

GuideStar



June, 2011
Volume 29, #6

At the June 10 meeting...

Science Fair Winners, Texas Star Party Review

Remember — the June meeting will be on the 10th (second Friday) to avoid a conflict with the Texas Star Party

The Houston Astronomical Society judges astronomy-related science fair entries and awards prizes. Two of the winners will be at the June meeting to discuss their projects. The HAS coordinator for the science fair is Richard Nugent.

The Texas Star Party will end less than a week before our meeting, so you'll get a fresh, first-hand report — observing conditions, vendors, speakers, observing lists and door prizes. If you didn't make it to the TSP this year, come see what you missed.



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

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 page for directions to the location.

Novice meeting: 7:00 p.m.
"A Tour of the Spring Sky!" — Justin McCollum

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.

Officers & Past President

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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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Special Interest Group Listing

Any member who wants specific information on a SIG listed below may call the listed individual. Anyone who wants to offer to coach another member on his or her special interest is invited to have a listing in this section.

Advanced Bill Leach 281-893-4057

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

Observations... of the editor

by Bill Pellerin, GuideStar Editor

Texas Star Party in progress!!

When you read this the Texas Star Party will be in progress, or about to be in progress, or just over. I hope you're making the trip and will be at the Prude Ranch, near Fort Davis, to enjoy the star party with everyone else.

John Wagoner has an observing list called *Lions and Tigers and Bears, Oh My!!* ...which looks interesting and should be a lot of fun. Larry Mitchell has his *Friends of Friends* list of objects that are near well-known objects and are therefore often overlooked.

The main thing about being in west Texas is the dark skies. In fact (I've said this before) the most amazing sight at the Texas Star Party is the Milky Way galaxy arching overhead from the southern horizon to the northern horizon. I haven't seen anything in any telescope that competes with the dark sky view of the Milky Way.

Any telescope will work better in this environment and will amaze you by showing you objects you never expected to see, or never expected to see as well. I'm going to try Wagoner's list in a 3" telescope, and I'm confident that I can complete it. I've always been successful in a 4" telescope even though a 3" only captures 56% as much light as a 4". I'll let you know what happens.

There will be vendors, talks, door prizes and great all-night observing opportunities.

Lists

I've mentioned the observing lists that will be available at the Texas Star Party, but we live in a world of lists.

Packing list for a trip

Observing lists—TSP lists, Astronomical League Lists (including Messier and Caldwell list, among others)

To-Do lists — where would we be without these? Prioritized, with deadlines.

Shopping lists — grocery, astronomy shops

Project lists — tasks that take more than one day

Birthday lists — greeting cards!

I have a to-do application on my phone, and I keep track of things I need to get done via this application. More than once, I've looked

at the list and been reminded of something that I need to / wanted to do but have since forgotten about. If I count on remembering what I need to do, I'll forget.

I keep my observing lists in SkyTools, an outstanding program (Steve Goldberg talked about this software at a Novice meeting) for keeping your observing lists organized. (The Wagoner list for this year's TSP is already in SkyTools, and is available on the Skytools Yahoo group.)

Remember, if you want to purchase SkyTools, there's a HAS club discount available to you. Check with our treasurer.

Until next time...

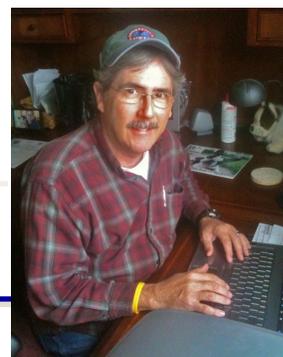
clear skies and new moons!

..Bill

Just Looking

A GuideStar Interview by Clayton L. Jeter

Jim Gilliam — Galveston observer



A hoy! Ever try observing night skies while out at sea? Or... ever try sailing while observing? I stumbled up on just the deck hand for some answers. I'm referring to Jim Gilliam from the Galveston club. That's right, our neighbors to the south has their own astronomy club. I've heard of this group but have never observed with them.

I emailed Jim last week to find out about a possible interview so that our HAS readers and myself could learn more about astron-



omy in our neighboring area. He was more than glad to talk about his love for the cosmos.

Jim has taught astronomy, organized and coordinated star parties, and has spread his desire of the night skies to others. Let's read about two of Jim's loves: dark skies and sailing. Meet Jim Gilliam...

The Jim Gilliam bio...

I grew up in Oklahoma City through junior high school. In 1957 I remember the newspaper headlines of the Sputnik launch and the concern on my parent's faces as they discussed it. I read a lot of science fiction as a kid and belonged to a model rocket club. Have always had an interest in space and fed that need as a boy.

In 1960 my parents moved to Indiana where I attended high school and college. In 1970 I graduated from Purdue University after surviving a diversion with Uncle Sam as a helicopter pilot (those were the days of conscription). Shortly before my discharge I watched fellow alumni Neil Armstrong walk on the Moon. A formative event

for those of us who saw it.

After a few years in Louisville in post baccalaureate study and graduate school, I divorced and moved to Dallas to work with the criminal district courts. I completed my Master's degree through Abilene Christian University and taught criminal justice classes while working. For years I had a dream to go sailing and had sailboats on lakes around Dallas. I finally made the decision to buy a big boat and quit work, talking two friends into quitting their jobs, moved to Clear Lake and lived aboard for a year getting it outfitted for cruising. I got a job through a contractor at JSC and worked on STS-1 until launch. We certified the TACAN for launch. I then sailed the US Gulf Coast and Caribbean for two years.

After returning to Houston I managed drug treatment programs for parolees with a United Way agency and eventually published a book on drug abuse in the workplace. I taught classes on seamanship, handgun defense and dance. I spent 5 years as a docent with MFA/H.

In 1997 I moved to Galveston to work with the state rehabilitation commission. Took my first astronomy course at COM with Chuck Budenhagen through whom I met Judy James, director of the Brazosport Planetarium. I joined the Brazosport Astronomy Club and avidly studied all things cosmic which continues to this day. Started teaching a class at Galveston College on astronomy and finally had enough students to start Galveston Stargazers. Since the owner was one of my students, we have the unique distinction to be the only astronomy club in Texas to meet at a donut shop. Among other ac-

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tivities we conduct monthly star party's and sidewalk astronomy on the Seawall for education and public outreach. I'm occasionally asked to give local presentations on astronomical topics and continue my participation with the Brazosport club. They are very active with school programs in the Lake Jackson area.

Club (and personal) Goals:

- Introduce people to the universe.
- Develop an interest in them for science, astronomy.
- Educate them on the evolution of the universe, its structure, composition and eventual fate.
- Fulfill my own desires for understanding and spiritual satisfaction.
- Facilitate my fellow club members growth.

Notable characteristics/experiences:

- Diverse and eclectic education, professional work experience and interests (science and liberal arts).
- Have always been a teacher, regardless of job title.
- Have always been a student, regardless of age.
- Have had two seminal experiences related to astronomical insight that helped steer me towards an interest in astronomy and understanding the cosmos. I call them moments of "Cosmic Whiplash" and talk about them in my presentations.

The Jim Gilliam interview...

Clayton: It is downright great to have you sit down with us here for an in depth interview for our readers. It's not every day that I get to chat with someone so enthused with amateur astronomy.

Which came first for you; the sky or the telescope?

Jim: Definitely the sky. The telescopes of my youth were only dime store toys for the most part. Whereas the sky has always been a source of amazement. What is it that we see when we look up at the nighttime sky?... only the rest of everything that is, at least what we can see of it. That's amazing.

Clayton: Do you think that by becoming involved in astronomy, it has somehow changed a direction in your life?

Jim: Not so much a direction as a perspective. One reason for me diving into astronomy was I decided I wanted some answers to questions I had about life in general before I left this mortal existence. I had not found them in conventional theology or philosophy, but science has always seemed to represent the truth. It certainly has changed the way I see the world.

Clayton: I know very little about the Galveston club. Can you give us a little history about how it came to be? Is there a webpage with details and contact info?

Jim: I have taught dance classes at Galveston College for years and know the folks in continuing education well. I proposed a new class in astronomy/star gazing and they accepted. Eventually we had enough interested participants to start a club. That's how we came to meet at Home Cut Donuts. The owner took my class. As far as a website, Karen Kahn (former Karen Nickle) was our web master for a few years, but she is no longer involved in astronomy. Now we're working to get on with the MoonFest folks. Best to contact me directly by phone or email at (409)539-5995 or star-dancer65@live.com.

Clayton: How hard is it to organize a new astronomy club? Where do you begin?

Jim: Not hard, really. Keep focused on what is fundamental which is to provide a platform to pursue your interest with like-minded people. You do need a place to observe which can be a problem, especially in a light polluted area like Houston. You can add the SIGs and all as you grow.

Clayton: Are you a visual observer only? Ever dabble into astrophotography?

Jim: For me it's about seeing something firsthand. I have used some video equipment for outreach and groups. It's especially effective with the detail you can see on the Moon. Unfortunately, I lost my equipment in the hurricane and have not replaced it yet. I just recently finished restoring my reflector.

Clayton: Where is most of your observing performed? Ever observe out at the HAS observatory near Columbus, TX?

Jim: I've never been to the HAS observatory, but that's on my list. We found the abandoned Outdoor Music Theater on the west end of the island by the state park which is reasonably dark. The new director for the park used to work at an observatory, so we are well received, and may develop some activities for the park visitors this summer. We also do a monthly outreach activity we call sidewalk astronomy on the Seawall. That's probably the worst place on the island for light pollution, but you have to go where the people are. They are still impressed with the Moon and any planets visible.

Clayton: Are you a telescope junkie like me? Tell

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our readers about your past, present, and possible future telescopes.

Jim: I am certainly susceptible to becoming a junkie, waiting for that next great telescope to come out. Only money restrains me. Personally, I have one of each: a refractor, reflector and catadioptric which I use for different purposes. Seems like I will use one for a while, then rediscover the others. I like to use my TMB with big binoculars for hunting down star clusters. The Schmidt, being f10, gives huge images of planets and is, of course, goto. It's great at schools for the Moon with video. Right now I'm enjoying having my dob back after it took 4 feet of water during IKE. I like Meade's idea of having a camera and audio information built in, although it seems geared for beginners and their QA may be inconsistent. How about some adaptive optics to improve our lousy seeing or built in display info you can toggle in the eyepiece? Last year I traveled to San Angelo several times to observe with those folks. Besides having magnitude 6 skies, they have a 30" reflector in a building that rotates. I was humbled.

Clayton: Do you have an amateur observing mentor?

Jim: I do not, although I wish I had. I started with the Brazosport Club years ago. They have a bunch of retired chemists and engineers with plenty of technical knowledge, but their warmth and acceptance of new people were what kept me coming back, even to this day. Neglecting the human relations element can make the difference between one club and another. Some clubs could learn from that.

Clayton: After reading your bio, it seems you have a great love for sailing. Ever combine the two, astronomy and boating? I suppose because of the boats movement in the waters that it pretty much limits your viewing to visual and/or binocular astronomy. How far south have you sailed?

Jim: You know, I was a sailing junkie before astronomy, but sailing fed the fascination with the night sky. Ever sail down the silver pathway the full moon makes on a calm sea? Inspiring. Late one night about 80 miles off the gulf coast of Florida, I went up to the bow pulpit before turning in after partying with friends from Dallas. The sea was perfectly flat and a thin fog hugged the surface obscuring the horizon. You could see the stars above clearly and they were reflected just as brightly in the water. From the bow I was surrounded by stars, above and below. That's what it would look like from space. Now, I knew we are surrounded by stars, although we only see them by looking up. I knew that, but I'd never seen it, until that moment. If we're lucky we get a few of those in life.

Clayton: How do you envision amateur astronomy in the next 10 years?

Jim: I'm sure the technology will continue to advance and hope the cost doesn't get out of control. Personally, I feel that Hubble has had a lot to do with the popularity of amateur astronomy.

It will be around for a while longer, and then we'll have the James Webb. What we will learn and see this next decade will be fantastic. That should bring more into the hobby to replace us old-timers. We can begin by doing more to interest younger people. Get some telescopes in the schools. And where are all the ladies? Maybe we need more wine & stars a la Haak.

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

Jim: As you can probably tell, I'm not a big fan of over-planning your experience. My advice: Go for it. Get what equipment you can afford and try to see and learn as much as you can handle. Eventually you'll figure it all out. That's one thing your fellow club members are for.

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

Jim: Sure, I'd be happy to hear from anyone, or to have visitors for our club star party or sidewalk. Again my email is stardancer65@live.com.

Clayton: Thanks Jim for taking the time to share your interest and thoughts within our HAS newsletter, 'The Guide Star'. We wish you luck with all of your astronomy and sailing interests. Please come visit our society when in the area, we'd love to see you.

Clear skies always!

Jim: Enjoyed it...

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

Observatory Corner

By Bob Rogers, Observatory Chairman

Hello everyone.

It has been a very busy time at the site since last month's Observatory Corner. On the weekend of April 25th, I had several members show up to install the new fence. We got all the H-braces and poles and T-poles into the



ground and strung up almost all the wire along the fence line. All that needs to be done is stringing up 3-300' lines of barbed wire to complete the fence. Everyone was too worn out by Sunday evening to finish the stringing. I will wait until the fall for cooler weather to recess the entrance and exit gates.



I want to thank the following volunteers for all their help—Don Selle, Mike Edstrom, Dana Lindstrom,

Ralph Walker, Lee Gibson, Rene Gedaly, Greg Barolak and Dale Mornigstar. Thanks everyone for your help. It was much appreciated.



The following weekend, HAS member Val Ricks brought out some Scouts from Troop 1940 (left) from the Tall Timbers District on Friday evening. Saturday morning, the scouts removed 2 dead trees, one from the picnic area and the other one from close to the



new fence (I didn't want our new fence destroyed by a dead tree). The trunk of the tree that was removed from the Picnic area was cut into the shape of a chair with a back rest. We were joking that we would put the light violators in "time out" on the stump because it faces the woods. Thanks to scouts Lane Bangerter, Donovan Brockhausen, Will Cutler, Chad Mourino, Andrew Nelson, Brett Nelson, and Jared Nysetvold. Scoutmaster is Trevor Nysetvold.



On the following weekend of May 14th, I hosted around 100 Cub Scouts and adults from Cub Scout Pack 312 (next page) from Columbus. Before they



arrived, Ed Fraini and I got the Bunk house cleaned out and we replaced one set of bunk beds



with a new set. In a few months, I will replace the other set of bunk beds. We are planning to sand, prime and paint the inside of the bunk house in the next couple



of months. It's amazing how much junk and trash that we cleaned out. Saturday night Ed Fraini, Jack, Sam and Isabelle Macdonough

along with John Lane and his wife came out and helped in the Observatory showing the Moon and Saturn to all the Scouts and adults. On Sunday morning, the Scout Troop removed 2 dead trees from the Picnic area and cleared brush from the exit road. Thanks everyone for all your help at the site. This makes 5 Scout groups that have been to the site this year, a new record for HAS.

After reading this month's article about all the dead trees, I want to point out that I have found out earlier this year that last fall there was an airborne fungus that was killing some of the weaker trees throughout the area. I'm hoping that we don't lose any more trees in the picnic area.

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

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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 use 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

Milky Way Safari

by Dana Coulter and Dr. Tony Phillips

NASA Space Place

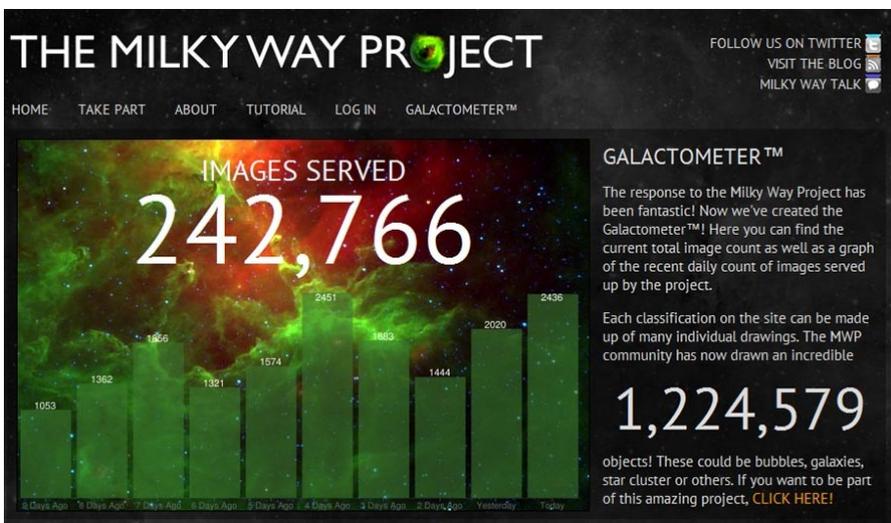
Safari, anyone? Citizen scientists are invited to join a hunt through the galaxy. As a volunteer for Zooniverse's Milky Way Project, you'll track down exotic creatures like mysterious gas bubbles, twisted green knots of dust and gas, and the notorious "red fuzzies."

pick up and find things that just look interesting. They're less precise, but very complementary to computer searches,

making it less likely we'll miss structures that deserve a closer look. And just the sheer numbers of eyes on the prize mean more comprehensive coverage."

Along the way the project scientists distill the volunteers' data to eliminate repetitive finds (such as different people spotting the same bubbles) and other distortions.

The project's main site (<http://www.milkywayproject.org>) includes links to a blog and a site called Milky Way Talk. Here "hunters" can post comments, chat about images they've found, tag the ones they consider especially intriguing, vote for their favorite images (see the winners at



Volunteers study infrared images of our galaxy from the Spitzer Space Telescope, identifying interesting features using the special tools of the Milky Way Project, part of the Citizen Science Alliance Zooniverse web site.

"The project began about four months ago," says astrophysicist Robert Simpson of Oxford University. "Already, more than 18,000 people are scouting the Milky Way for these quarry."

The volunteers have been scrutinizing infrared images of the Milky Way's inner regions gathered by NASA's Spitzer Space Telescope. Spitzer's high resolution in infrared helps it pierce the cloaking haze of interstellar gas and dust, revealing strange and beautiful structures invisible to conventional telescopes. The Milky Way Project is helping astronomers catalogue these intriguing features, map our galaxy, and plan future research.

"Participants use drawing tools to flag the objects," explains Simpson. "So far they've made over a million drawings and classified over 300,000 images."

Scientists are especially interested in bubble-like objects believed to represent areas of active star formation. "Every bubble signifies hundreds to thousands of young, hot stars. Our volunteers have circled almost 300,000 bubble candidates, and counting," he says.

Humans are better at this than computers. Computer searches turn up only the objects precisely defined in a program, missing the ones that don't fit a specified mold. A computer would, for example, overlook partial bubbles and those that are skewed into unusual shapes.

"People are more flexible. They tend to pick out patterns computers don't

<http://talk.milkywayproject.org/collections/CMWS00002u>), and more.

Zooniverse invites public participation in science missions both to garner interest in science and to help scientists achieve their goals. More than 400,000 volunteers are involved in their projects at the moment. If you want to help with the Milky Way Project, visit the site, take the tutorial, and ... happy hunting!

You can get a preview some of the bubbles at Spitzer's own web site, <http://www.spitzer.caltech.edu/>. Kids will enjoy looking for bubbles in space pictures while playing the Spitzer concentration game at <http://spaceplace.nasa.gov/spitzer-concentration/>.

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

Complete with Sketch Desk and Red Lighting

By Jim Wessell

Part 4 of 7

This Month: Construction of the Astronomers stool support.

A good leg (or four) to stand on

Earlier, I outlined the construction of the pedestal that forms the adjustable support for the seat, but that structure alone is insufficient to prevent the stool from falling over. In Rod Nabholz's original design, he used four 14", 2 x 4s attached on each of the bottom sides of the pedestal to increase the size of the footprint and add to the overall stability. John and I scaled up the legs for my considerably larger stool to 18" apiece and rounded the upper outside corner of the legs.



One thing that I have noticed and utilized post construction is that the top surface of the legs are a ready and available built-in mini step stool, even for someone of my height, when the chair is nearing maximum extension. Here's a picture of the four legs.

We felt that my weight at the top of the stool against the limited surface area of the connection point between the 4 legs and the pedestal (and the limited screws) was just setting the scene for a leg to either start to loosen causing the whole stool to become unlevel or the leg breaking off entirely. Both from a safety standpoint and from a stability issue, we wanted a bit more security in our design. So we made four plywood buttresses that were equal in height the central pedestal and went roughly 2/3rds the way out to the distal tip of the legs. The picture (right) gives an idea of their shape.

The next step was to attach the buttresses to the legs. We used glue and eight 1 1/2" woodscrews, and regularly spaced them along the length of the leg. Two of these leg and buttress combinations were permanently attached to the central pedestal through the use of glue and 3" wood screws. The picture (right) shows a single leg and buttress unit attached the pedestal.



to



to

For the purpose of clarity let's call these permanently attached legs the 'Lateral Legs' (primarily because they lay down in a side-to-side position in my car's trunk). I'll cover the 'Vertical Legs' in a bit more detail, later. This entire unit (the two permanent [lateral] legs and the central pedestal) plays an important role. This solidly constructed backbone is the strongest part of the entire stool assembly, and is the logical place for drilling the height adjustment holes, as the heavy hex bolt passes through 4 pieces of wood. The layers of wood are reinforcements for each other, and they, along with the pin, support the weight of chair and my 230lbs. I am confident in our robust construction effort, and that a catastrophic failure is absent in the resultant product. The image below shows the entire permanently assembled unit - complete with the pin placement holes, and the pin itself in the middle height position. Not shown are a pair of handles (for ease of carrying) that were later attached near the top after the picture was taken.



This picture shows the opposite side where the height adjustment pin protrudes. You can see the pin itself has been drilled to accept a retaining pin, which locks into place preventing the bolt from being able to be removed

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What's Up?

News about HAS members and Astronomy Events in Houston

Tom Williams (HAS Member) and Michael Saladyga will have a new book available in June. It's named ***Advancing Variable Star Astronomy: The Centennial History of the American Association of Variable Star Observers***. This book is about the 100 years of history of the AAVSO from its founding in 1910 . Available for pre-order from amazon.com.

Clayton Jeter (HAS Member) will have a **new interview in the Astronomical League *Reflector* magazine** in June. The article, called *Looking* will be an interview with Don Macholtz, the comet hunter.

Bill Pellerin (HAS Member) has a new article on the Astronomical League web site (astroleague.org) called ***The (Near) Future of Amateur Astronomy***.

Steve Goldberg (HAS Member) did an **interview** on the astronomy.fm web site about the Texas Star Party. It was recorded at 8:00 p.m. Houston time on 5/11/11 and will

be available as a podcast on astronomy.fm.

Steve Goldberg has been awarded the Astronomical League pin for completing the ***Universe Sampler* program**.

Note that the HAS Meeting for June has been moved to June 10 — many HAS members will be at the Texas Star Party which runs through May 5.

The HAS web site is going to be updated in the next few months.

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

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easily, and a large flat washer that protects the surface of the wood.

Now I return to the vertical legs. They were cleverly designed to be entirely removable (so that my trunk lid can close) for transport to distant dark sites. The vertical legs are the same construction as the lateral legs – nothing is changed there,



but they have been drilled through the legs' 2" x 4"s (and the center pedestal too,) to accept 4 threaded rods (1/4-20 X 8 1/2"). These threaded rods are below the lowest possible setting of the height adjustment pin, so there is no chance of conflict. Both ends of the rods have appropriate sized flat

washers and wingnuts which are only finger tightened for final setup prior to observing. The plywood buttress portion of the legs is considerably thinner, and for attachment here we used 4, 1/4-20 X 5 1/2" bolts which were drilled into positions so that they would not impede

the placement of the height adjustment pin which is perpendicular to the axis of the bolts.

Shown (left) is a view providing the best angle for emphasizing the removable legs and their hardware.



Next Month: Making a sketch desk and painting the assembly.

Shallow Sky Object of the Month

NGP—North Galactic Pole

By Bill Pellerin, GuideStar Editor

Object: Sky Location

Class: Interesting point in the sky

Constellation: Coma Berenices

Magnitude: Nearby star is 5.0

R.A.: 12h 51 m 26 s

Dec: 27 deg 07 min 42 sec

Size/Spectral: a point in the sky

Distance: n/a ly

Optics needed: Any Telescope

Why this object is interesting:

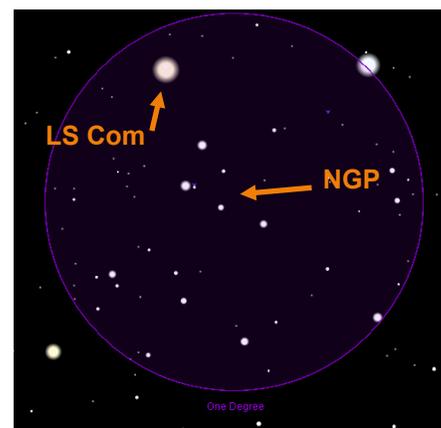
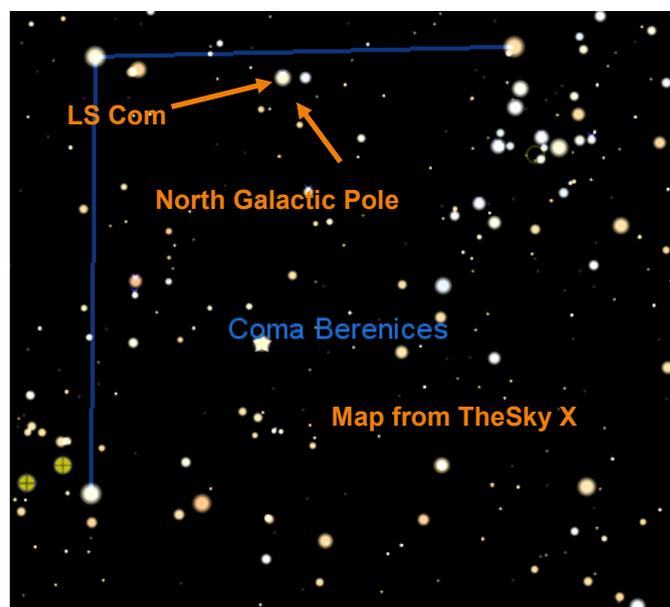
This is the first observation in this series where you won't be able to see the 'object' no matter what size telescope you have.

LS Com (also known as 31 Com) is the brightest star closest to the NGP. It's a variable, but it doesn't vary by much, so look for this approximately 5th magnitude star about 20 arc minutes from the Northern Galactic Pole. This is the realm of the galaxies, so don't get distracted by all the bright (?) galaxies nearby.

In at least one reference I found that LS Com is referred to as the northern galactic pole star, although it's a bit off from the actual pole.

What this represents is a point that is perpendicular to the plane of the Milky Way, and is, therefore, the point in the northern sky that is farthest from any of the stars in the plane of the Milky Way. When you look here, you're looking out to the depths of intergalactic space.

This is in the general direction of the Coma Cluster of galaxies. If you lived on a planet orbiting a star in one of the Coma Cluster galaxies, you'd see the Milky Way galaxy face on. What a sight that would be.



The North Galactic Pole is at the center of this one-degree circle.

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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Advertising: Advertisers may inquire concerning ad rates and availability of space.

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, June 10

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.