their friends about this new device Ron was keeping pretty busy trying to satisfy the demand and it gradually turned into a sideline job which he enjoyed. He then started his web site, [www.dewbuster.com](http://www.dewbuster.com), not only to sell the DewBuster Controller, but also to share useful information on building home made heater strips, making effective dew shields, and to educate potential customers on the physics of dew prevention. Today there are over 1500 DewBuster Controllers in use around the world in places as far away as Australia and he even shipped one to Moscow Russia. Ron builds every unit right here at home, not in China like most other manufacturers, and he personally tests and calibrates each and every one to insure it meets his high standards. Ron is also one of the few who will customize his product to suit the customer's needs. The DewBuster Controller has evolved quite a bit since the first PAS units and current models are almost indestructible, they can withstand dead shorts on the heater outputs, accidentally connecting power backward, and repeated stresses while plugging and unplugging heaters. Except for a few units that were destroyed by the toxic salt water flooding from Hurricane Katrina, every DewBuster Controller made is still in use today. Ron's dedication to both his product and his customer has resulted in an

extremely high customer satisfaction and even he is amazed by the fact that no one has ever asked to return their DewBuster.

### *The Ron Keating interview...*

**Clayton:** It is great Ron, to have you here for this interview. I really enjoyed reading your Bio... I could relate about being interested in astronomy as a youngster, and then things change as time passes. Looking back, what would it have taken for you to have always pursued this hobby?



**Ron:** Joining an astronomy club, no doubt about it. Until I joined the PAS, I really didn't know anyone who shared my interest in the sky so it was so easy for other things to push astronomy aside. I tried getting others interested and they enjoyed looking through my telescope, but their curiosity was overpowered by the first mosquito bite or when their feet got cold. The astronomy club was the first place that people actually got excited about an upcoming celestial event or a new gadget reviewed in an astronomy magazine.

**Clayton:** It was interesting to learn how this hobby of yours turned into a business. How do you sell the DewBuster besides on your webpage? Are you sometimes a vendor at star parties?

**Ron:** I have never advertised but instead concentrate on building the best product on the market and relying on referrals from satisfied customers. For about two years I tried selling through a prominent west coast dealer as well as on my web site but total sales never increased and it was no fun building 20 or 30 at a time never knowing where they'd end up. Also, the dealer margin was forcing me to raise prices but I didn't want my customers to

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## Just Looking... from previous page

have to pay more, so last year I went back to direct sales and I intend to keep it that way. It is much more fulfilling to build each DewBuster for a person with a name and whom I've often corresponded with answering pre-purchase questions.

As for star parties, I usually bring a couple of DewBusters with me in case someone wants to buy one, but you won't see me setting up a booth. I hate going into stores where the salesmen jump you at the door. If you're happy with what you have I won't try to convert you, but I'm convinced the DewBuster is hands down the best dew controller around and if you want to know more just ask. People often ask why I don't make heater strips and the answer is because there are already good products available. I want to make something that is better than anything else and I'm convinced the DewBuster is the best dew heater controller around.

**Clayton:** If you could explain to the H.A.S. membership in Houston just one thing about preventing problems with dew, what would it be?

**Ron:** Try the simple stuff first. The first step in heating a house is to close the doors and windows, so the first step in keeping your scope warm is to reduce heat loss to the sky with a dew shield or shroud. For Dobs keep the fans running and this will usually keep the primary mirror close to the air temperature and prevent dew. If you are only heating a finder or eyepiece then a cheap controller will do just fine. The DewBuster is best suited for an SCT or refractor where the temperature control can be put to use. The Frequently Asked Questions section of my web site ([www.dewbuster.com](http://www.dewbuster.com)) has a lot of helpful information.

**Clayton:** What's new at "DewBuster"? Any new gadgets pending....or is that a secret?

**Ron:** I'm always experimenting but I never make a change unless it improves the product. I'm currently testing a dual DewBuster that can separately control two scopes. A typical use would be on a large SCT with a refractor piggybacked because you could have a temperature sensor on each scope. If I decide to start producing this unit it would be priced about \$50 higher than the current model.

**Clayton:** Tell us about a typical observing session of yours. Could you use a home observatory?

**Ron:** No plans for a backyard observatory because the skies in my back yard are less than ideal plus I find that observing with others is a lot more fun. Most of my observing is done from our club's dark sky site about an hour's drive from New Orleans. It's a great site with a large grassy field and a bunkhouse. The skies are about mag 5.5 and the Milky Way is easily visible. We usually have about a half dozen members show up so it's like a star party every clear weekend. I'm strictly a visual observer and depending on the mood I may attempt an observing list or just visit some of my favorite objects. It's nice to be able to stay up as late as you want and get some sleep in

the bunkhouse without having to pick up the equipment until morning.

**Clayton:** How do you like your C-11? Any plans to upgrade?

**Ron:** The C-11 will be with me for a long time to come. It's my "big scope" and a perfect compromise between aperture and weight. When I was scope shopping I really thought I wanted a computerized GoTo scope. At that time, this meant a fork mounted SCT, but I wanted at least 10" of aperture and which meant at least 60 pounds of weight. I know people who've thrown their back out and I didn't want to become one of them. Then I saw a C-11 on a German equatorial mount. The C-11 was enough aperture to satisfy yet no component was over 30 pounds. I also came to the realization that I would be better off with a Push-To system so I went with the Argo Navis. It is as powerful as any GoTo system around, yet it uses hardly any power, a huge advantage at star parties where AC power is not available.

While the C-11 is a great scope, it is not quick to set up and has less than one degree field of view no matter what eyepiece you try. About two years ago I purchased a TeleVue NP101 on a Gibraltar alt-az mount for my "grab and go" scope. The NP101 is a wide field scope with nearly a 5 degree field of view at 14x magnification. In this scope the Andromeda Galaxy and companions are amazing and the wide field provides enough dark area to make the galaxy's oval shape stand out really well. With an O-III filter my favorite objects are the Veil Nebula (all 3 sections visible at the same time), the North American (shape is easy to see), and the Rossette Nebula. The NP101 is an excellent refractor, but aperture is aperture and the C-11 will easily reveal more planetary detail, resolve globulars, and allow me to see much dimmer objects. I often set them up side by side and use each scope for what it does best.

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## Just Looking... from previous page

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

**Ron:** I joined the PAS when I was 40 so I had already learned much through books. I guess my mentor would have been the person who taught me the constellations, H.A. Rey through his book "Find the Constellations". Although Rey died in the 70's his book is still in print and I highly recommend it.

**Clayton:** Besides Kisatchie (KSP), have you a favorite star party that you attend regularly? How about a star party that you have always wanted to attend but haven't yet?

**Ron:** I regularly attend the Deep South Regional Stargaze which is held in October near Norwood Louisiana. It has excellent skies and fairly good accommodations. I have also been to the Texas Star Party a few times and I really enjoy it. It's a long drive but everyone should do it at least once to see what really dark skies are like.

**Clayton:** While we are on the subject of the annual Kisatchie Star Party in Louisiana, how do you rate this gathering, observing field, sky conditions, etc?

**Ron:** I've attended the Kisatchie Star Party from its beginning. The first year the field had just been brush hogged for the first time and it was difficult to find a spot for a tent. The field is much smoother now but getting smaller each year due to digging for road construction. The organizer, Don Weinnell, says if it continues we may have to find another field to use. The weather is usually in the 50's so sleeping in a tent is comfortable, but this year was much colder making it a challenge. As for the skies, Kisatchie has the darkest skies I've seen short of the Texas Star Party. However, Kisatchie is heavily dependent upon atmospheric conditions and water vapor in particular. Heavy moisture in the air reflects light pollution and dims the stars, but when the moisture content is low the skies can be extremely dark and transparent. On my first trip to TSP I realized the measure of a good dark site is not how dim a star you can see, but how well you can see dark nebulae. KSP can't match TSP, but it is very good and you can make out many dark nebulae when the conditions are good.

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

**Ron:** That's a tough one and I know no more than anyone else, but my guess is we are going to continue to see the excellent Chinese optics being imported at dirt cheap prices and the machining will get better and better. At the same time, the well respected heads of the high end US companies will age and retire. Meade and Celestron will probably sell only Chinese imports but let's hope they continue with large scopes and bring better quality scopes to Wal-Mart customers. The only US made scopes will probably be big Dobs because they won't have Chinese competition. So, what will KSP 2033 look like? I'm guessing plenty of 3 to 6 inch Chinese Apo refractors and a few large Dobs.

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

**Ron:** First and most important, get active in your local club. You will make friends and this will keep your interest going. Second, learn the major constellations. Even though today's computerized GPS scopes can find objects themselves, it is still fun to learn the constellations and it will give you a tremendous sense of accomplishment. I urge even advanced observers to get a copy of the \$12 paperback book "Find the Constellations" by H.A. Rey. Although the book was intended for children it is great for all ages. Rey concentrates on teaching you how to find the easy constellations first and you will soon be amazed at how easy it is. Rey's connect-the-dots constellation figures actually look like their name. You may also enjoy his book for grown ups "The Stars: A New Way to See Them", but the children's book is the one you should start with.

**Clayton:** Is there an email address that a Houston Astronomical Society member could contact you for a question or two?

**Ron:** I change e-mails often to combat spam, so I ask people to go to my web site, [www.dewbuster.com](http://www.dewbuster.com), for my current e-mail address. I will be more than happy to answer any questions. I also have quite a bit of information on my web site so be sure to check out the FAQ section and How To articles.

**Clayton:** Thanks Ron for taking the time to share your interest and thoughts with us for our monthly HAS newsletter, "The Guide Star". We wish you luck with all of your astronomy nights and of course, you're "DewBuster". Please come visit our society when in the Houston area, we'd love to see you. Clear skies, always.

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# Apollo Upgrade

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The flight computer onboard the Lunar Excursion Module, which landed on the Moon during the Apollo program, had a whopping 4 kilobytes of RAM and a 74-kilobyte “hard drive.” In places, the craft’s outer skin was as thin as two sheets of aluminum foil.

It worked well enough for Apollo. Back then, astronauts needed to stay on the Moon for only a few days at a time. But when NASA once again sends people to the Moon starting around 2020, the plan will be much more ambitious—and the hardware is going to need a major upgrade.



*The Chariot Lunar Truck is one idea for a vehicle equal to the lunar terrain. Each of the six wheels pivot in any direction, and two turrets allow the astronauts to rotate 360°*

“Doing all the things we want to do using systems from Apollo would be very risky and perhaps not even possible,” says Frank Peri, director of NASA’s Exploration Technology Development Program.

So the program is designing new, more capable hardware and software to meet the

demands of NASA’s plan to return humans to the moon. Instead of staying for just a few days, astronauts will be living on the Moon’s surface for months on end. Protecting astronauts from harsh radiation at the Moon’s surface for such a long time will require much better radiation shielding than just a few layers of foil. And rather than relying on food and water brought from Earth and jettisoning urine and other wastes, new life support systems will be needed that can recycle as much water as possible, scrub carbon dioxide from the air without depending on disposable filters, and perhaps grow a steady supply of food—far more than Apollo life-support systems could handle.

Next-generation lunar explorers will perform a much wider variety of scientific research, so they’ll need vehicles that can carry them farther across the lunar surface. ETDP is building a new lunar rover that outclasses the Apollo-era moon buggy by carrying two astronauts in a pressurized cabin. “This vehicle is like our SUV for the Moon,” Peri says.

The Exploration Technology Development Program is also designing robots to help astronauts maintain their lunar outpost and perform science reconnaissance. Making the robots smart enough

to take simple verbal orders from the astronauts and carry out their tasks semi-autonomously requires vastly more powerful computer brains than those on Apollo; four kilobytes of RAM just won’t cut it.

The list goes on: New rockets to carry a

larger lunar lander, spacesuits that can cope with abrasive moon dust, techniques for converting lunar soil into building materials or breathable oxygen. NASA’s ambitions for the Moon have been upgraded. By tapping into 21st century technology, this program will ensure that astronauts have the tools they need to turn those ambitions into reality.

Learn more about the Exploration Technology Development Program at [www.nasa.gov/directorates/esmd/aboutesmd/acd/technology\\_dev.html](http://www.nasa.gov/directorates/esmd/aboutesmd/acd/technology_dev.html). Kids can build their own Moon habitat at [spaceplace.nasa.gov/en/kids/exploration/habitat](http://spaceplace.nasa.gov/en/kids/exploration/habitat).

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



# Volunteer Opportunity!!! Live Oak Festival - Columbus



The town of Columbus is holding their annual Live Oak Festival the weekend of **May 16 and 17th**.

This is the city's Arts and Crafts festival with over 100 booths and 2,000+ attendees. Since the HAS is a member of the community, we should have a presence at the festival. We can hand out astronomy information, nightly sky charts, NASA photos, and information on light pollution from the International Dark-Sky Association. The focus of our booth would be to promote astronomy and help protect the night sky. And possibly have a solar scope to view the sun.

We are looking for volunteers to help gather material from *Sky and Telescope*, *Astronomy* magazine and NASA. This is similar to what we do for Astronomy Day. Also, we are **looking for people** to sit at the booth to handout the materials and answer questions.

If you would like to volunteer, please let us know at [SGoldberg124@comcast.net](mailto:SGoldberg124@comcast.net).

Regards,

*Steve & Amelia Goldberg*

Chairman



## Want Ads

### For Sale: Nexstar 5se

Nexstar 5se bought in June 07. Like new condition, barely used (bought a bigger scope): This is a great starter scope if you're new to the hobby!

Includes a Zhumell 1.25 Inch Eyepiece and Filter Kit and A/C power source. Still have all the original boxes. Asking \$550.00

Rick Hillier  
Call 713-875-6463 (cell)  
e-mail hillier\_rick@yahoo.com

### For Sale: 17.5" Newtonian

Perfect for imaging or visual star parties. 17.5" f4.5 Newtonian telescope with highly accurate microprocessor-controlled, step-per-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 half-way. Call 281-482-5190 or E-mail Al Kelly.

### For Sale: Celestron Nexstar 8

Like New Condition...Celestron Nexstar 8, Used only 2 times in back yard. Some extras include Solar 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

*Email your ads to Kay McCallum, our Webmaster, at [KayM@McCLibrary.net](mailto:KayM@McCLibrary.net) and to Bill Pellerin, GuideStar editor at [billpellerin@sbcglobal.net](mailto:billpellerin@sbcglobal.net)*

# Algeiba - Gamma Leo

by Bill Pellerin, GuideStar Editor

**Object:** Algeiba  
**Class:** Double Star  
**Magnitude:** 2.4 combined (2.6, 3.5 individual)  
**R.A.:** 10 h, 19 m, 58 s  
**Dec:** +19 degrees, 50 minutes, 29 seconds  
**Distance:** 126 ly  
**Constellation:** Leo  
**Size:** 4.4 arc seconds (double star)  
**Optics needed:** Naked eye to see the star; telescope to see the companion star

## Why this object is interesting.

This easy double is waiting for you to take a look, and if you'll do, you'll enjoy the view. This pair of stars has been called yellow or orange by various observers. There's about a 1 magnitude difference between the stars, but this difference will not make the observation challenging.

Choose an eyepiece that provides a magnification of 125x or so for this observation. This means that with a 2000 mm telescope you'll need at least a 20mm eyepiece (providing a magnification of 100). Splitting a double star depends on the magnitude difference as well as the separation.

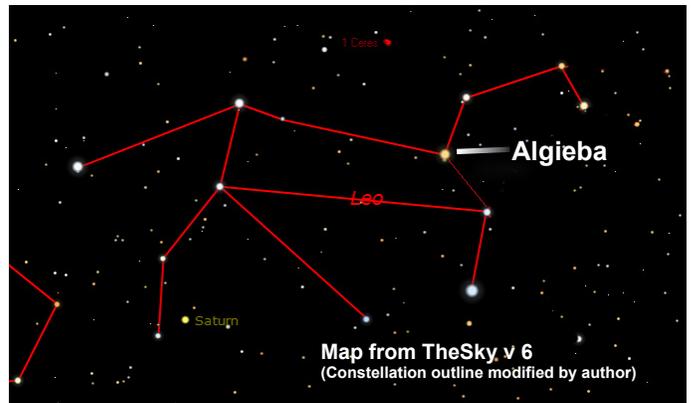
The January, 2002 *Sky and Telescope* magazine (p. 63) has an interesting article called "Finding Your Double Star Limit". The author of this article has developed a 'fuzzy-logic' algorithm for determining the degree of difficulty for splitting a double star. Software that implements the algorithm can be found at:

<http://www.carbonar.es/s33/Fuzzy-splitting/fuzzy-splitting.html>

If you run this algorithm for Algeiba, you find that the DI (difficulty index is about 50), easier than Castor. My opinion is that Castor is quite easy, and a very nice double to check out (see the May, 2007 *GuideStar* for an article about Castor).

Burnham's Handbook (once considered an essential reference for the amateur astronomer), considered this to be one of the finest double stars in the sky, and it appears on many lists of the best double stars.

Sissy Haas in the April, 1997 *Sky and Telescope* article "Doubles in Leo: Stars to Relax With" says that it's certain that this is a gravitationally bound binary because the motion of the secondary star has been tracked for 165 years. She says that the star system is 76 light years



away, which is a considerably different distance than I found from other sources.

There seems to be some uncertainty about how this star got this name. If you assume the name comes from an Arabic designation you end up with Al Jebbah, which means 'the forehead'. This name doesn't seem to be a good fit for the star, since the star lies in the mane or at least at the back of the lion's head. If you start with the latin word for mane (Juba) and add the letters 'al' in front, you end up closer to the meaning. This may be lost to history.

BONUS -- Saturn, for now, is near the southeastern end of the constellation Leo. I've looked at it recently and the rings are near edge-on, but I could easily see that there was some 'size' to the rings. That is, the rings didn't disappear.

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## ***Membership Renewals...***

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

Total yearly dues are \$36.

Your payment for 2009 is due as of January 1, 2009.

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!***

### 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

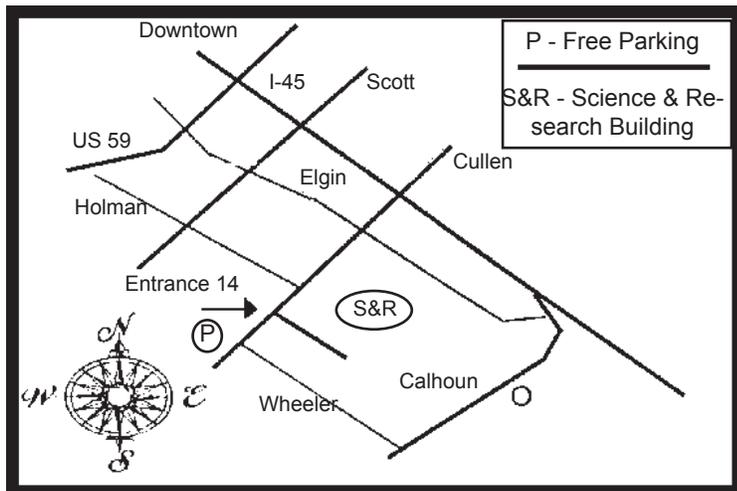
The Board of Directors Meeting is held on dates scheduled by the board at 7:00 p.m. at the Houston Chronicle office, downtown. Information provided to GuideStar will be published. The meetings are open to all members of the Society in good standing. Attendance is encouraged.

### 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 on Friday, April 3

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.***