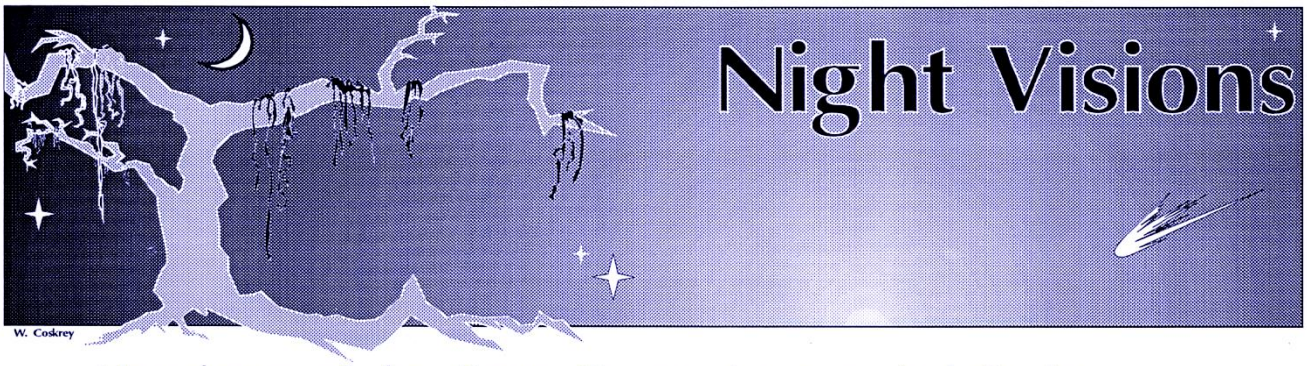


Newsletter of the Baton Rouge Astronomical Society

www.brastro.org

February 2013

What's in this issue:

PRESIDENT'S MESSAGE

Hey Everyone,

I hope everyone is having a great 2013 so far. We've finally had a few clear nights and I know some of the club members have been out to take advantage of it. I, for one, got to use some of my new equipment and posted a few of the pictures on the BRAS Facebook page.

We have the annual Hodges Gardens Star Party coming up March 13th-17th and I hope you'll plan to make a visit. It's such a good time to be out under nice dark skies with a bunch of other people with the same interest in observing the night sky. It's a great time to meet other amateur astronomers from all over (even though many of them you never end up putting a face to the voice because most of the conversations take place by star light!) It's a bit of a drive at 3 1/2 hours from Baton Rouge, but it is well worth the trip. The observing field is large, the park staff are friendly and accommodating and there is plenty to see and do during the daylight hours. (Especially if you like to be in the outdoors. Canoeing, hiking, biking, bird watching, fishing and strolling through the beautiful gardens are some of the favorites.)

The final night of the star party, Saturday March 16th, is also a great opportunity for some astronomy outreach. On that night, the party is opened to the general public for a few hours after sundown and it has proved to be popular event in the past. All of the attendees are instructed by park officials on the etiquette of star parties such as the ban on white light and utilizing only red lights when necessary. If you've never had a chance to do any outreach, this is a great opportunity for you to get your feet wet.

Dues... are Due! If you have not already paid your dues, please make arrangements to do so. You can bring payment in person to the next club meeting (Monday, February 11th), or you can mail your payment in to our treasurer, Geoff Michelli. His address is on the BRAS application that you can view on our main website at brastro.org.

Finally, we have successfully launched our new Dark Sky Advocacy website. It is located at darksky.brastro.org. You will see that we also gave our first Good Lighting Award to Bass Pro Shops and it was very well received. We've already had club members suggesting other locales as possible recipients for future awards and we need the suggestions to keep coming. This is just one step on the path to making Baton Rouge a dark sky friendly community.

OK...one more thing. I want to give another mention about the "Throw Me Something, Mister! 2013 Mardi Gras Online Star Party" announced by one of our newest club members, Mr. Chris Desselles. Check out this link for more information on the event. http://cs.astronomy.com/asy/observing/f/33/t/56302.aspx
It sounds like a lot of fun and here's a quote from a recent post about the event: "You don't need a telescope, or even binoculars. It's all about your observations and experiences during this time no matter how you are able to view the heavens."

Please come join us for our February meeting on Monday the 11th at 7PM at the HRPO. What better way to close out the 2013 Mardi Gras season than with some good astronomical fun? As always, feel free to bring a friend!

Clear Skies,
Ben Toman
BRAS President

NOTES FROM THE VICE PRESIDENT

February is usually a month of wet, yucky winter weather and overcast nights. Sure, we have had some of those but we have had some good clear nights also. Unfortunately, most of those have had heavy dew. Yet, I've seen some of the best views of Jupiter in a long time. The King of Planets still has a fairly large angular size, even though opposition is long past. However, it is near meridian at sunset right now, so it offers great opportunity for good viewing.

Our guest speaker this month is Brad Schaefer. Brad and Martha took a trip to Australia to view the last total solar eclipse. Martha took some good video and we may see some of that. They also took some other side trips and observed lots of southern hemisphere objects that we never get to see. I am sure we will hear about them too.

We will also give whatever updates we have for the Kisatchie Star Party.

Here is something I thought may make a nice filler for the newsletter:

Drift Alignment Made Easy

This method is for refractors or SCT's using a star diagonal. Reverse altitude adjustments, if using a star in the west for second star. Reverse all adjustments for Newtonian telescopes.

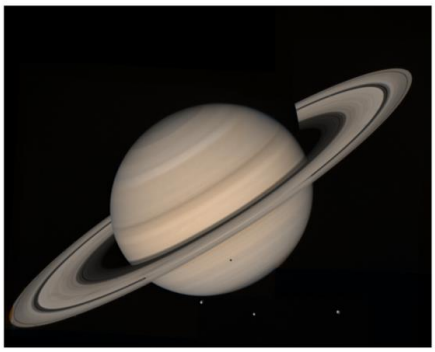
1. Level tripod.
2. Roughly polar align mount, preferably with a polar scope.
3. Pick a star on meridian, just north of celestial equator.
4. Orient eyepiece crosshairs with north-south and east-west axis of mount.
5. Place star on horizontal crosshair. If star drifts **up**, adjust mount in azimuth to move star **right**. If star drifts **down**, adjust mount in azimuth to move star **left**.
6. Place star back on crosshairs using hand controller.
7. Repeat adjustments until no drift is seen for 5 minutes.
8. Pick star in east, just north of celestial equator, about 20° above horizon.
9. Orient eyepiece crosshairs with north-south and east-west axis of mount.
10. Place star on horizontal crosshair. If star drifts **up**, adjust mount in altitude to move star **down**. If star drifts **down**, adjust mount in altitude to move star **up**.
11. Place star back on crosshairs using hand controller.
12. Repeat adjustments, as necessary, until no drift is seen for 5 minutes.

Merrill Hess
BRAS Vice President

OUTREACH

Sidewalk Astronomy program is still happening. The flier shows the dates and location remaining for this year's events. Let us know if you'd like to help out, and swing by during the events to see how enthralled the public gets when looking at Jupiter.

SIDEWALK ASTRONOMY



Come see the moon, planets, binary stars, galaxies, and more, all for free!

Community Coffee

All events start at 7PM

October 25th	CC's on Perkins
November 20th	CC's on Jefferson
December 18th	CC's on Perkins
January 22nd	CC's on Jefferson
February 19th	CC's on Perkins
March 19th	CC's on Jefferson

In the event of a rainy or cloudy night, we will automatically postpone the event to the following Tuesday. If that night is also rainy or cloudy, that event will be cancelled.

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MESSAGE FROM THE HRPO

FRIDAY NIGHT LECTURE SERIES *all start at 7:30pm*
8 February: "The Chinese Calendar"
15 February: "Asteroids!"
22 February: "The Discovery of Pulsars"
1 March: "Into the Neutron Star!"

CALL FOR VOLUNTEERS: ON SITE

*Saturday, 16 February from 6pm to 10pm. *Two volunteers in addition to regular BRAS compliment, each for two-hour shift.* **Evening Sky Viewing Plus**. Marshmallow roast, demo and clock tables; small telescope; setup and takedown. Easy; training provided.
*Saturday, 23 February from 3pm to 7pm. *Eight or nine volunteers.* **Learn to Use Your Telescope**. Instructing registrants for the class in the use of their personal telescopes. Previous telescope knowledge required.
*Friday, 8 March from 7:30pm to 8:30pm. *Two volunteers.* **"Viewing Comets".** Brief, five-minute presentations to the public concerning personal choices in attempting to viewing Comet PanSTARRS.
*various twilights, from 8 March to 21 March. *Four to seven volunteers throughout the time period.* **Comet PanSTARRS Viewing.** Assistance with running telescopes at Burbank Soccer Complex during the low-altitude apparition of PanSTARRS. Specific times are listed in the "Comets" section of the BRAS Forum.
*Saturday, 20 April from 3pm to 11pm. *Twelve to twenty volunteers.* **International Astronomy Day.** Staffing rides, information booth, ticket booth, front desk, entry gate, solar telescope, nighttime telescope and other stations. Moderate difficulty; training provided beforehand. 2013 is make-or-break time for IAD. This will be HRPO's seventh consecutive IAD event, and we hope to get 800 participants.

LIGHT POLLUTION NOTES

GLOBE at Night, the citizen science light pollution exercise sponsored by the International Dark-Sky Association has begun. There will be several ten-day campaigns which will run until May. Orion is the constellation participants will view now; they use Leo in April. (Both constellations are available in March.) As with past years, an observer notes the number of stars he or she sees and picks the online star chart which matches that view the closest. The more submitted reports the better, as this exercise allows the creation of a user-developed light pollution map. More information is on the BRAS bulletin board, and at www.globeatnight.org.

A Pointe Coupee Parish Police Jury committee discussed efficient lighting at their meeting on the morning of 17 January.

The Atchafalaya Trace Commission discussed light pollution and its effects on the Atchafalaya Heritage Area during its January meeting.

MOON WATCHER AWARD: BRAS' FIRST OBSERVING CERTIFICATE

The Moon Watcher Award is tailored for those who are interested in learning the major, basic features of the near side of Moon. It is recommended for members aged fourteen and older. The observing list consists of ten unaided-eye features, thirty binocular features and three exercises. One must obtain forty of the forty-six possible points to earn the Award. To obtain complete guidelines and the observing lists, email observatory@brec.org.

NEW SOLAR TELESCOPE AT HRPO

Thanks to the support of BREC Director of Special Facilities Brandon Smith, HRPO has secured its first-ever solar telescope. It is a Coronado Solar Max II with a 90-mm aperture. Our next task is to secure a mount so this new machine can premiere at the Solar Viewing session on 9 March.

The solar telescope used for the past several years will perform one more Solar Viewing duty in February. That scope, a 70-mm Coronado, has been on extended loan to HRPO from Southern University, thanks to Professor Greg Stacy.

SKYWATCH 2013

The *Skywatch* guide for 2013 is now at HRPO. This annual guide is invaluable for basic skyviewing through the year. Any major eclipses, conjunctions, transits and meteor showers are listed. The eighty-two page book also includes tips on eradicating light pollution, skygazing under light-polluted skies in the meantime, a map for each month to December 2013, a lunar map with over 250 telescopic features marked, a four-page article on how best to see the planets, advice on looking at the Sun in a safe and fun manner, a eight-page section outlining the best deep-sky features for each season and more! Alan MacRobert, Fred Schaaf, Tony Flanders and J. Kelly Beaty are contributors. The book's cost has been discounted $9.25 with tax.

FRANK CONRAD MEMORIAL VOLUNTEER AWARD

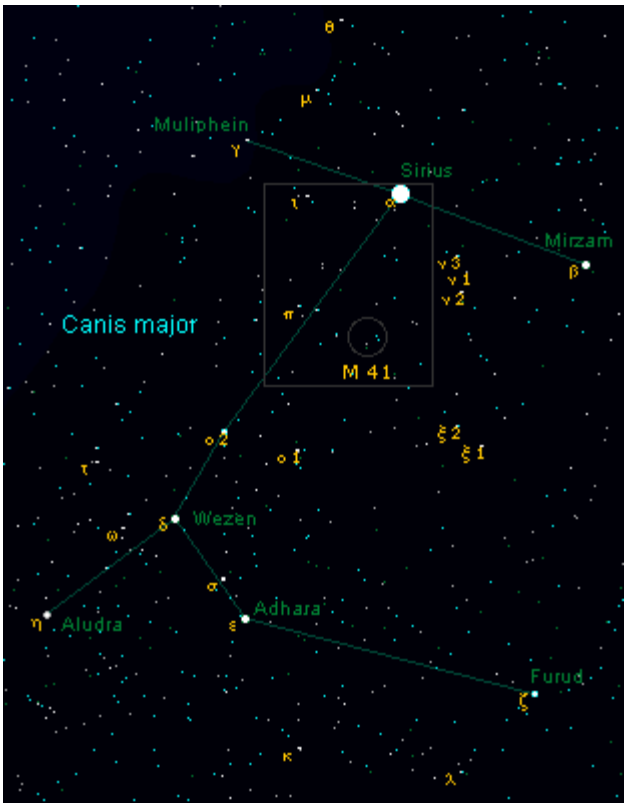
Congratulations to Kristin Troxclair, the winner for 2012! For years, Kristin has assist with a majority of special events at HRPO. Patrons and fellow club members alike know that they can always expect a courteous and professional disposition when dealing with Kristin. The facility has been made all the better by her donation of time and willingness to acquire a variety of skill sets needed for different tasks. Thanks, Kristin!

This honor is given annually to a single BRAS member whose contribution to the HRPO mission was particularly outstanding. The original recipient was Marvin Owen in 2005. Current guidelines mandate that cumulative service since 2007 be considered during selection of the recipient, and a BRAS member cannot win the Award more than once. The other individuals to receive the Conrad Award are…

2008, Briar Richard
2009, Stephanie Northrop
2010, Merrill Hess
2011, Ben Toman

OBSERVING NOTES

Canis Major
The Greater Dog



Canis Major is dominated by the star Sirius, called the Dog Star. Sirius is the brightest star in the sky, and the 6th closest star to Earth. Ancient astronomers referred to Canis Major as Orion's guard dog, following on the heels of Orion, and standing on its hind legs with Sirius carried in its jaws. Canis Major appears to be crossing the sky in pursuit of Lepus, the Hare, under Orion's feet.

Position in the Sky
Right Ascencion: 7 hours
Declination : 20 Degrees

Named Stars
Sirius (Alpha CMa) "The Dog Star" Mag. -1.42
Sirius B "The Pup" Mag. 8.65 (white dwarf companion)
Murzim (Beta CMa) "The Announcer" Mag. 1.98 (a Cephid variable)
Muliphein (Gamma CMa) Mag. 4.1
Wezen (Delta CMa) Mag. 1.82
Ad Hara (Epsilon CMa) Mag. 1.49 (22nd Brightest star in the sky)
Furud (Zeta CMa) Mag. 3.02 (spectroscopic binary)
Aludra (Eta CMa) Mag. 2.41
Omicrom 2 Mag. 3.02
UW (CMa 29) Mag. 4.95 (Variable, eclipsing binary in the NGC 2367 field)

Deep Sky Objects
M41- Open Cluster located 4 degrees south of Sirius. Has about 100 stars of 7th to 13th magnitude with a bright reddish star at its center.

NGC 2362- Open Cluster surrounding Tau (CMa 30) just 24' south of eclipsing binary UW (CMa 29). Has about 40 stars 7.5 to 13th magnitude.

80+ Double and Multiple Stars
30 Variable Stars
15 Star Clusters, Nebula, and Galaxies

Sirius comes from the Greek word for "scorching." Sirius' system was originally composed of two bright bluish stars. Sirius B, the more massive of the two, consumed its resources and became a red giant before shedding its outer layers and collapsing into its current state as a white dwarf. There is speculation that Sirius was a red star in ancient times. Convincing statements

were made by Cicero, Horace, Ptolemy and Seneca- all described Sirius with terms that can only be translated as "ruddy", "reddish", "blazing as fire", etc. Homer, in the Illiad, seems to compare the "Gleam of Achilles' copper shield" to the light of Sirius. In Babylonian cuneiform text the star, called "Kak-si-di", is described also as "shining like copper." In the 1st century BC, Cicero refers to Sirius with the term "with a ruddy light." Horace, only a few decades later, calls it the "Ruddy Dog Star." Seneca, in the days of Nero, definitely speaks of it as redder than Mars, whereas Jupiter "is not at all red." Ptolemy, in about 140 AD, refers to Arcturus, Aldebaran, Pollux, Betelgeuse, Sirius and Antares as "fiery red." However, Al Sufi, in the 10th century, does not mention Sirius among the stars which he classes as red. Presumably, by that time the star was no longer the "Rubra canicula" of ancient times.

The question was revived in modern times by recent observations of the fainter companion to Sirius (now a white Dwarf star.) Measurements have been cited in support of the hypothesis that Sirius B might possibly have been in the red giant state as recently as 2000 years ago. The most serious objection is that the time scale seems unacceptably short. The expected time from red giant stage to white dwarf stage is about 100,000 years rather than a mere 2000 years. Sirius B has a present mass of nearly 1 Sun, and in its red giant stage might have been bright enough to at least equal Sirius A and affect the naked eye color of the system. The fairly impressive testimony of ancient writers at least suggests that this idea should be seriously considered.

But it seems there is another possibility which might be considered that has nothing to do with the stars, namely the suggestion that the color-sensitivity or color balance of the average human eye has changed or evolved somewhat in the last few thousand years and the the ancient peoples did not see colors quite the same as we do today.

In support of this hypothesis, one might consider the fact that Ptolemy also classes Arcturus and Pollux among the "fiery red" stars, and that Capella was called red by ancient writers. All these stars today are yellowish, the term "Topaz" is often used to describe Arcturus. There are other odd color phrases used in ancient writings; consider Homer's repeated use of the term "wine dark sea." It is true that Homer is possibly semi-legendary, and was also traditionally blind, but the authors, whoever they may have been, still employed the phrase as an appropriate metaphor for the normal color of the sea. Until more conclusive evidence is available, it seems unwise to state dogmatically that the ancient redness of Sirius must be dismissed as an impossibility.

Burnham's Celestial Handbook, Vol. 1 Pgs. 392-394

Thanks and Happy Observing!

John Nagle
BRAS Observing Chairman

TREASURER'S NOTES

Renewals: Many of you have renewed your membership in BRAS. Thank you! You will continue to receive the benefits of BRAS membership such as a full membership to the Astronomical League and access to our dark sky site during planned observing times For those of you who have not yet renewed, I encourage you to do so. I will be present for the February meeting. Feel free to renew in person. Alternatively, you can send me your renewal in the mail. You can find the necessary information at the BRAS website on the membership form.

Geoff Michelli
BRAS Treasurer

PREVIOUS MEETING MINUTES

November 12 2012 Meeting Notes:

- 7:16 Meeting begins
- 7:17 Members introdues themselves
- 7:18 Ben talks about the Good Lighting Award to Bass Pro Shop. New Dark Sky Advocacy website discussed. (brastro.org)
- 7:30 Steve talks about online star party he is hosting at astronomy.com.
- 7:34 Trevor talks about outreach programs.
- 7:35 Chris talks about possible Good Lighting Advocacy Committee. Then he discusses highschool student's senior project on light pollution. Registrations for assisting at the "How to Use Your Telescope Event. Then he awards Miss Kristen with the Frank Conrad Award.
- 7:41 John talks about his new sky quality meters one of which he has given to the observatory.
- 7:43 Amy talks about her senior project.
- 7:44 LED lights discussed.
- 7:46 Merrill's Pleiades talk begins.
- 8:21 Talk ends.
- 8:22 Christmas presents discussed.
- 8:34 Raffle prizes shown.
- 8:40 Meeting adjourned.

Rory Bentley
BRAS Co-Secretary