Houston Astronomical Society

GuideStar

August, 2007

At the August 3 meeting...

Triple Nickel

Jack 'Triple' Nickel

Triple Nickel is a retired Air Force fighter pilot. He joined NASA in 1989 and helped the astronaut community learn how to fly and land the space shuttle. He has also been the pilot on the weightlessness training aircraft, sometimes called the 'Vomit Comet'.

Triple Nickel

Triple is now, among his other interests, an amateur astronomer. In the mid 1990's he built his own telescope and began a lifelong interest in astronomy. He is a member of the Johnson Space Center Space Club.

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 cover for a map to the location.

Novice meeting: ..... 7:00 p.m.
Aaron Clevenson- "The Life of Johnnes Kepler"

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: Doug McCormick ..... H: 281-996-0177
Treasurer: Bill Flanagan H:713-699-8819
Past President: Steve Sartor .....

Additional Board Members

	Liaison responsibility
Steve Goldberg	713-721-5077
Brian Cudnik	
Allen Gilchrist	
Don Pearce	713-432-0734
Bram Weisman	
John Missavage	

Committee Chairpersons

Audit	Tom Blocker	
Education	Richard Nugent	
Field Tr./Obsg	George Stradley	281-376-5787
Novice	Justin McCollum	
Observatory	Bob Rogers	281-460-1573
Program	Don Pearce	
Publicity	John Missavage	
Telescope	Bram Weisman	
	Paul & Kay McCallum	
Welcoming	Lee Lankford	

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, imm ediate family members of a Regular Member, have all membership rights, but do not receive publications. Sustaining members have the same rights as regular members with the additional dues treated as a donation to the Society. *Sky & Telescope* mag $32.95/year, *Astronomy* mag $29/year -- see club treasurer.

Membership Application: Send funds to address shown on outside cover of *GuideStar*. Attention - Treasurer, along with the following information: Name, Address, Phone Number, Special Interests in Astronomy, Do you own a Telescope? (If so, what kind?), and where you first heard of H.A.S.

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Special Interest Group Listing

Any member who wants specific information on a SIG listed below may call the listed individual. Also, see the "Ad Hoc Committee Chairpersons" on the inside front cover and the "Special Help Volunteers" listing (not in every issue).

Advanced	Bill Leach	281-893-4057
Comets	Don Pearce	713-432-0734
Lunar & Planetary	John Blubaugh	713-921-4275
Occultations & Grazes	Wayne Hutchison	713-827-0828

Other Meetings...

Fort Bend Astronomy Club meets the third Friday of the month at 8:00 p.m. at the First Colony conference Center. Novice meeting begins at 7:00, regular meeting begins at 8:00. Web site: http://www.fbac.org

Johnson Space Center Astronomical Society meets in the the Lunar and Planetary Institute on the 2nd Friday of each month. Web site: http://www.ghg.net/cbr/jscas/

North Houston Astronomy Club meets at 7:30 p.m. on the 4th Friday of each month in the Teaching Theatre of the Student Center at Kingwood College.Call 281-312-1650 or E-mailbill.leach@nhmccd.edu. Web site: www.astronomyclub.org

August/September

Calendar:

Photo by Scott Mitchell

Date	Time	Event
August		
3	8:00 p.m.	HAS General Meeting, U of H
4		Instructional Star Party, Columbus Observing Site
5	4:21 p.m.	Moon at Last Quarter
11		Prime Night, Columbus Observing Site
12	6:02 p.m.	New Moon
13	1:00 p.m.	Neptune at opposition
		Perseid meteors peak (early a.m.)
20	6:54 p.m.	Moon at First Quarter
28	5:36 a.m.	Full Moon
		Lunar Eclipse, visible locally in early morning
September		
2	4:00 p.m.	2 Pallas at opposition
4	9:34 p.m.	Moon at Last Quarter
8		Prime Night, Columbus Observing Site
9	2:00 p.m.	Uranus at opposition
11	7:44 a.m.	New Moon
15		Annual Picnic, Columbus Observing Site
		Star Party, Columbus Observing Site
19	11:48 a.m.	Moon at First Quarter
22	4:00 a.m.	Mercury 0.10 degrees North of Spica
23	12:00 a.m.	Venus brightest for this apparition, Mag -4.6
	4:54 a.m.	Fall or Autumn Equinox
26	2:46 p.m.	Full Moon
27	7:30 p.m.	HAS Board Meeting, Houston Chronicle Building
29	11:00 a.m.	Mercury at greatest elongation east

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

***GuideStar* deadline for the September issue is August 15**

Check the web site:

www.astronomyhouston.org

Webmaster: Kay McCallum

KayMcCallum@MccLibrary.net

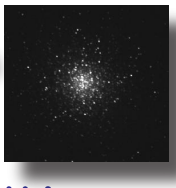
The Houston Astronomical Society Web page has information on the society, its resources, and meeting information.

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 KayMcCallum@MccLibrary.net.

Special "Help" Volunteers

Any member who wants specific information on an astronomical topic may call special help volunteer (listed in most issues of the *GuideStar*). If you have a moderate knowledge of a special subject and would be happy to have others ask you about that subject, let the editor know and your subject, name and phone will be listed in *GuideStar* in the future.

Observations... of the editor



by Bill Pellerin, GuideStar Editor

I got a new computer

I got a new computer and ended up violating my own rule about how long I'm willing to work on a gadget before giving up. Computers are a high care-and-feeding item, though, and I expected that getting it set up and operational would take some time. It did.

Lousy for observing

Has this been a lousy observing time, or what? Awful, just awful. The last full night of observing from Houston or west of Houston was June 9. It's now July 21 as I write this! Yikes!!

All we can do at this point is dream of a good observing night.

Last night, July 21, 2007 wasn't really what you'd call clear. I could see some stars, but the sky was very hazy and there was a large glow around the moon. If I had gone to the trouble to set up the telescope I would have been able to see a few, bright sights. Anything that was even slightly dim would have been invisible.

I saw VZ13 Linear - July 12

I did manage to see the comet VZ13 Linear last weekend. I was in the hill country and I had my small (10x30) binoculars with me. I also had a chart showing where the comet would be over a several day period. So, I'm *sure* that what I saw was the comet, but it wasn't very bright -- not as bright as I thought it would be. The information that I had said that the comet would be magnitude 7.7 or thereabouts, so I thought it would be easier to find than it turned out to be.

Discovery Channel - If We Had No Moon

I can recommend to you the Discovery Channel program *If We Had No Moon*. I am not a subscriber to any cable service, but I heard of this program and was able to rent it from Netflix. The program discusses the origin of our Moon and the impact that the Moon has had on the earth. If you think that the Moon exists only to disrupt your observing program, you'll enjoy this program.

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

..Bill

billpellerin@sbcglobal.net

Mark Your Calendars!!!

Here is the schedule for future 2007 field trips to our Columbus observing site:

September 15
December 01

Each of these dates is a Saturday, and the September 15 outing will coincide with the HAS Annual Picnic.

We will be inviting members of all the area clubs to each event as we did in March (the turnout was great!).

There will be a laser tour of the constellations to begin the evening, and the observatory will be staffed for telescopic tours as the sky darkens. We will have "light windows" for those who bring families and would like to leave a little early.

Please mark your calendars, pack your gear and observing list, and come on out. Our website www.astronomyhouston.org will keep you up to date on details as they are developed.

See ya' there,

***George Stradley*, Field Trip / Observing Coordinator**
stradley@sbcglobal.net

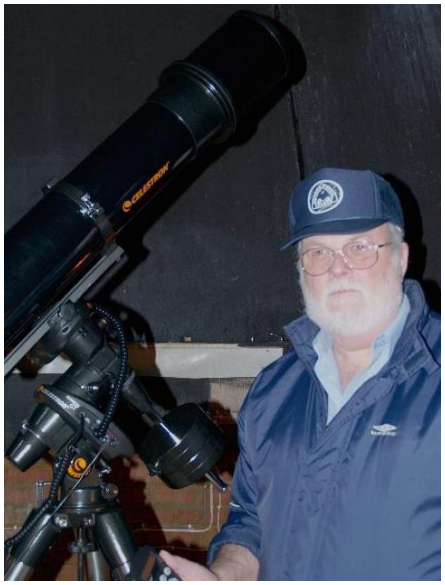
Just Looking

A *GuideStar* Interview by Clayton L. Jeter

Brian States - Guilford Astronomical Society

I remember the exciting night at our HAS monthly meeting back in the spring of 1987 when our club's president, Lee Cain introduced Brian States, from England's "Guildford Astronomical Society". Brian traveled from England to represent his club for the twinning of our societies. It was quite a memorable event for us all. When I contacted Brian for this interview, I was surprised at how long ago this event occurred. The time has passed by so quickly. When Brian visited us that evening, he was President elect and editor of the "Skywatcher" magazine of his society. As I read Brian's interview, I was quite surprised at how little I knew about him. I know you'll find this amateur from across the Atlantic very interesting. He seems to be very clear-cut about his love for astronomy…like us all.

Bio:
I was born in 1944, one of three children. I was educated until the age of 15 in state school, and then went on to further education at Guildford Technical College as part of my apprenticeship to become an automotive engineer. I completed this at the age of 21 and worked on cars of all types before moving on to heavy vehicles, where I ended up carrying out heavy vehicle recovery. An inherent back problem put paid to my career as an automotive engineer.



Caption Brian States; December 28, 2006

I ran my own chauffeur car business for a few years, before going into teaching automotive engineering. In the late 1970's I spent a period driving race-cars.

I married Rosemary in 1971 and have three children, Deborah and twins Jennifer and Jacqueline.

In 1980 I visited a friend who didn't have a hobby and we decided to take up astronomy. I started off with a 60mm "Tasco" refractor on a wobbly tripod. It wasn't much of a telescope, but it did awaken my interest in astronomy to go further, and gave me views of the Moon, Saturn, Jupiter and Mars.

A colleague told me to buy the most expensive mirror I could afford, and then build a telescope around it. As a result, I purchased and built a 12" f 6.5 Newtonian. I mounted it in a Dobsonian designed mount and spent many hours viewing the night skies. At around this time I joined Guildford Astronomical Society, a decision I never regretted. I met many wonderful folks, who were very helpful. In particular I met Larry and Bessie Wadle from Houston. Larry was also member of GAS.

It soon became obvious that observing out in the open air was not a good idea. The weather here in Guildford can get very cold in the winter, and the slightest breeze would buffet the telescope, so I decided some sort of building was required to house the telescope. An astronomy friend, Dave Dyer and I designed a domed observatory. I could not afford to buy a ready made one, so we decided to build one out of wood. This was eventually done, the building frame being made out of 2"x2" timbers, and the curved ribs of the dome cut from plywood and covered with hard board (known to Americans as Masonite). The dome was 12 feet across and ran on wheels for a full 360°. The observatory became known as the States–Dyer Observatory (S.D.O)

Our friend Larry Wadle and his wife Bessie returned to Houston in 1983 and I suggested that it would be a good idea to "twin" our two societies in line with a well known habit in this country of towns twining with other towns around the world for mutual benefit.

My wife, three daughters and I flew to Houston in May 1987, and visited many places of interest during our four week stay – including a visit to the HAS Observatory site at Columbus, (I remember Paul Sventek

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showing me a cataclysmic variable in his 10" Newtonian), the Astrodome to watch the Astro's play the St Louis Cardinals, the Houston Museum of Science, spent a morning with the Houston Police Department, visited the Alabama Coushatta Reservation, Natural Bridge Caverns, San Antonio and the Alamo and the Texas Star Party, where I was fortunate enough to meet Clyde Tombaugh, and Larry got us access to a 30" at McDonald.

During our stay we met many wonderful people in Texas and this culminated on the signing of the Twinning Charter between HAS and GAS with Lee Cain and myself. There is a copy of this charter in my observatory and the Guildford Astronomical Society Observatory. I believe the other two are in Texas with one at the Columbus site. By this time I was a Fellow of the Royal Astronomical Society, Webb Society, British Astronomical Society, Society for Popular Astronomy, Guildford Astronomical Society and Worthing Astronomical Society.

We also met HAS member, Leland Dolan with whom we have communicated ever since.

On our return to the U.K things went on much as usual until in October 1987 the south of England was hit by a hurricane which caused a lot of damage and devastation – including the S.D.O. It has subsequently been rebuilt on two occasions to its final current specification. In the 1980's and 90's the observatory housed the 12" f6 Newtonian and 8.75" f7.5 Newtonian piggy backed on the same mount. Back in the days of the visit of Halley's Comet in the late 80's the observatory had been open to the public for viewings, and still today we have visitors come around, and I enjoy very much showing them the wonders of the night sky. I was scanning through the S.D.O's visitor's book a few days ago and a certain astronomer from Houston had written that just maybe the skies in Guildford were as good as those in Texas. It can be occasionally.

We returned to the USA in 1991 landing in Miami and driving through several states to arrive in Houston on July 4th of that year. We joined the NASA Astronomical Society and Houston Astronomical Society for a trip to Puerto Vallarta for the total eclipse. We stayed at an old airfield Santiago Ixcuintla and saw all 7 minutes of the eclipse.

In 1993 the first of our four grandchildren was born, the last being March 2006.

Since the first S.D.O was built the skies in Guildford have deteriorated badly thanks to the advance of sodium lights, and I have become in the main a solar observer with my data being sent to folks in the U.K and the USA, but I still enjoy night observing, weather permitting.

At Christmas 2003 I took semi-retirement from my position as a lecturer in automotive engineering at Brooklands College, and now only work there three days a week, but not lecturing, but I do work for the British Red Cross, so am still kept busy.

My back problems have resulted in me re-thinking what telescope I can use. I can't climb ladders to the eyepiece any more, or crank my neck round to look through the Telrad or finder. I seriously considered a large aperture Meade SCT GOTO, but could not justify the cost. In the end I purchased a Celestron C6RGT on a GOTO mounting with GPS. At the time of writing (December 2006) I have only managed to use it once due to the vagaries of the English weather. I have also recently purchased a pair of Revelation 15x70 binoculars – they are awesome.

Attached to the SDO was my office, which I have now outgrown, and so I now have a 14-foot square, fully insulated, climate controlled log cabin, which should be OK for a few years.

In addition to astronomy my other main hobby is genealogy, this I started in 1987, after the death of my father in 1985.

The Brian States interview:

Clayton: It was great to have you over here for the twinning of the societies in 1987. What do you remember most about that evening?

Brian:Could I firstly say that I consider it an honor to be asked to be included in this Guidestar project, when so many eminent astronomers are associated with HAS. I remember eating with my family and members of HAS in the Black Eye Pea before the meeting, and meeting lots of wonderful folks, and I just can not remember them all. However, I have remained in contact with a few. It was the first time that I had spoken in such a large auditorium, and I guess that I found that a little intimidating for a while. I was also impressed with the way that HAS meeting are organized. If you look at the Twinning Charter Lee dated his signature as 6/5/87 and I signed with a date 5/6/87 – this shows one of the interesting differences

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between out two countries – the date format. An unknowing person may look at the charter and think that it was signed a month apart.

Clayton: Astronomy seems to be a big mind-expander for the observer that can change ones ideas and perceptions. Do you think that by becoming involved in astronomy, it has somehow changed the direction of your life?

Brian: Without a doubt. At various times in your life you come to a fork in the road, and have to make a decision as to which way to go. After I gave up racing cars, I came to such a fork in the road of my life, and it resulted in me becoming and amateur astronomer and making friends that led to our visit to Houston in '87, and to making many other friends that I would otherwise not have met. Astronomy has given me a new prospect on life, and enabled me to be more relaxed with life, and put things in perspective – the cosmos has a habit of making one feel very small.

Clayton: You mentioned meeting Clyde Tombaugh at TSP, has your club had any well known professional or amateur astronomers to attend your meetings? Anyone we might know?

Brian: Meeting Clyde was a highlight, but I am not sure what he would make of what has happened to Pluto recently. We have had several professional astronomers give presentations at our GAS meetings over the years including Sir Patrick Moore, Dr. John Mason and Heather Couper, who have all – I believe – visited HAS. We have a few members of GAS that are well known over here in the U.K, but I cannot think of anyone who would be known in Houston as a professional astronomer.

Clayton: Do you have a favorite type of object that you prefer to observe?

Brian: I think that everything I observe becomes a favorite the first time I observe it, but I suppose that the Whirlpool Galaxy in Cannes Venatici would be a favorite, and was observed on an evening down at the McDonald Observatory back in '87 using one of their big telescopes. The Double Cluster in Perseus (NGC889 and 884), the planet Saturn has to be in the list also. Everything I look at in the night sky has an appeal to me. I guess that I am known here primarily as a solar observer, mainly due to the night skies. I know that some astronomers don't think of solar observing as astronomy – but then I guess it takes all types to make a World.

Clayton: You listed the telescopes you have used in the past, but tell us how you find those faint "fuzzies". Do you have a special technique?

Brian: You have to remember that over here where my observatory is, the skies are pretty badly polluted, but on a good night I can just about find the full Moon. Seriously though, I usually tended to star hop - I have never been really able to get on very well with setting circles which others find very easy to use. Before the purchase of my new Celestron recently which has GPS and GOTO, I used a Telrad and finder combination, and this worked quite well plus a reasonably good idea of where things are in the night sky. I always felt that the best way to observe was to find the objects using the traditional methods of finder and sky knowledge. But a lot of observing time can be lost looking, and so I have reluctantly gone the GOTO route, and will now be able to spend all night, looking at what I looked for all night.

Clayton: Other than your observatory, is there anywhere else you observe? Do you attend star parties?

Brian: Actually, the only official star party I ever attended was the TSP in '87, although there are several held here in the U.K throughout the year. Most of my observing is done at the SDO, but I do join members of the Guildford A.S for observing sessions. These are sometimes at the GAS Observatory site and sometimes at a local area with dark skies. Occasionally I observe with the members of Worthing Astronomical Society down on the south coast.

Clayton: Are any of your family members interested in your hobby? Are they observers too?

Brian: My wife is very supportive, and occasionally when there is something special to see, such as a new comet, she will venture out and have a look. She has also made countless cups of tea or coffee and supplied biscuits (cookies) for visitors. However, she cannot spend much time at the telescope because she suffers from arthritis. My three daughters have a passing interest on astronomy, and one of them has recently expressed and interest in doing astrophotography through the telescope. My grand son was very interested, I even gave him a Celestron telescope but now at the age of thirteen, other things seem to be taking over.

Clayton: Do you have an amateur observing mentor?

Brian: I used to have a mentor. He was Leslie F Ball, who was a famous lunar cartographer, and astronomical artist. He illustrated lots of Patrick Moore's early

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books. He lived close to me here in Guildford and we became very good friends. I owe much of my observational skill and limited art ability to Leslie. His death was a particularly bad blow to me – he was a true amateur astronomer and English gentleman.

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

Brian: Yes – learn the sky first. Use a star map and start with a decent pair of binoculars. If you get fed up with astronomy, you still can use the binoculars for other things. Join your local astronomy society or club and make friends of observers – their experiences will make your experience much more enjoyable and rewarding. Amateur astronomy can be a lonely task at the telescope – knowing your subject makes it far more enjoyable. Never be afraid to admit you don't know, and ask. Before you buy a telescope, ask the experts, those who actually use them and you will not waste your money. The best telescope for you is one you will use. I heard of many telescopes abandoned at observing sites and never or very occasionally used, or stored in the attic.

Clayton: Many years have passed since our two societies were joined together to provide mutual benefits to one another. It seems that at the present time, our clubs do not communicate on a regular basis to share our love of astronomy. Do you have any suggestions on how we could better communicate this impressive idea to promote astronomy?

Brian: I think that many members of astronomy clubs, are loners, and just want to come to meetings to learn more about the subject. However, in every club, there are those who are really serious, the society driving force, and they are the ones that need to be targeted to work on projects between our two societies. I am sorry that the twinning did not take off as was intended. I remember that I used to send articles for Guidestar for several years, but when others in our society took over, this seemed to stop. I left Guildford A.S for a few years, and was saddened when I returned to find that things had not improved. I know that our current secretary wants to rekindle the project, so I guess that now is the time. As a solar observer I would be only too pleased to share my data and observations with HAS if I thought the membership would be interested.

I manage to keep up to date with what is going on in HAS via the *GuideStar* on the WEB.

Clayton: Have you any plans of coming back to the US for another visit? What would it take us to bribe you? Ha!!

Brian:My wife and I would love to come back to the U.S.A some time and to Houston in particular. I would like to observe again at Columbus, to attend an HAS meeting, get back together with friends. My family and I have actually been to Houston not only in 1987, but also in 1991, 1998 and 2000. Now that I am semi-retired, I do have more time on my hands, but it would take a year or two to save up the funds to make the trip. Next year would have been good to celebrate twenty years of twinning.

Clayton: Thanks Brian for taking the time to share your astronomy interest with us for our monthly HAS newsletter, The *GuideStar*. We wish you luck with all of your astronomy interests. Please come visit our society for fun, friends, and great observing.

We would love to have you visit us again on this side of the big pond. Be sure to tell the Guildford Society membership "Howdy" from its twin club here in Texas.

Clear skies, always.

Shallow Sky Object of the Month

95 Hercules

Object: 95 Her
Class: Double Star
Magnitude: 4.3
R.A.: 18 h, 01 m, 30 s
Dec: 21 degrees, 35 minutes, 44 seconds
Distance: 470 light years
Constellation: Hercules
Optics needed: Small telescope

Why this object is interesting.

If you've received the August issue of *Astronomy* magazine, and read Glen Chaple's article you'll find that I submitted an observation of this double star, about a year ago in which I call the colors of the two stars that constitute the double "blue-white and amber". To be honest, I don't remember sending in this observation. I need to look at 95 Her this year and see what it looks like. You may wish to check it out yourself, because there's some controversy about the colors of the two stars.

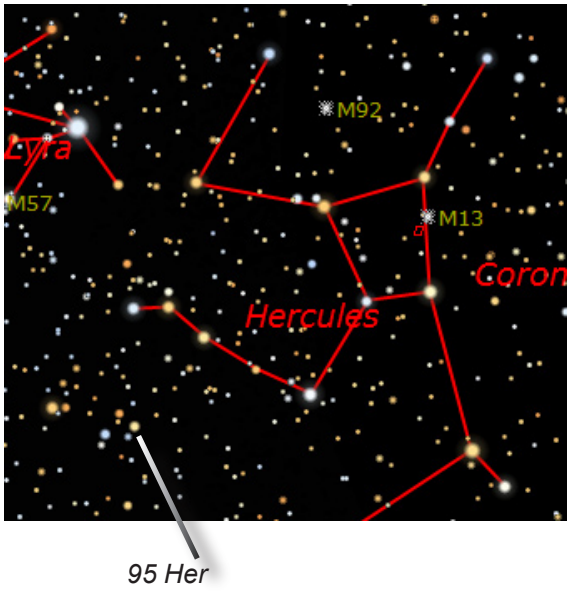
Other observers have described this double as having green ("apple green") and red ("cherry red") components. I can't say that I've ever seen a star that I'd call green, but I *would* expect that I'd see a green star from time to time. The reason is that our eyes are most sensitive to green light. In truth, there's so much light of other colors coming from stars (including the Sun) that the green light is overwhelmed by the other colors.

I have a 'V' band filter for doing variable star photometry. The 'V' means 'visual'. What color is it? It's green!!

Officially, 95 Her A is a class A (white) star and 95 Her B is a class G star (slightly redder than our Sun). 95 Her B is past its hydrogen fusing stage and is currently fusing helium to the heavier elements oxygen and carbon.

Both of these stars are close to 5th magnitude, so they're nice and bright. The separation is 6.3 arc seconds -- close enough to be interesting, but far enough apart to make the pair easy to split. The combined brightness is at magnitude 4.3, which would be easy from a reasonably dark site. Studies indicate that this is truly a binary pair, because the pair of stars is moving through space together. (This is called the 'proper motion' of the stars.) They are also the same distance from us, and are, therefore, near each other. With what we know about the pair the orbital period would be approximately 11,000 years, so we'll have to keep watching for a long time to see any movement.

You're probably aware of the fact that many celestial objects are known by multiple names. This is confusing, to



Finder Chart for 95 Her
From TheSky V6

say the least. It seems that just about every large-scale observing program has produced a catalog of objects. 95 Her is a designation from the Flamsteed catalog, put together by John Flamsteed in the 1600's The stars were numbered west to east in the constellation These designations were usually used after all the letters of the Greek alphabet had been applied to naming stars. The scheme there was that Alpha is the brightest, Beta is the second brightest, and so on. This isn't always accurate, though.

For what it's worth, 1 Her is also known as SAO 45772 and is located at 15h, 52m, 41s and +42 degrees, 27 minutes. It's a 4.6 magnitude star, so it'd be easy to see. I have not checked out all the stars between 1 Her and 95 Her, however. If you do this, let me know what you find out. Are they in proper RA order?

How can I learn more about the Astronomical League?

Amateur astronomers from across the country benefit from perusing the many pages of the Astronomical League's website, www.astroleague.org. Naturally, this is the place to go if you're looking for information about upcoming events and League news. But there is so much more...

Want to learn all about one of the great League observing programs? Go to www.astroleague.org/observing.html.

Do you know of a worthy candidate for one of the many League awards? Look at http://www.astroleague.org/al/awards/awards.html.

Are you interested in buying a particular book about our fascinating hobby? Then go to www.astroleague.org/al/bookserv/bookserv.html.

There is even something to help your club function better. Try www.astroleague.org/al/socaids/socaidid.html

Make the most of your Astronomical League membership! **To find out more about what the Astronomical League offers you, why not log on to www.astroleague.org today?**

Membership Renewals...

Your membership is renewable on January 1 of each year.

Total yearly dues are $36.

If you paid your dues any time in 2006, your payment for 2007 was due as of January 1, 2007.

Magazine subscriptions can be renewed at any time and the renewal does not need to be synchronized with your HAS dues.

Membership in the Houston Astronomical Society is one of the great bargains in Astronomy.For a regular membership of $36 you get the opportunity to support an active and growing organization, you get the monthly *GuideStar* newsletter, and you get access to the outstanding H.A.S. observing site near Columbus, Texas. (You must attend an orientation, given monthly, to use the site.) And, after two months of membership you can borrow, at no charge, one of the Society's loaner telescopes. It's the best deal in town, we think. Please renew your membership when it expires.

Encourage other astronomy enthusiasts to join the organization as well. It's a great group.

Thanks!

Want Ads

For Sale: Celestron Starhopper, 8" Dobsonian Telescope
$250.00, Kerry Warner, 713 784 7673

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

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

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

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

For Sale: Celestron Sky Master binoculars
11 X 80 Astronomical Binocular with original carrying case. Celestron Photographic Tripod (crank up) in original box. Both items purchased new and gently used a few times. $250 or best offer.
George Sellnau
713-978-7774, gsellnau@aol.com

Email your ads to Kay McCallum, our Webmaster, at KayMcCallum@MccLibrary.net

August's A.M. Total Lunar Eclipse

by Leland Dolan

In the predawn hours of Tuesday, Aug. 28, 2007 the Full Moon will pass into Earth's shadow, producing a total lunar eclipse. If the skies are clear it will be worth getting up early, even though this is a work-day. As seen from the Houston area, the entire total phase will be visible. To see the end of totality, you'll need a low horizon in the west...

Time	*Phase*	*Altitude*
2:54 a.m.	Earth enters Penumbra	42°
3:52 a.m.	Partial Eclipse Begins	34°
4:52 a.m.	Totality Begins	24°
6:23 a.m.	Totality Ends	07°

All times of events (in the accompanying table) are given in Central Daylight Time. Note that, while Earth enters the penumbra at 2:54 a.m., you will not see any darkening of the Moon at this time. According to the August issue of *Sky & Telescope* (page 51), the penumbral shadow first becomes visible about 3:20 a.m.

Your best observations (as well as photography) will be during the hours before totality, into and including the first half of the totality, as the Moon becomes increasingly lower in the West-southwest and emerges from totality only seven degrees above the western horizon. You won't see the end of the partial phase, because Moonset occurs at 7:03 a.m., and the partial phase doesn't end until 7:24 a.m. However, an hour-and-a-half of totality is definitely worth watching. Happy Observing!

Logo Sales

In addition to all the other cool stuff that Judy Dye has available in Logo Sales, the 2007 "Observer's Guide" is available. This book is a must-have for planning your observing in 2007, so if you don't have your copy come to the meeting, see Judy, and buy one.

All checks should be made out to HAS for the correct amount, and mailed to Judy Dye, 12352 Newbrook, Houston TX 77072-3910. If there are any questions, please call. Our phone number is 281-498-1703.

Judy Ann Dye

Minutes
of the July, 2007 Meeting of the
Houston Astronomical Society

General Announcements:

The July, 2007 meeting of the Houston Astronomical Society was called to order on July 6th at 8:02 p.m. by HAS President, Bill Leach.

Announcements:

- Bill Leach welcomed everyone to the meeting and congratulated George Stradley for his fine efforts in organizing the very successful Star Party held June 9th at the HAS observing site in Columbus.

- Field Trip/Observing Committee Chair, George Stradley, reminded everyone of the next Star Party at the Columbus site on September 15th, coinciding with our Annual Picnic.

- George also announced that he's planning an instructional star party on August 4th if there is enough interest from the membership. Novices could receive instruction from more experienced observers in topics like the use of their telescope, using star charts, and star hopping. George is asking those planning to attend, either to provide instruction or receive it, to RSVP to him by September 15th by sending him an email at the address listed on the HAS website, http://www.astronomyhouston.org.

- Bill Leach announced the next meeting of the HAS Board of Directors is July 26th at the Houston Chronicle building downtown. Bill thanked John Missavage for serving as our host at the Houston Chronicle building for the board meetings.

- Barbara Wilson announced that the George Observatory will be open all night long for the Perseid Meteor Shower peak the night of August 12 – 13. The Brazos Bend State Park entrance will allow admittance until 2 a.m. and the observatory telescopes will be open for observers until midnight. The general public is invited. Barbara encouraged everyone to come out and enjoy the Perseids, which are favorably presented this year.

- Bill Leach welcomed two visitors to the meeting and previewed the speaker for the evening.

- Bill welcomed the two new members to HAS and asked them how they got interested in astronomy.

- Telescope Loaner Program Chair, Bram Weisman, reviewed the rules of the Loaner Telescope Program and invited members to view pictures and descriptions of the loaner telescopes and instructions on how the program works on the HAS website.

- Bill Leach introduced himself as the HAS President and related that the initiative to clean out the old magazines from the HAS Library was continuing that evening. HAS Librarian, Peggy Gilchrist, had some vintage Astronomy Magazines available free to members at the front of the meeting room. The vintage Astronomy and Sky and Telescope magazines are being removed from the library to create more room for the club's books, and it is likely that this initiative will continue for several more meetings.

- Steve Goldberg announced that the speaker for the August meeting will be Triple Nickel, pilot for NASA and member of JSCAS, who will be speaking on zero-G astronaut training flights.

- Don Pearce gave the Comet Report, describing a nice summer comet, C/2006 VZ13 LINEAR, moving rapidly across the sky due to its upcoming close approach to Earth and its path counter to the Earth's orbital path. At the time of the meeting, VZ13 was magnitude 8.5 and expected to reach a maximum brightness of 7.5. VZ13 will be well placed for observing with binoculars or a telescope in July. For more information on this comet and other comets of interest, see Don's Comet Corner on the HAS website.

Program

Don Pearce introduced the featured speaker for the evening, HAS Novice Program Committee Chair, Justin McCollum, who gave his presentation, The Great Moons of the Outer Solar System – Part 1. At the conclusion of his excel-

Continued ...

Minutes... *from previous page*

lent presentation, Justin answered questions, and Don presented him with a gift of appreciation from the society.

Closing Announcements

- Bill Leach announced that the Annual Regional Clubs Astronomy Meeting will be held October 19th with noted observer and author, Stephen James O'Meara, speaking on comets and the witch hysteria of 1692. Astronomy Day is the following day, October 20th.

- Bill Leach pronounced the meeting adjourned at 9:24 p.m.

Remember --

All HAS memberships are due for renewal in January. Pay your 2007 dues now!! Our membership year now corresponds to the calendar year.

Mail your dues to the address on the last page of this *GuideStar* or bring your payment to the meeting.

Publicity Suggestion Box

I welcome any suggestions that *any* member has to offer. It doesn't matter how trivial you think your idea may be. All input will be reviewed and welcomed.

Let's grow.

Please drop me a note at the following address.

itjdm0@yahoo.com

John Missavage- HAS Publicity Chair

Tones from the Deep

By Patrick Barry and Tony Phillips

Now is an exciting time for space enthusiasts. In the history of the Space Age, there have never been so many missions “out there” at once. NASA has, e.g., robots on Mars, satellites orbiting Mars, a spacecraft circling Saturn, probes en route to Pluto and Mercury—and four spacecraft, the Voyagers and Pioneers, are exiting the solar system altogether.

It’s wonderful, but it is also creating a challenge.

This artist's concept shows the New Horizons spacecraft during its planned encounter with Pluto and its moon, Charon. The spacecraft is currently using the beacon monitor system on its way to Pluto. Credit: Johns Hopkins University Applied Physics Laboratory/Southwest Research Institute (JHUAPL/SwRI)

The Deep Space Network that NASA uses to communicate with distant probes is becoming overtaxed. Status reports and data transmissions are coming in from all over the solar system—and there’s only so much time to listen. Expanding the network would be expensive, so it would be nice if these probes could learn to communicate with greater brevity. But how?

Solving problems like this is why NASA created the New Millennium Program (NMP). The goal of NMP is to flight-test experimental hardware and software for future space missions. In 1998, for instance, NMP launched an experimental spacecraft called Deep Space 1 that carried a suite of new technologies, including a new kind of communication system known as Beacon Monitor.

The system leverages the fact that for most of a probe's long voyage to a distant planet or asteroid or comet, it's not doing very much. There’s little to report. During that time, mission scientists usually only need to know whether the spacecraft is in good health.

"If you don't need to transmit a full data stream, if you only need some basic state information, then you can use a much simpler transmission system," notes Henry Hotz, an engineer at NASA's Jet Propulsion Laboratory who worked on Beacon Monitor for Deep Space 1. So instead of beaming back complete data about the spacecraft's operation, Beacon Monitor uses sophisticated software in the probe's onboard computer to boil that data down to a single "diagnosis." It then uses a low-power antenna to transmit that diagnosis as one of four simple radio tones, signifying "all clear," "need some attention whenever you can," "need attention soon," or "I'm in big trouble—need attention right now!"

These simple tones are much easier to detect from Earth than complex data streams, so the mission needs far less of the network's valuable time and bandwidth, Hotz says. After being tested on Deep Space 1, Beacon Monitor was approved for the New Horizons mission, which is currently on its way to Pluto, beaming back a simple beacon as it goes.

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

Observatory Corner

By Bob Rogers, Observatory Chairman

Hello everyone.

The HAS Tractor

I have some great news to report to everyone. On Saturday, July 7th, a member of HAS, who wants to remain anonymous, donated to the HAS Observatory Committee a Yanmar YM 2610 tractor (see picture) with a Bulldog 287 front end loader and a Bronco 60 (5 ft.) cutter. The tractor has already been put to good use the last two weekends. We have used it to fill in holes in the road and cut all the grass on the observing field. The tractor will also cut down the wear and tear and maintenance cost on the riding mower that we have been using for the last three years. Now we have to build a shed to store it in. It has been suggested that there can be a tractor fund set up and have donations go to it so we can get another cover like the one over the cooking area to store the tractor under. If you would be interested in donating any amount to this, please let me know. These covers cost around $700.00. I would like to again give a big "Thank You" to the HAS member for this very generous donation.

A friendly reminder to all the Key Holders of the Observatory, when you took your training in the Observatory, you learned that part of the responsibility of having the key is that you will need to volunteer some time at the site for site duty. In the last couple of years, I have seen the same small group of people come out to the site to work. There are a lot of key holders who are not coming out and putting in their time. We have a couple of projects in the works for the fall when the weather cools down and I would like to see more key holders coming out to help with them. The more key holders who volunteer, the faster the work gets done and the less that everyone else gets burned out from doing all the work. So, please come out and put in your time. Of course, any member can volunteer to help at the site. I won't turn down anybody who wants to help.

In last month's Observatory Corner, I mentioned about the keypad system in the Observatory and that I have removed codes to members that have not paid their dues. If you are a key holder to the Observatory and have NOT paid your dues for 2007, you won't be able to gain access to the telescope room. If you need to find out if your code is active or has been disabled, fell free to contact me by phone (281-460-1573) after 5:00 p.m. or by Email – siteworkerbob@hotmail.com.

Some dates of interest here for everyone. George Stradley, our Field Trip and Observing Chairman, has set the following 2007 Field Trip Schedule – September 15th (HAS Picnic) and December 1st. Keep an eye out on the Web site and here at the Observatory Corner for future updates for these Field Trips.

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

Thanks,
Bob Rogers
Observatory Chairman

Observatory Duty Roster

by Bob Rogers, Observatory Chairman

The site is in great shape thanks to the many, many volunteers who help maintain the site. Ed Fraini, Ken Miller, Ken Carey, and the site teams did a great job.

August Supervisor - Dana Lindstrom - 713-862-6044

Volunteers:	**Projects for August:**
Stan Musielewicz	Site Cleanup
Ben Negy Jr	Weed Eater Control
Johnny Norris	Field Maintenance
Richard Nugent	
Ralph Overturf Jr	
Don Pearce	
Sim Picheloup	
Scott Poteet	

September Supervisor - Ed Preston – 281-992-8501

Volunteers:
Stan Musielewicz
Ben Negy Jr
Johnny Norris
Richard Nugent
Ralph Overturf Jr
Don Pearce
Sim Picheloup
Scott Poteet

October Supervisor – Mike Edstrom – 832-689-4584

Volunteers:
Jim E Anderson
Peyton Barnes, Jr.
Don Bates
John Blubaugh
John Chauvin
Art Ciampi
Brian Cudnik
Gary Delzer

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

Want new information in the *GuideStar*? Write it!!

You, too, can be published here.

- What are you doing that's new and exciting?
- What have you read recently (book report!)?
- What new and interesting software are you using?
- Did you have an observation that was especially interesting?
- Any 'lessons learned' from observing attempts?
- What are you looking forward to at the Texas Star Party next year?

Send your materials to Bill Pellerin, the GuideStar editor at: *BillPellerin@sbcglobal.net*

General Membership Meeting

The Houston Astronomical Society holds its regular monthly General Membership Meeting on the first Friday of each month, unless rescheduled due to a holiday. Meetings are in Room 117 of the Science and Research Building at the University of Houston. A Novice Presentation begins at 7:00 p.m.. The short business meeting and featured speaker are scheduled at 8:00 p.m. Also typically included are Committee Reports, Special Interest Group Reports, current activity announcements, hardware reviews, an astrophotography slide show by members and other items of interest. Parking is NOW across from Entrance 14, by the stadium.

Board of Directors Meeting

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

GuideStar Information

The H.A.S. *GuideStar* is published monthly by the Houston Astronomical Society. All opinions expressed herein are those of the contributor and not necessarily of Houston Astronomical Society. The monthly Meeting Notice is included herein. *GuideStar* is available on the HAS web site to all members of H.A.S., and to persons iinterested 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.

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

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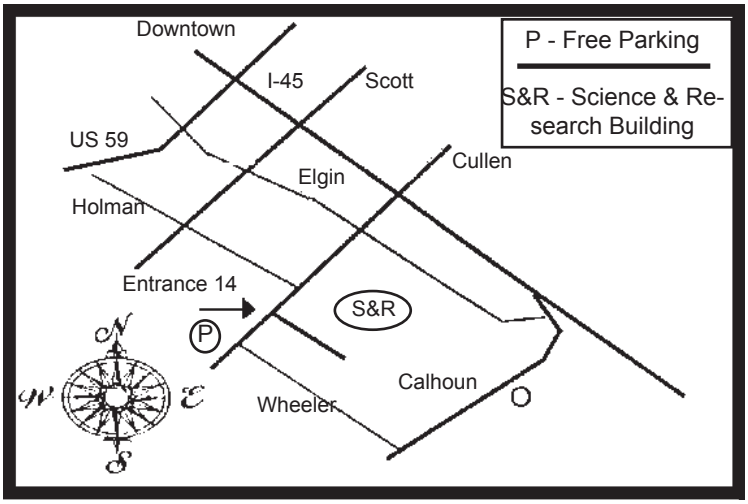

Houston Astronomical Society Meeting

Meeting on August 3, 2007

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.