Houston Astronomical Society

July, 2011

GuideStar

July, 2011

Volume 29, #7

At the July 8 meeting…

Remember — the July meeting will be on the 8th (second Friday) to avoid a conflict with the July 4 holiday weekend.

Mosquitoes, Knowing Your Enemy

Bob Rogers is our observatory chairman and besides doing an outstanding service to the Houston Astronomical Society by maintaining the observatory, he is an expert on mosquitoe control. In fact, he's a professional (his *day* job).

How many times have you been observing on a warm summer evening and heard a zzzzzzzzttt in your ear—the sound of a nearby mosquitoe? What should you do about it? How can you protect yourself and how can you fight back?

This is not an insignificant issue for us as observers as we enter the summer months (summer officially began at 12:16 CDT on June 21).

The Houston Astronomical Society is a member of the Astronomical League.

Highlights:

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 page for directions to the location.

Novice meeting: ..... 7:00 p.m.

"Observing Variable Stars" — Bill Pellerin

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

See last page for directions 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.

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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
Associate $6
Sustaining $50
Student $12
Honorary ..... N/C

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*. *The GuideStar*, the monthly publication of the Houston Astronomical Society is available on the web site. 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 last page 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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Other Meetings...

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

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

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-mailbill.leach@nhmccd.edu. Web site: www.astronomyclub.org

Brazosport Astronomy Club meets the third Tuesday of each month at the Brazosport planetarium at 7:45 p.m. The Brazosport planetarium is located at 400 College Boulevard, Clute, TX, 77531. For more information call 979-265-3376

July/August

Calendar

Date	Time	Event
July		
1	3:53 a.m.	New Moon
8	1:29 a.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
12		Uranus completes its first orbit since discovery
15	1:38 a.m.	Full Moon
20	12:00 a.m.	Mercury at greatest elongation east
23	12:03 a.m.	Moon at last quarter
30	1:39 p.m.	New Moon
		Prime Night, Columbus site
		Delta Aquarid meteors peak
August		
4	11:00 p.m.	4 Vesta at opposition
5	7:00 p.m.	HAS Novice Meeting, U of H
	8:00 p.m.	HAS General Meeting, U of H
6	6:08 a.m.	Moon at first quarter
13	1:57 p.m.	Full Moon
		Perseid meteors peak
21	4:56 p.m.	Moon at Last Quarter
22	6:00 p.m.	Neptune at opposition
27		Prime Night, Columbus Site
29	10:03 p.m.	New Moon

Send calendar events to Doug McCormick - skygazer10@sbcglobal.net

GuideStar deadline for the August issue is July 15

Check the web site:
www.astronomyhouston.org
Webmaster: Kay McCallum
kaymccallum@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.

Follow the *GuideStar* on Twitter at:

GuideStar_HAS

Join Facebook and look for:

Houston Astronomical Society

Starline is back

Call 832-go4-HAS0 (**832-464-4270**) for the latest information on the meeting and other information about activities within the HAS.

Observations... of the editor

by Bill Pellerin, GuideStar Editor

Texas Star Party, 2011

The long road to the TSP

Since our last issue of the *GuideStar*, the Texas Star Party has come and gone. It's always a great week in west Texas, and a lot of fun. Fort Davis is about 600 miles west of Houston, and probably should be in the Mountain Time zone. If you go due north of Fort Davis, you go into New Mexico which *is* in Mountain Time. That said, I figured out that sunset at Fort Davis is about 30 minutes later than sunset in Houston.

So, we were seeing sunsets at 8:52 p.m. or so. Never mind, the weather didn't cooperate with our observing program. We had perhaps two nights of observing when you add together the holes in the clouds. We always anticipate and hope for a week of clear skies in west Texas, but it doesn't always happen that way.

Sunset — looking north from the Prude Ranch

The other concern was the fires that have been going on. In fact, there was a new fire west of the McDonald Observatory that was burning *during* TSP. We could see the glow from the fire on the clouds after dark. Interesting to watch. The photo above was taken near sunset looking north from the Prude Ranch.

One of the best things about going to the Texas Star Party is seeing friends that you only see at the event. There are quite a few folks from other parts of Texas that we don't see often enough, and it's a good opportunity to catch up with them. There are new friends to make as well, and the TSP is a great opportunity to meet new astronomers.

Mike Simonsen (AAVSO) was at the TSP and did three well-received presentations. I had met Mike at an AAVSO conference so it was great to see him again. Mike drove all the way from Michigan to be there and had a great time.

Renee' James (Sam Houston State) did a presentation on her 'Seven Wonders of the Universe' book and did a book signing. On Saturday, William Keel of the University of Alabama talked with us about the various citizen science programs in the 'Zooniverse' (Galaxy Zoo, Hubble Zoo, etc.).

A small group of us did a day trip to Marfa to see some of the art galleries there. Our friend Anne Adkins works at Marfa Public Radio, and while she wasn't in the office when we arrived, the general manager, Tom Michael showed us around. Marfa Public Radio was an important source of information during the worst of the west Texas fires. (I now am a Marfa Public Radio member and I have a Marfa Public Radio decal on my car… and I'm waiting for someone to ask me about it.) You can support the station at marfapublicradio.org.

You can support the recovery effort in the area by purchasing a photograph (showing the fires and the McDonald observatory). These were available at the Fort Davis Drug Store. Call the Drug Store at (432) 426-3939 for more information.

Until next time...

clear skies and new moons!

..Bill

Just Looking

A *GuideStar* Interview by Clayton L. Jeter

Eric Berger—Science Guy

Eric Berger may not be a household name yet, but it won't be long. When browsing the Houston Chronicle online, you'll find out real quick that this guy is the premier science writer in our area. His blog is called, "SciGuy". If you haven't taken a peep, then you're in for a real treat.

I love Eric's take on the different sciences. Why are his writings so interesting, informative, and fun to read? Answer: Passion. This guy immerses himself into his writing. He loves it and it shows. Let's learn about what makes Eric tick. Here's Eric…

The Eric Berger bio…

Eric spent his college years at the University of Texas dreaming about the stars, which led him to an astronomy degree. But he decided studying a particular classification of stars in depth for the rest of his life seemed a bit too restrictive. He dove into journalism, hoping to put these experiences in concert with his astronomy degree to work explaining the complexities of science and medicine to the general public. Hoping to interact with readers, he began the "SciGuy" blog in early 2005 covering everything from hurricanes to space. He's won several awards, including the 2006 Texas Associated Press Managing Editors award for "best blog." In 2008 the Chronicle was a Pulitzer Prize finalist in large measure due to his blogging on Hurricane Ike.

Eric Berger's ride on the "Vomit Comet"

The Eric Berger interview…

Clayton: How did you first become interested in astronomy? Were your parents interested in sciences as you were growing up?

Eric: I grew up in rural Michigan, so all I had to do to be inspired was look up at night and marvel at the Milky Way smudged across the sky. I distinctly recall one night in high school when there was a Leonid meteor shower. It was a cold, crisp night and I laid out in our back yard, freezing, for about three hours staring up at meteor after meteor. I also had a great physics teacher in high school who helped channel my scientific interest into astronomy. Neither of my parents were scientists.

Clayton: Seems you're quite knowledgeable on Hurricanes. How did you become interested in these giant dynamos? Got a favorite storm from the past?

Eric: I became interested in hurricanes during Tropical Storm Allison, in 2001, when I saw the devastating potential of tropical weather up close. I was stranded the night the storm hit by rising water all over the city of Houston. I parked my car on a little rise and wandered through the city on flooded streets with friends. After that I decided I'd better learn more about them. My favorite storms are those that remain out to sea.

Clayton: How did you and the Houston Chronicle team up? Do you write your articles from an office there or from

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home? Where do all of your ideas come from?

Eric: I joined the *Chronicle* formally in 1998 as a general assignment reporter. Along the way I have covered sports business (stadium construction), the Texas legislature, Enron's bankruptcy case and science. Needless to say I enjoy science the most. I write equally often from home and work and my ideas come from everywhere: sources, news releases, e-mails and simply making an observation about something happening and deciding that it's worth writing about. I welcome tips.

Clayton: We know you love astronomy and yet you seldom observe. What would it take to "jump-start" you into looking up through a telescope? Do you own a scope?

Eric: My dad got an eight-inch Celestron telescope as a gift about a decade ago and gave it to me. I occasionally use it in my backyard but it's difficult to see much from southeast Houston. When my kids get a little older I'll probably try to do more observing to get them interested in what's up there.

Clayton: It sure seems that the younger generation of today is not as excited about the sciences as the children that I went to school with in the heyday. Are we doing something wrong? What can we do to light the fire?

Eric: The failure of science education is a topic about which many books have been written, and a large part of the problem is that it's "boring" and "hard." It's boring in the sense that instead of learning about why the periodic table is useful, students are taught to memorize it. Science shouldn't be rote memorization, it should be focused on how science works. We need to teach the "whys" not the "whats." To light a fire we need to get kids doing more experiments in school, to help them see how science works, and HISD actually has some pretty good programs going. Another problem is that parents of many kids don't value science, so they're not buying them chemistry sets, telescopes, microscopes and other fun tools to help nurture an interest in science. They'd rather their kids grow up to be bankers or lawyers.

Clayton: *Sky and Telescope* or *Astronomy* magazine? Do you have a favorite monthly science publication?

Eric: *Sky & Telescope*. My favorite monthly science magazine is *Scientific American*, although if you hadn't specified monthly, I'd have said my favorite scientific magazine is *New Scientist*.

Clayton: I know science is your passion… do you have a mentor?

Eric: I honestly don't have any mentors in science, although some scientists in Texas have been really helpful to me in terms of understanding science and growing my skills in reporting on it. Specifically helpful have been Bill Read, director of the National Hurricane Center, and John Nielsen-Gammon, the state climatologist.

Clayton: I'm assuming you're very interested in space flight. Ever dream of going up?

Eric: All of the time. When the price of suborbital trips drop to under $50,000 I know what I'll be buying myself for a 50th birthday present.

Clayton: So you rode on NASA's "Vomit Comet"? What was that like? How did you hitch a ride with this group?

Eric: The Vomit Comet was a blast. I went up as a reporter covering a team of students at Rice University doing a research project. I wish the current prices of zero gravity plane rides was lower, because it really is an incredible experience to fly and float through the air. And you don't get sick.

Clayton: What's your take on NASA retiring the Space Shuttle program? Have you ever witnessed a launch?

Eric: Yes, I've seen a shuttle launch. It's time for NASA to retire the shuttles because it's been 30 years. Where NASA has been derelict, and in this case it's really Congress and the President, is in not coming up with an affordable plan to build a spacecraft to succeed the shuttle. We've known the end was coming for 15 years and never really gotten around to doing anything about it. It's a real shame and we're going to pay the price until commercial providers step up.

Clayton: Years ago you made a choice to change a direction from pursuing work as a professional astronomer to becoming a science writer. Do you sometimes think, "What if"?

Eric: Rarely. I respect the heck out of astronomers, but I have an awesome job. I have met all sorts of interesting people – Stephen Hawking, Jane Goodall, James Watson, to name a few – and gone to so many interesting places. Essentially I get to research and write about whatever I'm interested in. Astronomers are a bit more

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locked in, specialization-wise. And I don't have to write grant proposals!

Clayton: Is there an email address that you have that a Houston Astronomical Society member could contact you for an additional question or two? Also, what is your blog's address?

Eric: I'm always happy to receive emails at eric.berger@chron.com and I encourage them to visit the blog at http://blogs.chron.com/sciguy.

Clayton: Thanks Eric for taking the time to share your interest and thoughts within our HAS newsletter, The *GuideStar*. We wish you luck with all of your science and astronomy interests. Keep up the great job at the *Houston Chronicle* as our science writer. Please come visit our society (first Friday of every month), we'd love to see you there.

Clear skies always!

Eric: Thanks for the opportunity. As for clear skies, I wish. I write a daily blurb for the Chronicle's weather page and often want to tout this or that astronomical phenomenon for readers. Alas, I'll check the forecast and it's cloudy. So I echo your wish for clear skies.

Clayton L. Jeter is an avid SCT visual observer and a long time member of the Houston Astronomical Society. Contact him at: stonebloke@gmail.com

Kent Francis and Scott Mitchell enjoying a presentation at the TSP

Mike Simonsen (AAVSO) at the TSP (with travelling companion).

Below: The north observing field at the TSP.

Observatory Corner

By Bob Rogers, Observatory Chairman

Hello everyone.

Well, after the last few months of work at the site, I decided to take some time off from that job for a few weekends to devote some more time to my other job at Mosquito Control. Yes, it's that time of year again for these pesky insects and it's getting busy at work. The reason that I'm talking about this is because at the July 8th meeting I will be giving a presentation about mosquitoes to the membership. What does this have to do with astronomy you ask? Well when you're at your telescope and getting bitten by these pesky insects, I hope that everyone will be having good thoughts about me. Remember, it's not my fault they're biting. I do hope to provide everyone some advice about mosquitoes and how to control them while enjoying the observing experience. Hope to see you there.

A reminder that we are taking donations to help with some of the cost of the fence replacement. If you can donate, it would be appreciated and all donations are Tax deductible.

Donations can be made to:

HAS
PO Box 20332
Houston, TX 77225-0332

In the note section, please put – "Observatory donation"

Remember that we are the only club that has an observing site that everyone can go to observe away from city lights. It cost money every year to keep the site maintained for your use and pleasure.

I **do need** to remind everyone that we need to start filling out Log Reports at the site so I can give this information to the Fondren Foundation. The property is on a 99 year lease and part of the Lease agreement is that HAS needs to report every year to the Fondren Foundation that the Property is being used. The Log Reports are located in the box in the middle of the field. Just open the cover, fill out the report and then slide it into the slot that is in the inside of the cover and then close the box. It is very important that **everyone** fill out a Log Report so that we are showing that the Observing site is being used. Your help on this is very much appreciated.

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% 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 roles 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

Finding Planets Among the Stars

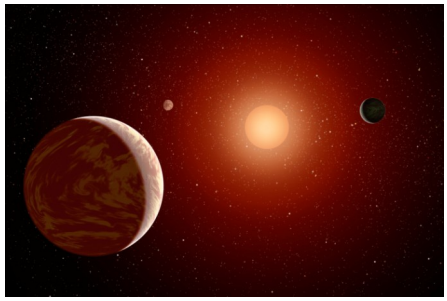
by Dr. Tony Phillips

Strange but true: When it comes to finding new extra-solar planets, or exoplanets, stars can be an incredible nuisance.

It's a matter of luminosity. Stars are bright, but their planets are not. Indeed, when an astronomer peers across light years to find a distant Earth-like world, what he often finds instead is an annoying glare. The light of the star itself makes the star's dim planetary system nearly impossible to see.

Talk about frustration! How would *you* like to be an astronomer who's constantly vexed by stars?

Fortunately, there may be a solution. It comes from NASA's Galaxy Evolution Explorer, an ultraviolet space telescope orbiting Earth since 2003. In a new study, researchers say the Galaxy Evolution Explorer is able to pinpoint dim stars that might not badly outshine their own planets.



Exoplanets are easier to see directly when their star is a dim, red dwarf.

"We've discovered a new technique of using ultraviolet light to search for young, low-mass stars near the Earth," said David Rodriguez, a graduate student of astronomy at UCLA, and the study's lead author. "These M-class stars, also known as red dwarfs, make excellent targets for future direct imaging of exoplanets."

Young red dwarfs produce a telltale glow in the ultraviolet part of the electromagnetic spectrum that Galaxy Evolution Explorer can sense. Because dwarf stars are so numerous—as a class, they account for more than two-thirds of the stars in the galaxy—astronomers could reap a rich bounty of targets.

In many ways, these stars represent a best-case scenario for planet hunting. They are close and in clear lines-of-sight, which generally makes viewing easier. Their low mass means they are dimmer than heavier stars, so their light is less likely to mask the feeble light of a planet. And because they are young, their planets are freshly formed, and thus warmer and brighter than older planetary bodies.

Astronomers know of more than five hundred distant planets, but very few have actually been seen. Many exoplanets are detected indirectly by means of their "wobbles"—the gravitational tugs they exert on their central stars. Some are found when they transit the parent star, momentarily dimming the glare, but not dimming it enough to reveal the planet itself.

NASA Space Place

The new Galaxy Evolution Explorer technique might eventually lead to planets that can be seen directly. That would be good because, as Rodriguez points out, "seeing *is* believing."

And it just might make astronomers feel a little better about the stars.

The Galaxy Evolution Explorer Web site at http://www.galex.caltech.edu describes many of the other discoveries and accomplishments of this mission. And for kids, how do astronomers know how far away a star or galaxy is? Play "How Old do I Look" on The Space Place at http://spaceplace.nasa.gov/whats-older and find out!

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

Building an Astronomer's Stool

This Month: Building a sketch desk and the decision of paint.

By Jim Wessell

Part 5 of 7

Even Rembrandt needed an easel…

I really enjoy drawing what I see through the eyepiece. In my pursuit of this facet of my hobby, I have learned that using a clipboard isn't ideal for recording my observations, and a little more room to spread out will help me a lot. The idea of a sketch desk was not something I originally set out to make, and it sort of naturally fell into place as a logical extension of the armrests. One afternoon, I was sitting in the built out chair, remarking to John that it 'just felt right', and that the only thing I was missing was a way to make my drawing effort easier. I reached out, grabbed a reasonable piece of plywood, held it at an angle that seemed comfortable to rest my forearms against, and poof, the initial concept of the sketch desk was born. Please be aware that I can't provide accurate measurements of any of the wood parts of the sketch desk as a definitive plan for interested do-it-yourselfers, as it is completely contingent on your chair and its respective armrests. The following description should be taken as a representative method for building your own desk and any measurement I may give is unique to my situation.

That original piece of scrap plywood actually turned out to be the large flat surface of the desk, with a few minor modifications, of course. As it has occurred time and time again through this project, John just happened to have some Plexiglas lying around that would work just fine as a hard smooth writing surface. A very meager amount of scrap 1" x 6" and 2" x 4" provided the basis for the side supports and the underside structurally bracing ribs. John also had the needed wood screws in his workshop, so the only thing I was out of pocket on was the small screws needed to secure the Plexiglas to the plywood and the final overcoat of paint. If you decide to build your own version of a desk, I included a reasonable approximation of the costs in the parts breakdown earlier in this description.

The first thing necessary is that the piece of plywood be wider than the width of the armrests so that it can span the gap between them. The armrests on my chair are 21.5" apart to the external edges (18.5" to internal edges), and the top of the desk is just under 24" wide (and about 15"deep), so this detail is covered. Here in southeastern Texas, with our nearly perpetually cloudy summertime skies, most of my observing is in the somewhat cooler months. Any seasoned observer will remark that if you are cold, you are going to be uncomfortable, and likely shorten your observing. To prevent this, you wear layers of clothing or a heavy coat, and those items have a volume associated with them, which in turn, makes your circumference larger. If you are larger around, you have to extend your arms further to reach. To help counter this problem, John and I elected to cut a notch out of the edge of the sketch deck (and the corresponding Plexiglas edge) that would normally rest against my abdomen. The picture below shows the top of the desk with the screws securing the Plexiglas, and the notch removed.

The final, comfortable angle for the total sketch desk assembly was conceptualized in much the same manner as was previously described in the section for determining the armrests' height. After that angle was decided upon, what would become the two pairs of side pieces of wood were cut at the desired angle and heavily sanded. It's important to do a good job of sanding here, because doing so will reduce the chance of marring the surfaces of the armrests. In fact, I have taken this one step further, and put the soft part of some Velcro stripping (with adhesive on the other side) on this wood to protect the armrests even more (the picture of Velcro placement is not shown). The following close-up picture shows the side design better than I can explain in words.

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The next image shows the total underside of the desk with the side supports and the cross braces. All of this wood was connected together with finishing nails and wood glued to the underside of the plywood that forms the desktop. The distal pieces of wood are the aforementioned 1 x 6s. Taken together, they form the side edges of a shell that fits over and to the outside of the armrests, and ultimately prevents the desk from moving side to side. The two interior pieces of wood, just proximal to the larger outside 1 x 6s, are the pieces of wood that actually rest directly onto the upper surface of the armrests. Care was taken so that the position of the cross brace was placed so that it's closest edge did not break the plane of the two pieces of wood that rest on the armrests, otherwise over time you would end up scalloping the inside edge of your armrests. A second cross bracing piece forms the front edge of the sketch desk.

The sketch desk is rigid, light (about 5 lbs), fits my chair perfectly, and is totally functional for my needs as a beginning astronomical sketcher. A three quarters view of the completed sketch desk, in its typical position on the armrests is seen in the image below. The careful observer will notice the reflectivity of the Plexiglas writing surface. What is not shown in the picture are the later additions of an screw eye and rope to the side of the desk (used to retain the desk while entering or exiting the chair), a modified clipboard holder to keep my log sheets held in place, and my post-construction lighting system for the illuminating the writing surface.

To paint, or not to paint? That is the question.

My original intent was to give the wood a nice rich stain to accentuate the inherent grain. After seeking a few external opinions, I was convinced that paint was a better choice. I settled on a high quality exterior latex, and actually carried the boat seat into the paint store to get the best match possible. Two thick coats later, and all the wood surfaces almost identically match the lighter grey color of the seat. John had on hand a can of rust inhibiting metal paint to be used as a primer, and I purchased a black satin rust inhibiting paint to act as a sealant. This was used almost exclusively for the metal that formed the supports for the armrests. I decided that I would go ahead and paint over the pipe floor fittings, and the protective metal channel and 90° angles, knowing that it would have to be periodically touched up due to abrasion between the hanging footrest and the edges of the plywood legs. The sketch desk was painted as well. Since the lighting system was constructed after the painting was completed, I had a series of minor touch-ups to the painting afterwards.

Next Month: A Red LED lighting system.

What's Up?

News about HAS members and Astronomy Events in Houston

Note that the HAS Meeting for July has been moved to July 8 — to avoid a conflict with the July 4 holiday weekend.

Several HAS members participated in the TSP.

Steve and Amelia Goldberg work hard as the organizers for the TSP coordinating the housing and providing general troubleshooting services during the event.

Barbara Wilson was the nightly MC for the meetings. Also, Barbara was awarded a T-Shirt by Larry Mitchell for completing 10 of his Advanced Observing Lists.

Jayne Lambert was the coordinator for the vendors.

HAS members who were speakers included Scott Mitchell (astronomical sketching), Larry Mitchell (advanced observing program), and Bill Pellerin (CCD photometry).

Clayton Jeter and Bill Flanagan took on MC roles during daytime presentations, and several HAS'ers worked as registrars, power line staff, dark out staff, and did other duties to make the TSP a success.

Rumor has it that Brian Cudnik is working on a new book on deep sky observing.

The 'Candlelighters' event at Camp for All has invited Houston Area volunteers to come back to Camp for All in October to share the sky with kids who are patients at MD Anderson, and Texas Children's Hospitals

SkyTools software is available to HAS members at a discount once a sufficient number of orders have been put together. See our treasurer, Warren Murdoch for more information.

HB 2857, a state law that mandates better outdoor lighting near observatories has been signed into law!

Summer began at 12:16 p.m. on 6/21/11. The days are getting shorter and the nights are getting longer — YEAH!

Supernova SN 2011dh went off in M51 during the Texas Star Party.

Any news? Send to billpellerin@sbcglobal.net — *GuideStar* editor

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Book Review:

Packing for Mars

by Mary Roach.

Reviewed by Bill Pellerin, GuideStar Editor

The Thursday before I left for the Texas Star Party I was listening to the radio on the way home. There was an article about audio books.

Since I'd be spending a lot of time in the car on my way to and from the TSP I dropped by my local library to see what was available, and picked up *Packing for Mars* (unabridged). So, this review is about that version of the book.

I was disappointed with the book, but this may say more about my expectations than about the book. I expected the book would be about the technical difficulties of getting to and from the planet Mars.

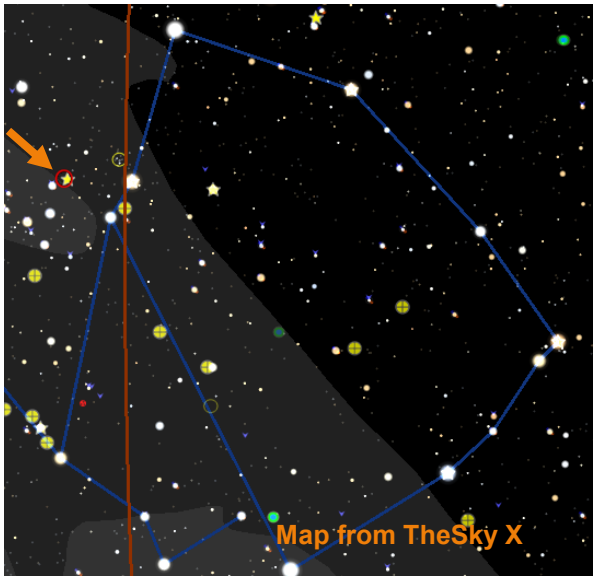
In fact, it was more about the problems with human space flight in general with significant details about motion sickness (much more than I ever wanted to know), and quite a bit about the problems with creating and using space toilets. All of this related to a discussion about space food, personal hygiene, and so on. All this may be interesting to you, and if it is, give the book a try. Not my cup of tea.

Shallow Sky Object of the Month

Barnard's Star

By Bill Pellerin, GuideStar Editor

Object: Barnard's Star
Class: Star with high proper motion
Constallation: Oph
Magnitude: 9.54
R.A.: 17h 57 m 48 s
Dec: 4 deg 43 min 36 sec
Size/Spectral:
Distance: 6 ly
Optics needed: 8" or larger telescope



Ophiucus region. Barnards star is at the arrow, upper left. See next page for detailed finder charts.

Why this object is interesting:

This is the second closest star to the Sun at about 6 light years or 40 trillion miles. (The closest star system is the Alpha Centauri system, consisting of three stars, so, really, Barnard's Star is the 4th closest star.) The astronomer, E.E. Barnard discovered the star in 1916 when he was 59 years old.


E. E. Barnard

Although he failed to get a formal education in astronomy he was hired to work at the Lick Observatory in 1887, at the age of 30. Nine years later he went to the University of Chicago and worked at the university's Yerkes Observatory (in Wisconsin).

What's all the fuss about Barnard's Star? The star has a high 'proper motion', which is its apparent movement in the sky. Given enough time, all stars in the sky move, but Barnard's star moves fast, and that's of interest.

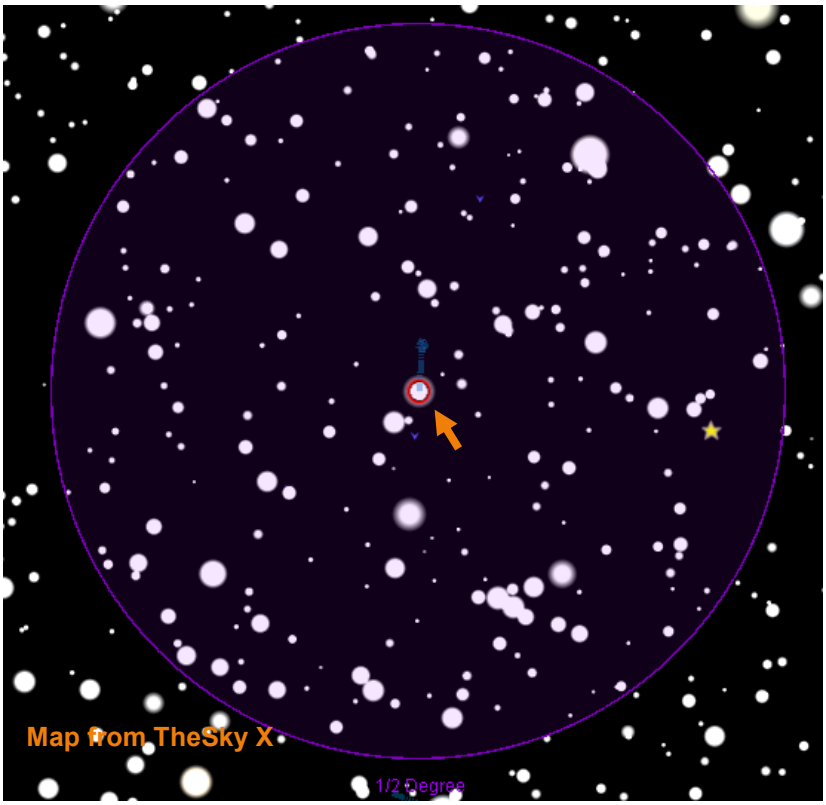
Some astronomers believed that they saw wiggles in the motion of the star, and that those wiggles indicated that there was one or more planets around the star. Alas, it was not to be. More careful studies of the motion of the star failed to show the wiggle, and Barnard's Star is not now believe to be the host star for a planetary system.

Nevertheless, the high proper motion of about 10.2 arc-seconds per year is observable to the careful amateur astronomer. Just how far does the star have to move before you can notice the movement? The star moves about .85 arc-seconds per month. Can you detect this? Or is this lost in the 'seeing'?

Create an image or a sketch showing the position of Barnard's Star over time to determine what you can detect. What is the smallest interval of time over which you can say with confidence that you see movement of the star?

This star is dim, you'll need a telescope and a good clear night to see this one. Give it a try and let me know what it takes for you to positively identify the star.

Also, it's an M dwarf star, meaning that it is red. Look for color in the star. Dimmer stars often show more color than brighter ones. Dwarf stars are (surprise!) small, so, while it's bigger than Jupiter, it's considerably smaller than the Sun.



Barnard's Star

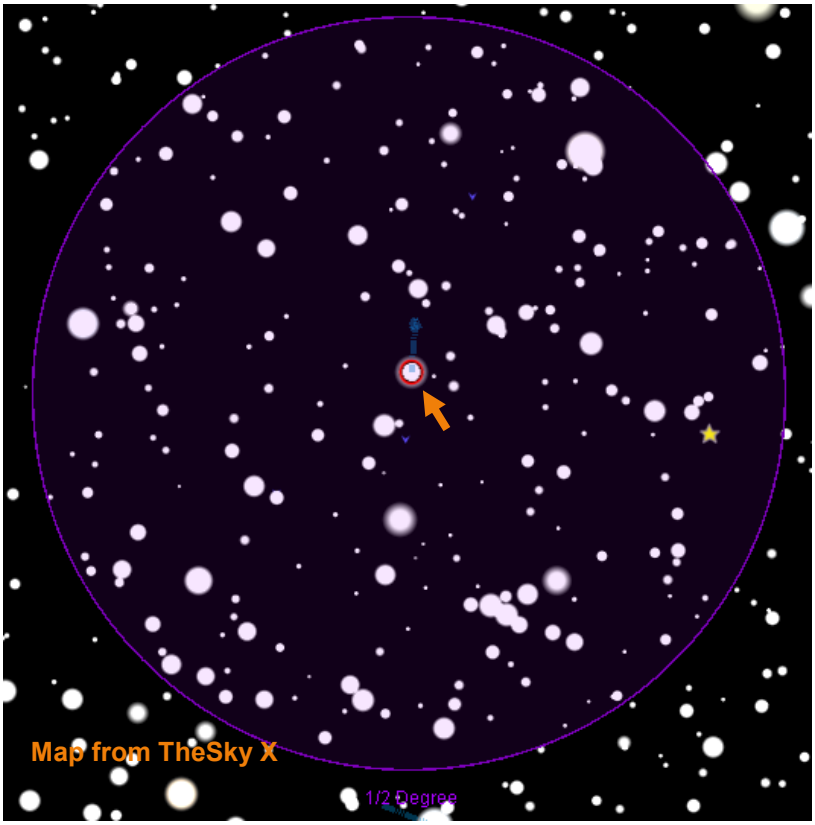
Date: July 30, 2011

Circle = 1/2 degree

RA: 17h 57m 48s

Dec: 04d 43m 36s

(2000 coordinates)



Barnard's Star

Date: July 30, 2016

Circle = 1/2 degree

RA: 17h 57m 48s

Dec: 04d 44m 27s

(2000 coordinates)

Star will have moved 51 arc seconds in 5 years.

Houston Astronomical Society

P.O. Box 20332

Houston, TX 77225-0332

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.

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. 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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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 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.

Houston Astronomical Society

Meeting on Friday, July 8

7:00 Novice Meeting
8:00 General Meeting

University of Houston

Directions to meeting:

From I-45 going south (from downtown)

- exit at Cullen Boulevard
- turn right on Cullen
- turn right into the parking lot (by the stadium)
- Science and Research is across the street (2nd building back)

From I-45 going north (from NASA/Galveston)

- exit at Cullen Boulevard
- turn left on Cullen
- turn right into the parking lot (by the stadium)
- Science and Research is across the street (2nd building back)

Parking:

There is Free Parking, **BUT DO NOT PARK IN ANY RESERVED PARKING SPACES AT ANY TIME.**
U of H parking enforcement will ticket your vehicle.