Houston Astronomical Society

October, 2013

GuideStar

October, 2013
Volume 31, #10

October 11 All-Clubs Meeting

Dr. Reggie DuFour

Houston Museum of Natural Science—Hermann Park…

Registration: 7:00 p.m.
Meeting: 7:30—10:00 p.m.

The HAS will not hold a monthly meeting at the UH Campus in October. Instead, be sure to attend the area-wide All Clubs Meeting at the Houston Museum of Natural Science in Herman Park. For more information on the meeting and for directions to the musuem see the Astronomy Day web site at *www.astronomyday.net*. Parking will be free for this event.

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.

The *GuideStar* is the winner of the 2012 Astronomical League Mabel Sterns Newsletter award.

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

Schedule of meeting activities:

Meetings are at the University of Houston Science and Research building (but NOT OCTOBER'S MEETING). See the last page for directions to the location.

Novice meeting:····· 7:00 p.m.

See page 12 for more information

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

President: Bill Pellerin C:713-598-8543
Vice Pres: Rene Gedaly .....
Secretary: Bill Flanagan .....
Treasurer: Don Selle .....
Past President: Gordon Houston .....

Directors at Large

Greg Barolak H:281-467-5780
Mark Holdsworth H:713-478-4109
Mike Rao 832-689-4584
John Haynes H:802-363-8123
Brian Cudnik H:832-912-1244

Committee Chairpersons

Audit ..... Scott Mitchell H:281-293-7818
Education ..... Debbie Moran .....
Field Tr./Obsg ..... Steve Fast 713-898-2188
Novice ..... Debbie Moran
Observatory ..... Mike Edstrom
Program ..... Brian Cudnik H:832-912-1244
Publicity ..... Mike Rao 832-689-4584
Telescope ..... John Haynes H:802-363-8123
Welcoming ..... Vacant
Membership ..... Steve Fast 713-898-2188

Ad-Hoc Committee Chairpersons

Texas Star Party ... Steve Goldberg. H:713-721-5077
AL Awards ..... Doug McCormick .....
GuideStar ..... Bill Pellerin C:713-598-8543
Outreach ..... Alan Rossiter H:713-660-9503
Webmaster ..... Jeffery McLaughlin .....
Email: webmaster@astronomyhouston.org
By-Laws Review ... Scott Mitchell H:281-293-7818
Urban Observing .. Mike Rao 832-689-4584

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
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 Houston Community College Southwest Campus in Stafford, Texas http://www.fbac.org/club_meetings.htm. Novice meeting begins at 7:00 p.m., regular meeting begins at 8:00 p.m. Website: 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

GuideStar deadline for the November issue is October 15th

President's Message

by Bill Pellerin, President

What's Going on with the HAS?

- **Rene Gedaly was elected to Vice President** of the HAS at the October general meeting. Rene has made many significant contributions to the organization and I look forward to her continuing to do so. Welcome back to the executive committee, Rene. Rene also chaired the nominating committee for 2014 and the committee's nominees for 2014 are in this issue of the *GuideStar.*
- **The All-Clubs Meeting on October 11 replaces our usual meeting at the U of H.** See the front page of this *GuideStar* for information on that meeting.
- **The November 1 Meeting of the HAS will be our annual meeting with election of officers for 2014.** There is a report of the nominees for 2014 in this *GuideStar*. Nominations will be taken from the floor at the November meeting. You can nominate yourself or someone else who has agreed to take on the job for which he or she has been nominated.
- **Special Meeting in December—** Our program committee has a very special speaker lined up for the December 6 meeting. You'll want to make a special effort to attend this meeting.
- **Dr. Everett Gibson (NASA)** was our speaker in October and gave us a great presentation for the evidence of organic material on Mars. Thanks to Dr. Gibson for coming to our meeting.

Dr. Gibson (second from left) visits with students following his presentation at the October HAS meeting.

- **The November meeting is the 'annual meeting'** of the organization, at which the election for officers and elected committee leaders for 2014 will be held. Nominations will be taken at the November meeting. The nominees from the nominating committee are in this issue of the *GuideStar.*
- Remember — **the October, 2013 HAS meeting will <u>not</u> be held at our usual time and place**. The All Clubs meeting on October 11 will constitute our October meeting. October 12 is the Astronomy Day event at the George Observatory. If you haven't already volunteered to help with this, see www.astronomyday.net to sign up. This is the biggest outreach event of the year and your contribution of your time and effort will help make the event the big success that it has always been.
- **Committee to develop recommendations for remembering Bob Rogers** and others has provided a general recommendation to the board. Final acceptance is pending the development of the budget to implement this recommendation
- **The HAS Facebook page —** is now being updated regularly by Bram Weisman and ownership of this page will become the responsibility of the Publicity Committee.
- **Laptop Computer for meetings—**The HAS was in need of a laptop for the meetings (to show presentations, etc.). Board member Mike Rao offered to donate a computer to the HAS for this purpose. Thanks, Mike.

Cheers,

..Bill Pellerin

President

October/November

Calendar

Date	Time	Event
October		
3	9:00 a.m.	Uranus at Opposition
4	7:33 p.m.	New Moon
5		Prime Night, Columbus Site
9	5:00 a.m.	Mercury at greatest elongation east
11	6:03 p.m.	Moon at first quarter
	7:00 p.m.	Regional All Clubs Meeting, HMNS
12	3:00 p.m.	Astronomy Day, George Observatory
18	6:36 p.m.	Full Moon
21		Orionid meteors peak
26	6:41 p.m.	Moon at last quarter
November		
1	3:00 p.m.	Venus at greatest elongation east
	7:00 p.m.	HAS Novice Meeting, U of H
	8:00 p.m.	HAS General Meeting, U of H
2		Prime Night, Columbus Site
3	2:00 a.m.	Daylight Savings Time ends, Change clocks back 1 hour
	6:48 a.m.	New Moon
9	11:58 p.m.	Moon at first quarter
17		Leonid Meteors Peak
	9:15 a.m.	Full Moon
	8:00 p.m.	Mercury at greatest elongation west
	8:00 p.m.	C/2012 S1 ISON 0.38 deg N of Spica
20	7:00 p.m.	HAS Board meeting—Houston Arboretum
25	1:29 p.m.	Moon at last quarter
	7:00 p.m.	Mercury 0.31 deg SSW of Saturn
28	5:00 p.m.	C/2012 S1 ISON at perihelion

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

For the latest information on club events, go to http://www.astronomyhouston.org/

Check the web site: www.astronomyhouston.org

The HAS website not only has news and information about our society, but also a variety of features to manage your membership and connect with other club members. Current members can post photos, trade gear, pay dues, manage discount magazine subscriptions, swap stories in the forum, and more.

Questions about the site? Need a hand to get your account set up?
Contact webmaster@astronomyhouston.org.

The HAS web site is the winner of the 2012 Astronomical League award for excellence.

Follow the *GuideStar* on Twitter at:

GuideStar_HAS

Join Facebook and look for:

Houston Astronomical Society

Starline

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

HAS Board Meeting

HAS Board meetings are scheduled regularly (see the calendar, above). All members are invited to attend these meetings, but only board members can vote on issues brought before the board.

Observations... of the editor

by Bill Pellerin, GuideStar Editor

Ready for cool nights?

Many of our neighbors to the north, say in Michigan, are already experiencing cool, fall weather. We're not. I think of October as the first month in which it's *possible* to have a cool night. One thing is for sure — we'll have longer nights as we move into fall, and finally winter. Make plans to enjoy those nights.

As I write this, fall will officially start tomorrow (9/22). Yesterday and last night were very rainy, but today (Saturday) hasn't been rainy at all. The weather forecast predicted a 100% chance of rain. Maybe if they count midnight through 6:00 a.m., that's valid, but it hasn't rained since.

Internet 'Television'…

I came across a new source for astronomy information. There are several products now on the market that connect between the Internet and your television. Some television sets now include the ability to show Internet content. I have had a Roku box for a while (www.roku.com) and there are NASA videos and a 'Lecture Kings' channel (among many other things) available through this device. The 'Lecture Kings' channel has astronomy lectures through Yale University and Missouri State University. The Yale University astrophysics lectures look to be very interesting, but there's no audio (at least on my setup); I hope this gets fixed soon. Other Yale University lectures work ok. The Missouri State lectures includes an introductory astronomy survey course.

Don't expect fancy production values in these lectures; they look like recorded class lectures, but, hey, they're free.

Web links in GuideStar…

I'm adding more links imbedded into the *GuideStar* pages. As time goes on and I figure this out better the results should be better. I've included the URL (i.e. www.astronomyhouston.org) in case you're printing the page and need to type in the address, but also making the address a web link. We'll both see how this works.

GuideStar Contributions

As your editor of the Houston Astronomical Society *GuideStar* I've been very fortunate to receive contributions of *GuideStar* content by many officers, committee leaders and others. Thanks to all of you.

If you haven't contributed to the *GuideStar* yet, but would like to, please let me know. I can receive articles at my email address on the last page. Tell your fellow members about your observing experience, some new astronomy gadget or software you've been using, or anything that would be of general interest to our membership.

Have you been to any astronomically interesting place? A star party, perhaps? Tell us about it. Did you go on an eclipse trip? We'd like to hear about that as well.

Have you made any especially interesting observations? Any new observing techniques? Are you doing imaging?

I'd also like to receive more pictures. These can be astro-images, but they can also be photos of you and your friends during an observing session.

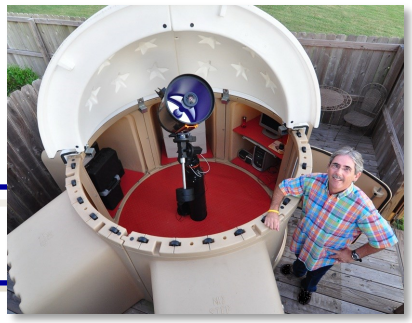
Until next time...

clear skies and new moons!

..Bill

Just Looking

A *GuideStar* Interview by Clayton L. Jeter



This or That

I met Kent Wade during the break of an HAS meeting in 1985. Many moons have passed: We're both older, but neither of us know/admit it. We were talking comets then and are now: ISON be the one! Were we disappointed by Halley and Panstarrs? To some degree but that didn't stop us from observing them a hundred or so times. We still observe together, most recently at the Columbus site. He drove from Dallas. The last time he was there it was much darker, not because of the nearby housing development: We discovered the infamous drilling crew lighting up the entrance to property across the street for a midnight delivery that never came. Kent felt at home as he regularly observes on week nights from White Rock Lake in Dallas. Most nights, M41 is invisible through binoculars and star hopping more difficult than rocket science!

Last new moon we were observing, myself in Brenham and Kent in Dallas. We often observe together long distance by phone or text. This particular night the clouds rolled in soon after sunset. Neither of us had new equipment so we expected it to clear. While waiting, we debated this or that and before you know it we had quite a list. Some items are astronomical objects or lists of objects, some equipment, some manufacturers, and others people. To simplify, there are only two choices for each. There could be more, such as who are the elite refractor manufacturers; Takahashi, AP, TEC, or TeleVue? Please fill in what we left off. The most hotly debated topics recently are the AL's instance of not using Goto scopes and charging for observing lists. The latter didn't make our list but as soon as we come up with a humorous alternative it will. There are no wrong answers (says who), but your answers may tell you something about your astronomical leanings.

Remember we're all drawn together by a love for observing. Clear skies!

- Sagittarius or Orion
- Celestron or Meade
- Seeing or Transparency
- Omega Centauri or North American
- Obsession or Starmaster
- Day or Night
- Mare or Highlands
- Zambuto or Lockwood
- Evening or Morning
- Prude or Davis Mountain SP
- Tent or Rent
- Double or Variable Star
- UC or Classic
- Center or Individual Focus
- Crab or Veil
- Pleasure or Science
- SCT or Dobsonian
- Dumbbell or Ring
- Rigel or Telrad
- AP or Visual
- Refractor or Newtonian
- Borosilicate or Pyrex
- Coathanger or Kimble's Cascade
- Takahashi or Astro-Physics
- Star Hop or GoTo
- TeleVue or Explore Scientific
- 1.25" or 2"
- Alt Azimuth or GEM
- Telescope or Binoculars
- Argo Navis or Sky Commander
- Hale-Bopp or ISON
- Waxing or Waning
- RDF or MRF
- SBIG or Mallincam
- Iridium Flare or ISS
- Sky Tracker or ServoCAT
- Jupiter or Saturn
- Herschel or Messier
- Cartes du Ciel or Stellarium
- Catseye or Howie Glatter
- HR or AR
- Albireo or Herschel 3945
- Phil Harrington or Stephen James O'Meara
- Large Aperture or Portable
- Caldwell or Messier
- DGM or Lumicon
- Open or Globular Cluster
- Astronomy or Sky and Telescope
- Galaxies or Planetaries
- Dew Buster or Kendrick
- M13 or M22

(Continued on page 7)

Kids Outreach & Public Star Parties

By Alan Rossiter, coordinator

Event: Fathers & Flashlights
Leader: Alan Rossiter
Type: Urban Overnight Camp for Kids & Dads. Numerous organized activities.
Date: Saturday, 10/5/2012
Time: 8:00 PM - 9:30 PM (tentative)
Location: West University Little League Field (University Blvd @ Auden Street)

Event: Camp for All / Candlelighters
Leader: Bram Weisman
Type: Observing – Kids from MD Anderson and Texas Children's. Dinner provided.
Date: Friday, 10/11/2013
Time: 6:00 PM – 10:00 PM
Location: Camp for All near Brenham, TX

Name: The Houston Arboretum Hunter's Moon Party
Leader: Bill Flanagan
Type: Mostly Adults – Arboretum Members. An evening at the Arboretum. Food & Drink!
Date: Saturday, 10/19/2013
Time: 8:30 PM – 10:00 PM
Location: Houston Arboretum, 4501 Woodway Drive

Name: Rothko Chapel Moonrise Party on the Plaza
Leader: Debbie Moran
Type: Fundraiser. Mostly Adults
Date: Saturday, 10/19/2013
Time: 7:00 PM – 10:00 PM
Location: 1409 Sul Ross St., Houston, TX 77006

Name: The Houston Arboretum ISON Comet watching
Leader: Bill Flanagan
Type: Mostly Adults – Arboretum Members. A morning at the Arboretum
Date: Saturday MORNING, 12/14/2013
Time: 5:00 – 8:00 AM
Location: Houston Arboretum, 4501 Woodway Drive

Details – especially times – are subject to change

(Continued from page 6)

- Emission or Dark Nebula
- High Magnification or Wide Field
- Texas Star Party or Okie-Tex
- Cloudy Nights or Yahoo Groups
- Sue French or Walter Scott Houston
- M74 or Pinwheel
- John Dobson or Al Nagler
- Winter Star Party or Stellafane
- Northern or Southern Hemisphere
- Heavens Above or CalSKY
- Near or Far Side
- Pluto or Ceres
- Perihelion or Aphelion
- Autumnal or Vernal Equinox
- Green or Red
- Step Ladder or Both Feet on the Ground
- Transit or Occultation
- Solar or Lunar Eclipse
- Thin or Full Thickness
- Leonid or Perseid
- Turn Left at Orion or Deep-Sky Companions:The Messier Objects
- Fast or Slow Optics
- SkySafari or Pocket Sky Atlas
- Double Cluster or IC4756 and NGC6633
- Fujinon or Canon IS
- Solid Tube or Truss
- Abell or Hickson

Clear skies always…

*Clayton is an avid SCT visual observer and a longtime member of the **H**ouston **A**stronomical **S**ociety. Contact him at: stonebloke@gmail.com*

HAS Texas 45

Achernar: the River's End

By Rene Gedaly

Some of you are very close to finishing up the list. Waiting for Achernar, perhaps? You'll find it low in the south at a reasonable time of night this month. Start looking for Alpha Eridani at about 1 a.m. in October, 11 p.m. in November, and 10 p.m. in December. Although it's one of the night sky's top ten brightest stars—and we can spot all of them from our latitude—you may want to use binoculars so you can travel the constellation Eridanus from northwest of Rigel in Orion, meandering south all the way down to where Achernar will appear. There is a nice gap between the tree limbs located due south at the dark site, and that is where you'll start looking for Achernar to transit the local meridian, about an hour later than the times given above. That southernmost spot on the horizon corresponds to about -60° declination, which puts Achernar at only 3.5° above it. But don't give up* —several members have spotted it already. Just follow Eridanus to Achernar, the river's end.

* *Did you attempt to see Achernar but couldn't quite locate it? Keep trying through December and if it still eludes you, jot "college try" on your observation log to receive full credit.*

Rene Gedaly
Program Coordinator
HAS Texas 45

Cls	Primary ID	Alternate ID	Con	RA 2000	Dec 2000	Mag	Ur. 2	PSA	TLO
Glob	M 30	NGC 7099	Cap	21h40m22.0s	-23°10'42"	6.9	143	77	--
Con	Grus	constellation	Gru	22h27m23.5s	-46°21'07"	4.8	178	79	--
PNe	Helix Nebula	NGC 7293	Aqr	22h29m38.5s	-20°50'14"	6.3	142	77	172
Doub	Beta PsA	17 PsA	PsA	22h31m30.4s	-32°20'46"	4.3	160	76	--
Var	Fomalhaut	Alpha PsA	PsA	22h57m39.4s	-29°37'22"	1.2	160	76	--
Gal	M 31 Andromeda Galaxy	NGC 224	And	00h42m44.3s	+41°16'07"	4.3	30	3	176
Gal	Sculptor Galaxy	NGC 253	Scl	00h47m33.1s	-25°17'20"	7.9	158	7	174
Open	ET Cluster	NGC 457	Cas	01h19m35.0s	+58°17'12"	5.1	29	3	193
Gal	M 33 Triangulum Galaxy	NGC 598	Tri	01h33m50.9s	+30°39'36"	6.4	62	2	178
Var	Achernar	Alpha Eri	Eri	01h37m43.0s	-57°14'13"	0.4	203	8	--
PNe	M 76 Little Dumbbell	NGC 650/651	Per	01h42m19.9s	+51°34'31"	10.1	29	2	--
Open	Muscle Man Cluster	Stock 2	Cas	02h14m43.0s	+59°29'06"	4.4	29	2	--
Open	h Persei	NGC 869	Per	02h19m00.0s	+57°07'42"	4.3	29	2	187
Open	Chi Persei	NGC 884	Per	02h22m18.0s	+57°08'12"	4.4	29	2	187
Gal	M 77	NGC 1068	Cet	02h42m40.8s	-00°00'48"	9.7	119	6	--

Ur.2: page # in Uranometria 2nd ed.; PSA: page # in Pocket Sky Atlas; TLO: page # in Turn Left at Orion 4th ed.

Program Rules: (1) observe 10 objects from each season plus any 5 solar system objects of your choice, (2) log your findings using the HAS Texas 45 observation log, (3) complete a pad log at the HAS dark site for each observing session, (4) jot the pad log # onto the Texas 45 observation log and (5) place the pad log in the box on the field. When complete, email the Texas 45 observation log to the program coordinator at renegedaly@gmail.com.

Texas 45 Certificate #1

By Rene Gedlay

HAS President Bill Pellerin presents Steve Fast the first HAS Texas 45 gold level certificate and observing pin. Steve observed all 60 list objects plus five "observer's choice" solar system objects, all using the star-hopping method.

The Texas 45 program requires observing 40 of 60 list objects plus another five solar system objects for a total of 45 objects. List objects are selected from among the four seasons of the year and 10 of each season's 15 objects must be observed. Any size telescope or binoculars may be used, and observers may use the star-hopping, go-to, or push -to observing methods. All observations must be made at the HAS Observatory and Dark Site located near Columbus.

A Star is Born

Our newest HAS Member

Reid Dmitry Kowalczyk was born on 8/26 at 6 lb. 8 oz. at 18 ¾" ; he and mom are doing great. He has already been to the site twice by three weeks of age since we have onsite lodging. He seems to want to be an astronomer like his dad as he likes to stay up all night and sleep all day, much to the chagrin of his mother. Got a pic of him checking out the F7 for fun on his second trip out.

Report of the Nominating Committee

Nominations for 2014

By Rene Gedaly, Vice President and Chair of the Nominating Committee

Below appears our slate of the elected positions for 2014. The slate will be announced in the GuideStar, posted on the website, and announced to members attending the All Clubs meeting. The All Clubs meeting serves as the HAS October general meeting.

At last night's board meeting, Bill Pellerin thanked all who are currently serving HAS, those who will be serving in the coming year, and those in the nominating committee, John Haynes, Clayton Jeter, Debbie Moran, Bram Weisman, and myself. All assembled applauded Bill for agreeing to run for president for 2014.

HAS Slate for 2014:

- President: Bill Pellerin
- Vice President: Rene Gedaly
- Secretary: Bill Flanagan
- Treasurer: Don Selle
- Director-at-large: Ash Alashqar
- Director-at-large: Brian Cudnik
- Director-at-large: John Haynes
- Director-at-large: Mark Holdsworth
- Director-at-large: Bram Weisman
- Telescope: Allen Wilkerson
- Field Trip and Observing: Steve Fast
- Program: Brian Cudnik
- Publicity: Bram Weisman
- Novice: Debbie Moran
- Audit: Scott Mitchell
- Observatory: Mike Edstrom
- Education: Debbie Moran
- Welcoming: open

Nominations will be taken from the floor at the November meeting.

Observatory Corner

By Mike Edstrom, Observatory Committee Chairman

Hello,

And the Drilling goes on; I hope to report to you next month that the drilling is finished and that all the annoying light to the northeast and the noise are gone. I am in contact with the drilling company and they are on schedule.

Observatory committee notes: the committee met Saturday September 7th and other than the lightning and rain we had a good meeting. The committee now has 6 "work groups" with leads to split up the work load at the site. The groups, their lead and contact information are: Grounds – Allen Wilkerson (rwilkers@sbcglobal.net); Training (both site and observatory) – John Haynes (henry_v_1598@yahoo.com); IT and Electrical – Chris Ober (chris@oberphoto.com); Observatory Telescopes – Clayton Jeter (stonebloke@gmail.com); Private Observatories – Ed Fraini (eafco@entouch.net) and Trailer Sites – Ed Malewitz (emalewitz@sprynet.com). If you are interested in joining any of these groups please contact the lead as I am sure they would be glad to have the help.

October appears to be a busy month we have scout troops camping out and doing service projects on Oct 11-13 and Oct 18-20 they have a great time at the site and do a lot of good work for the society.

Also the electrical lines for the private observatories are being installed we have 4 of the 12 spots committed if you are interested in a plot please contact Ed Fraini, Don Selle, Steve Goldberg or myself. We have opportunities to construct concrete pads if you want to install a dome at a reasonable price with a small amount of sweat equity.

As a safety reminder please read the sign posted on the side of the metal building at the Dark Site which has directions to the hospital and contact information for the sheriff's department it also has the address to the site in case of a medical emergency.

And the Work Goes On...

I **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 member spends at Randalls. Randalls totals up the amount spent each quarter and will send us a check if the amount goes over $2,500, otherwise the total roles over to the next quarter of 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, please let me know.

Thank you,

Mike Edstrom

medst22531@msn.com

Power of Multiple Amateur Telescopes, UNITE!

By Phil Plait, Bad Astronomy, http://www.slate.com/blogs/bad_astronomy.html

Taking pictures of astronomical objects is a lot like collecting rainwater in buckets. Photons from your target are the rain, and your telescope is the bucket. The bigger the bucket, the more rain you collect. You get more water if you leave the bucket out longer, too.

The planetary nebula Jones-Emberson 1, a dying star 1600 light years from Earth. This image was taken using six different small telescopes, with their power combined into one beautiful picture.

Photo by Michael Stauning, Michael Rask, Torben Taustrup, Flemming R. Ovesen, Morten la Cour, Paul Christiansen, and Morten Balling. Used by permission.

Isn't that gorgeous? It's even cooler than you think, too, because it's actually the combined result from six separate telescopes… not one of which has a mirror bigger than 35 centimeters (14")! Not only that, but it represents a total exposure time of 125 hours—more than five days.

It was created by observations from amateur astronomers Michael Stauning, Michael Rask, Torben Taustrup, Flemming R. Ovesen, Morten la Cour, Paul Christiansen, and Morten Balling. It was Balling who contacted me about it—he and the other astronomers organized their efforts through the Danish bulletin board Astro-Forum.dk. Balling collected the data and combined them into the image above. Incredibly, some of the observations were done not far from the heavily light-polluted city of Copenhagen. However, the use of narrow filters (that is, filters that let through a very small range of colors) cut way back on the amount of light from the city, while still letting the nebular light pass through. The exposure times of individual images ran from 300 – 1800 seconds (5 - 30 minutes).

I was not familiar with the object when Balling sent me the image, so I was surprised by it; I've studied planetary nebulae and love them, so there aren't many I haven't seen before! JE1, it turns out, is a very large and exceedingly faint object, and not as popular a target as some smaller, brighter nebulae.

Located about 1600 light years away, JE1 is shaped by the winds from a dying star. I've described how this all works in many previous posts (notably for the Cat's Eye nebula, NGC 7026, and NGC 1514, which has to be seen to be believed). In the image above, red is light from hydrogen, and blue from oxygen. Thousands of years ago, the star in the middle of JE1 started blowing a dense, slow wind that compressed the material around it, forming the outer shell. Eventually, a faster wind started up that then pushed into the slower wind, carving the more evacuated region in the middle.

I'll note that it looks like all the oxygen in the nebula is in the middle, but that's an illusion. The filter used here (called an [OIII] filter) selects a particular color emitted by oxygen when it's had two electrons stripped from the atoms. This type of atom strongly emits light, but is also fragile; in too dense an environment the remaining electrons get jostled and the atoms won't emit this kind of light. That means if you use an [OIII] filter you only see oxygen from the less dense regions—there's still oxygen all over the place, but it's not emitting this light. Hydrogen, on the other hand, is everywhere, so if you see less light from it that means there's less of it around.

Also, the odd waist you can see inside the nebula is probably due to the winds being shaped by rotation of the central star as it blew them off. The star was a red giant when that happened, having expanded from a Sun-like star to a bloated ruddy monster a hundred times its original size. When it did so, it may have literally consumed any planets close by. The planets would have sped the star up as they orbited inside it like a chef whipping up eggs, increasing its spin and leaving behind their legacy in the shape of the planetary nebula we see today.

(Continued on page 12)

Texas Star Party Memorial

The Texas Star Party is now providing permanent memorial space to recognize deceased amateur astronomers and place their names on our Stars End web page, amongst the stellar nursery of the Eagle nebula (M16).

https://texasstarparty.org/stars_end/

We'll add your friend's name to Stars End when you make a small donation to the Friends of TSP fund. If donations total over $50 within the first 4 months, we will keep their name active on the page permanently.

What a great way to provide a simple memorial for your friend, and at the same time help preserve the spirit and camaraderie that TSP provides through the Friends of TSP fund!

Donations to Texas Star Party are tax-deductible, as an IRS 501(c)(3) organization for educational and scientific purposes

Sincerely,

The volunteers and staff at Texas Star Party

(Continued from page 11)

I found several other lovely pictures of the nebula online; I quite like this one by J-P Metsävainio (who also created this stunning 3D rotating nebula animation), this one by Bob Franke which uses different colors, and this unusual one created using images from the Sloan Digital Sky Survey.

As a last note, I was reading an article by the British Astronomical Association when I saw that this object is nicknamed the Headphone Nebula. I laughed when I read that; it really does look like a pair of headphones.

I hope this is the beginning of more collaboration between amateur astronomers. It shows that with cooperation and effort really beautiful images can be made. I also think a lot more science can be done as well; a smaller bucket can be more than made up for by calling your friends, borrowing theirs, and leaving them all out in the photon rain for a bit longer.

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AAVSO Writer's Bureau

Novice Presentation November/December, 2013

Professor Comet / Novice Graduation

By Debbie Moran

Please note that there will be no October Novice meeting due to the meeting coinciding with the All Clubs meeting on October 11th.

We will resume in November with a talk by Justin McCollum, our own Professor Comet, about the basics of comet observing just as Comet ISON is making its best showing. Whether it is naked eye or needs a little help, this talk will prepare you to observe this and other comets in the future. Learn how to find and recognize comets in the telescope, know their component parts, origins, orbits, how they are discovered and named.

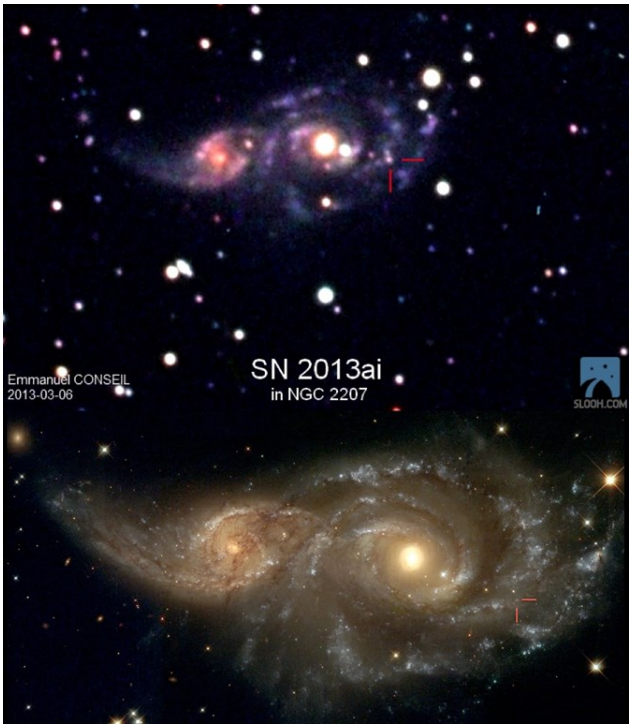
For December, I would like to do a program called Novice Graduation. I will be seeking novices from the last year or so who would like to report on their adventures in stargazing, telescope shopping, imaging or public outreach. Let us know what objects became your favorites, what observing lists you may have tried, how you decided on any equipment you may have purchased, what problems you solved. We have new novices waiting to hear what you learned. This will bring us full circle to repeat some basic principles in January again for the next crew.

How to Hunt for Your Very Own Supernova!

By Dr. Ethan Siegel

NASA Space Place

In our day-to-day lives, stars seem like the most fixed and unchanging of all the night sky objects. Shining relentlessly and constantly for billions of years, it's only the long-term motion of these individual nuclear furnaces and our own motion through the cosmos that results in the most minute, barely-perceptible changes.



SN 2013ai, via its discoverer, Emmanuel Conseil, taken with the Slooh.com robotic telescope just a few days after its emergence in NGC 2207 (top); NASA, ESA and the Hubble Heritage Team (STScI) of the same interacting galaxies prior to the supernova (bottom).

Unless, that is, you're talking about a star reaching the end of its life. A star like our Sun will burn through all the hydrogen in its core after approximately 10 billion years, after which the core contracts and heats up, and the heavier element helium begins to fuse. About a quarter of all stars are massive enough that they'll reach this giant stage, but the *most* massive ones -- only about 0.1% of all stars -- will continue to fuse leaner elements past carbon, oxygen, neon, magnesium, silicon, sulphur and all the way up to iron, cobalt, and, nickel in their core. For the rare ultra-massive stars that make it this far, their cores become so massive that they're unstable against gravitational collapse. When they run out of fuel, the core implodes.

The inrushing matter approaches the center of the star, then rebounds and bounces outwards, creating a shockwave that eventually causes what we see as a core-collapse supernova, the most common type of supernova in the Universe! These occur only a few times a century in most galaxies, but because it's the most massive, hottest, shortest-lived stars that create these core-collapse supernovae, we can increase our odds of finding one by watching the most actively star-forming galaxies very closely. Want to maximize your chances of finding one for yourself? Here's how.

Pick a galaxy in the process of a major merger, and get to know it. Learn where the foreground stars are, where the apparent bright spots are, what its distinctive features are. If a supernova occurs, it will appear first as a barely perceptible bright spot that wasn't there before, and it will quickly brighten over a few nights. If you find what appears to be a "new star" in one of these galaxies and it checks out, report it *immediately*; you just might have discovered a new supernova!

This is one of the few cutting-edge astronomical discoveries well-suited to amateurs; Australian Robert Evans holds the all-time record with 42 (and counting) original supernova discoveries. If you ever find one for yourself, you'll have seen an exploding star whose light traveled millions of light-years across the Universe right to you, and you'll be the *very first* person who's ever seen it!

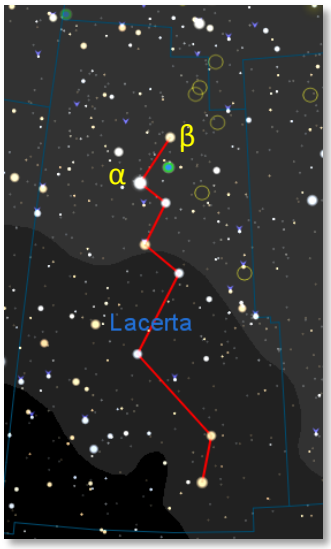
Read more about the evolution and ultimate fate of the stars in our universe: http://science.nasa.gov/astrophysics/focus-areas/how-do-stars-form-and-evolve/.

While you are out looking for supernovas, kids can have a blast finding constellations using the Space Place star finder: http://spaceplace.nasa.gov/starfinder/.

Shallow Sky Object of the Month

Lacerta

Object: Lacerta
Class: Constellation
R.A.: 22 h 27 m 36 s
Dec: 44 deg 49 min 12 sec
Size/Spectral:
Optics needed: Unaided eye / telescope



Finder chart for Lacerta

Star chart generated by TheSkyX © Software Bisque, Inc. All rights reserved. www.bisque.com

Why this is interesting

There are, of course, plenty of things in the night sky that I've never seen and never will see. Part of the fun of writing this every month is that I get to discover something new in the sky or try to find out as much as I can about an object I've seen many times. Have you seen the constellation Lacerta (the lizard)? Me neither. The fact that I've never seen this constellation makes it interesting to me.

The constellation ranks 68th in size (of the 88 constellations) and the area within its boundary is only 201 square degrees. The north-south extent of the constellation's main stars spans only about 14.5 degrees.

Lacerta according to several sources, contains no interesting objects. Not so. Every part of the sky contains something interesting if you're willing to do a little digging.

Lacerta is south of the constellation Cepheus and the northern part of Lacerta is located in the Milky Way. We shouldn't expect to find galaxies in this constellation because they would be hidden behind the disk of our own galaxy. We would expect to find a lot of stars within the boundaries of the constellation, however.

Alpha Lac shines mag 3.76 and is the brightest star in the constellation. All the other stars are dimmer. The beta star is mag 4.42, although the southernmost star in the constellation is slightly brighter at magnitude 4.13.

This constellation is not one of the 'ancient' constellations, because it's not obvious. It's a recent constellation, defined by Johannes Hevelius in 1687 (to replace the existing constellation Sceptrum). In addition, Hevelius is responsible for adding the following constellations to the map: Canes Venatici, Leo Minor, Lynx, Scutum, Sextans, and Vulpecula.

What objects can we see in this constellation? Here's a list:

- NGC 7209 & NGC 7243 — two open clusters of 8th magnitude and dimmer stars
- 8 Lac — A double star (22" separation, mags 5.7 and 6.5) easy with small telescopes.
- BL Lac — The 'star' that isn't a star and probably the most interesting object in the constellation. BL Lac was thought to be a variable star initially and, as such, was given the name BL Lac. We now know that the object we call BL Lac is an elliptical galaxy very far away but with a core that varies in brightness. These objects are called 'Blazars', a special category of galaxies with active galactic nuclei. This would be a difficult object to see with an amateur telescope since its magnitude varies from 14 to 17. It could be imaged, however, given enough exposure time.

With binoculars you should be able to see this little constellation from an urban or suburban site.

Parking at the University of Houston Main Campus

For the monthly Houston Astronomical Society Meeting

The large-scale map at the right shows the location of the 15F parking lot, on the west side of Cullen Boulevard.

The detail map (below) was provided by the University of Houston Parking department to define the area that is available for parking while attending the Houston Astronomical Society monthly meeting. This parking is available from 6:30 p.m. until 10:00 p.m. on the Friday night of the HAS meeting (usually the first Friday of the month).

This parking is free. If you get a notice from the UH campus police on the night of the meeting, call the UH Security office and let them know that this area has been made available on HAS meeting night by the Parking Department.

From Google Maps

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 or a conflict with other events at the University of Houston.

Board of Directors Meeting

The Board of Directors Meeting is held on dates and at locations scheduled by the board. 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.

Editing & Production: Bill Pellerin,

713-880-8061

Email: BillPellerin@sbcglobal.net

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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.

The October Meeting of the Houston Astronomical Society will be at the All Clubs Meeting on October 11.

Information on the All Clubs meeting and the Astronomy Day event on October 12 can be found at *www.astronomyday.net*.

This meeting will be at the Houston Museum of Natural Science in Hermann Park. Details on the museum location are at *www.hmns.org*.