

Newsletter of the Baton Rouge Astronomical Society

www.braastro.org



November 2013

Next meeting Nov 11th 7:00PM at the HRPO

Dark Site Observing Dates:

Primary on Nov. 2nd

Secondary on Nov. 9th



Trifid Nebula taken at the HRPO



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PRESIDENT'S MESSAGE

Hi Everyone,

I hope you've all been enjoying some of the cooler clear evenings we've had recently. We had a great time at the HRPO for Spooky Spectrum with a record turnout. Thanks to all that contributed for the event.

Just a HUGE reminder...we will be fielding nominations for the BRAS Officers at the November meeting. PLEASE let us know if you would like to be considered for a position.

As per the vote taken at the October meeting, we are going to start providing a membership roster to members that request one in the near future. This would be used to help members stay in contact with each other and as our own personal telephone/email book in case you need to get in touch with a club member. Just like the phone company, if you do not wish to be listed on the roster, let us know and your info will not be included on the issued roster. If we do not hear from you, it is assumed you are OK with being listed.

That's all from me for this month. The big issue is just Officers. Please join us for the November meeting (especially if you are interested in a position.)

Clear Skies,
Ben Toman
BRAS President



NOTES FROM THE VICE PRESIDENT

Well, another Deep South Regional Stargaze has gone by. If you attended, bring your stories, pictures, gadgets, what have you.

But first, will start the meeting with the main presentation – something that BRAS has never done before. We will participate in a Webinar called “Real-Time Spectroscopy” by Tom Field. You might have heard of a Web meeting. Well, a Webinar is similar. It is a live interactive presentation over the Web from a speaker at a remote location. It is just like having a live meeting, except the participants can all be in different parts of the country or the world – even in orbit.

Tom will give a brief introduction to spectroscopy, some history and stories, and the modest equipment needed to do it. He will focus on how you can do real science in your back yard. Tom authored a simple computer program that interfaces with a fairly inexpensive filter. He will highlight using that system.

Tom Field of Field Tested Systems and is a Contributing Editor at *Sky & Telescope*. Tom’s first article in the magazine appeared in August 2011 on the topic of spectroscopy. He’s the author of the RSpec software (www.rspec-astro.com) which received their “Hot Product 2012” award last year. Tom is a popular speaker who has spoken at many different venues, including NEAF, the NEAF Imaging Conference, PATS, the Winter Star Party, the Advanced Imaging Conference, SCAE, and others. His enthusiastic style is lively and engaging. He promises to open the door for you.

Here, I’ll let Tom describe it.

Even if you wanted to touch a star, they’re impossibly distant. Despite these great distances, researchers have learned a great deal about quite a few stars. How? The most common method to study the stars is called spectroscopy, which is the art and science of analyzing the colorful rainbow spectrum produced by a prism-like device.

Until recently, spectroscopy was too expensive and too complicated for all but a handful of amateurs. Today, though, new tools make spectroscopy accessible to almost all of us. You no longer need a PhD, dark skies, long exposures, enormous aperture ... or a big budget! With your current telescope and FITS camera (or a simple web cam or even a DSLR without a telescope) you can now easily study the stars yourself. Wouldn’t you like to detect the atmosphere on Neptune or the red shift of a quasar right from your own backyard?!

This talk, with lots of interesting examples, will show you what it’s all about and help you understand how spectroscopy is used in research. And, it will show you how to get started.



MESSAGE FROM THE HRPO

FRIDAY NIGHT LECTURE SERIES

all start at 7:30pm

- 1 November: "Science at the South Pole"
- 8 November: "Astrophotography for Beginners"
- 15 November: "Buying Your First Telescope"
- 22 November: "Buying Your First Binocular"

CALL FOR VOLUNTEERS: ON SITE

* Saturday, 23 November from 6pm to 10pm. *Two volunteers in addition to regular BRAS compliment.*
Evening Sky Viewing Plus. Marshmallow roast, demo and clock tables; small telescope; setup and take down. Easy; training provided.

20OGS OPERATING EQUIPMENT

The large dome control system is brand-new, put in by one Greg Stafford, who visited from the southwest.

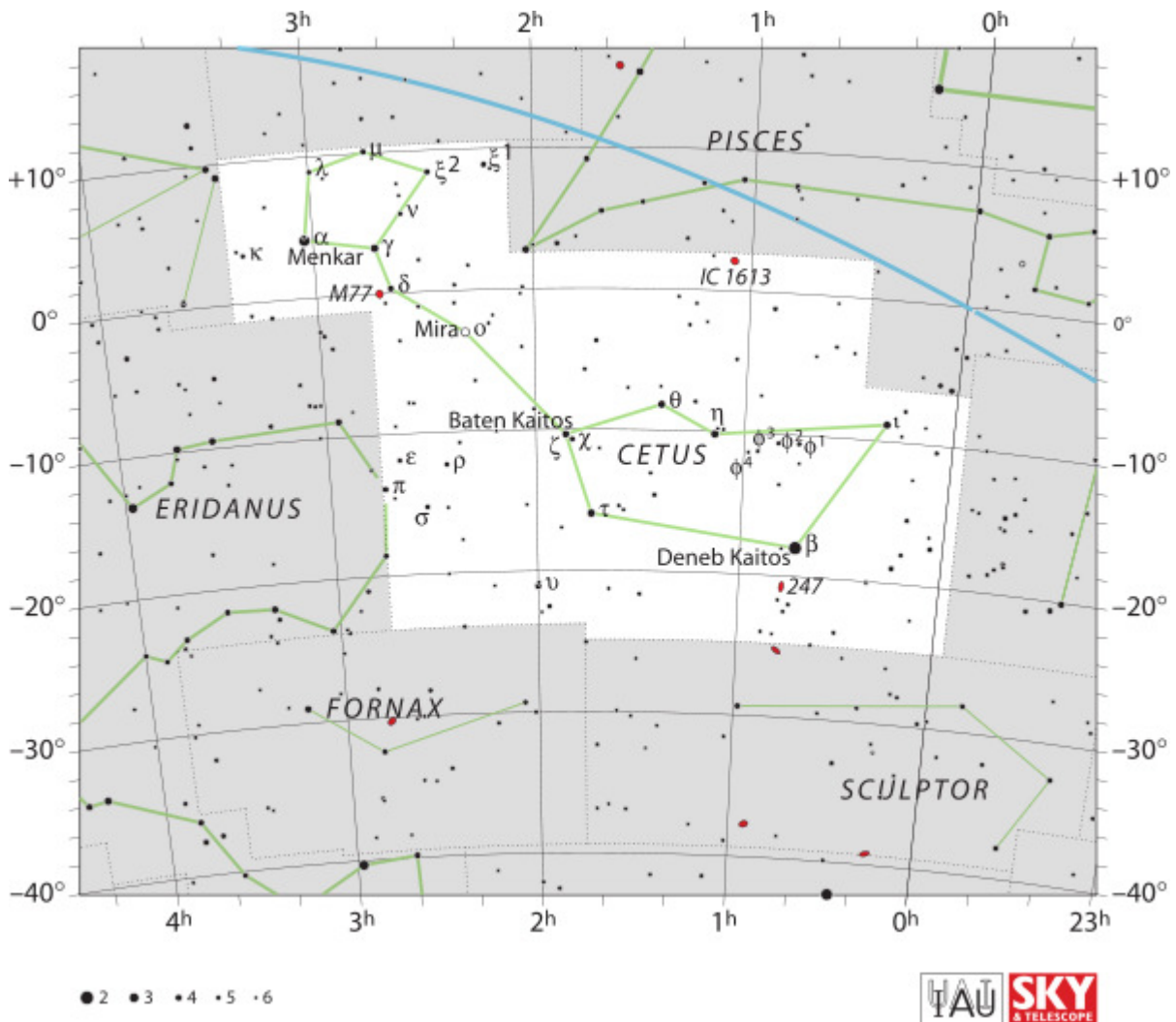
The 20OGS control system is a copy of the original system current operators use. Brad Schaefer is the only allowed user at this time; his observing course will last through December. On 16 October HRPO Center Supervisor Tom Northrop emailed Professor Guzik asking for a time frame during which the public can expect to once again look through the 20OGS. A time frame is still forthcoming.



MONTHLY OBSERVING NOTES

Constellation of the Month: Cetus “The Whale” or “Sea Monster”

Position: RA 1.42 hr, Dec. -11.35



Cetus – The Sea Monster

When Cassiopeia, wife to King Cepheus of Ethiopia, boasted that she was more beautiful than the sea nymphs, called the Nerids, she set in motion one of the most celebrated stories in mythology, whose characters are commemorated in the sky. In retribution for the insult to the Nerids, the sea god Poseidon sent a monster to ravage the coast of Cepheus' territory. That monster is represented by the constellation Cetus.

To rid himself of the monster, Cepheus was instructed by the Oracle at Ammon to offer up his daughter Andromeda as a sacrifice to the monster. Andromeda was chained to the cliff at Joppa (the modern Tel Aviv) to await her terrible fate.

Andromeda trembled as Cetus made toward her, cleaving through the waves like a huge ship. Fortunately, at this moment, the hero Perseus happened by after killing Medusa. Perseus produced the Medusa's severed head, whose fatal gaze instantly turned Cetus to stone. Andromeda later married Perseus, and because of his faithful service, Cetus was given a place among the stars in the region known as The Water, with Eridanus, Aquarius, and Pisces.

Named Stars

Menkar (Alpha Cet) or Menkab "Nostril", mag. 2.54, 03 02 16.78 +04 05 23.7. A wide double star, primary is a red giant, secondary is a blue white star (93 Ceti) at mag. 5.6.

Deneb Kaitos (Beta Cet) or Diphda "The Tail of the Sea Monster", mag. 2.04, 00 43 35.23 -17 59 12.1, an orange giant.

Kaffaljidmah (Gamma Cet), mag. 3.47, 02 43 18.12 +03 14 10.2. A close double star – primary is a yellow star, secondary is a blue star at mag. 6.6, with a separation of 2.7". A third faint companion, a 10th mag. red dwarf, is 14' to the NW.

Phycocroma (Delta Cet), mag. 4.08, 02 39 28.95 +00 19 42.7, is a variable star with a period of 0.161137 days.

Baten Kaitos (Zeta Cet) "Belly of the Sea Monster", mag. 3.74, 01 51 27.61 -10 20 05.8.

Deneb Algenubi (Eta Cet), mag. 3.46, 01 08 35.26 -10 10 54.9.

Thanih al Naamat (Theta Cet), mag. 3.60, 01 24 01.45 -08 10 57.9.

Deneb Kaitos Shemali (Iota Cet), mag. 3.56, 00 19 25.68 -08 49 25.8, a suspected variable star.

Menkar (Lambda Cet), mag. 4.71, 02 59 42.90 +08 54 26.6.

Aquae Abyssii (Upsilon Cet), mag. 3.99, 02 00 00.22 -21 04 40.0.

MIRA (Omicron Ceti) "The Wonderful", mag. 3.04, 02 19 20.79 -02 58 37.4. The first variable star to be discovered and the prototype of its class. Over a period of 322 days, it varies from

mag. 3 to 10, a pulsating variable. Discovered on Aug. 13, 1596 – every maximum since 1638 has been observed. MIRA is a binary; with MIRA B is an intrinsically variable high

temperature white dwarf, with magnitude ranging from 10th to 12th mag. with a separation of about 50 AU. Star known to Star Trek fans.

Al Sadr al Ketos (Pi Cet), mag. 4.24, 02 44 07.35 -13 51 31.2.

Al Sadr al Ketos al Thani (Sigma Cet), mag. 4.74, 02 32 05.28 -15 14 39.6.

Durre Menthor (Tau Cet) or Al Durr al Manthur, mag. 3.49, 01 44 05.13 -15 56 22.4. It has 5 planets orbiting it, and is one of the nearest naked eye stars at 11.9 light years distance.

Al Nitham al Anwal (Phi Cet), mag. 4.77, 00 44 11.41 -10 36 33.4, a suspected variable star.



Deep Sky

M77 (NGC 1068, 3c71), mag. 8.9, 02 40.1 -00 14, 7' by 6' size. A barred spiral Seyfert galaxy with 3 sets of spiral arms. One of the brightest galaxies seen face on, and is located 1.5° south

and 30' east of Delta Cet. Has an active galactic nucleus (AGN), and the nucleus is a steady infrared emitter.

Struve 186, mag.7.0, 01 53.3 +01 36, a close double star, both 7th magnitude.

NGC 246 (Caldwell 56, Hershel H-25-5, PK 118-74.1) "The Cetus Ring", mag. 8. Large, bright, with traces of a ring structure.

NGC 247 (Caldwell 62), mag. 9.2, 00 47.1 -20 46, 21' x 5', 3° SSE of Beta Cet (mag. 2.04). A faint, large, elongated, intermediate spiral galaxy gravitationally bound to NGC 253 in Sculptor constellation (Hershel H-20-5, the "Pac Man" galaxy).

IC 613 (Caldwell 51), mag. 9.2, 01 04.9 +02 08, 16'x14'. An irregular dwarf galaxy with a lot of Cepheid variable stars

NGC 720 (Hershel H-105-1), mag. 10.2, 01 53.0 -13 44, 4.7'x2.6', a bright, large elliptical galaxy.

NGC 936 (Hershel H-23-4), mag. 10.2, 02 27.6 -01 09, 4.5'x3.7', a barred spiral galaxy paired with NGC 941.

NGC 157 (Hershel H-3-2), mag. 10.4, 00 34.8 -08 24, 4.2'x2.7', a spiral galaxy.

NGC 908 (Hershel H-153-1), mag. 10.4, 02 23.1 -21 14, 5.5'x2.8', a spiral galaxy joined with NGC 894.

NGC 584 (Hershel H-100-1), mag.10.5, 01 31.3 -06 52, 3.5x2.1, elliptical galaxy.

NGC 584 (Hershel H-100-1), mag. 10.5, 01 31.3 -06 52, 3.5'x2.1', an elliptical galaxy.

NGC 1052 (Hershel H-63-1), mag.10.5, 02 41.1 -08 51, 2.9x2.1, a bright, large, round, elliptical galaxy, an active radio source, in the NGC 1068 group.

NGC 1055 (Hershel H-1-1 and H-6-2) mag. 10.6, 02.41.7 +00 27, 7.6'x3.0'. A nearly edge on spiral galaxy with dust lane. Located 35' NNW of Delta Cet, and is a known radio source.

NGC 45, mag. 10.8, 00 14.1 -23 11, 8.1'x5.8', a barred spiral galaxy.

NGC 864, mag. 10.8, 02 15.5 +06 00, 4.7'x3.2', a faint, large spiral galaxy.

NGC 1087, mag. 10.9, 02 46.4 -00 30, 3.9'x2.3', a spiral galaxy paired with NGC 1090, in the NGC 1068 group.

NGC 210, mag. 10.9, 00 40.6 -13 52, 4.7'x3.1', a barred spiral galaxy.

NGC 596 (Hershel H-4-2), mag. 10.9, 01 32.9 -07 02, 3.0'x2.3', an elliptical galaxy.

NGC 1073, mag. 11.0, 02 43.7 +01 23, 4.8'x4.4', a barred spiral galaxy in the NGC 1068 group.

NGC 578, mag. 11.0, 01 30.5 -22 40, 4.8'x3.2', a bright, large spiral galaxy with 3 arms.

NGC 988, mag. 11.0, 02 35.5 -09 22, 4.5'x2.2', a barred spiral galaxy.

NGC 1042, mag. 11.0, 02 40.4 -08 26, 4.7'x3.9', a faint, large, round spiral galaxy with well defined spiral arms, in the NGC 1052 group.

NGC 779 (Hershel H-101-1), mag. 11.2, 01 59.7 -05 58, 4.1'x1.2', a bright, large, barred spiral edge on.

NGC 1022 (Hershel H-102-1), mag. 11.3, 02 38.5 -06 41, 2.6' diameter, a bright, large, round spiral galaxy in the NGC 1052 group.

NGC 533, mag. 11.4, 01 25.5 +01 46, 3.9'x2.8', a bright, large, round elliptical galaxy.

NGC 428, mag. 11.5, 01 12.9 -00 59, 3.8'x3.0', a faint, large, round spiral galaxy.

NGC 450, mag. 11.5, 01 15.5 -00 52, 3.0'x2.3', a spiral galaxy.

NGC 636, mag. 11.5, 01 39.1 -07 31, 2.7'x2.2', an elliptical galaxy.

NGC 151, mag. 11.6, 00 34.0 -09 42, 3.7'x1.5', a barred spiral galaxy.

NGC 50, mag. 11.6, 00 14.7 -07 21, 2.6'x1.9', a lenticular galaxy;

NGC 337, mag. 11.6, 00 59.8 -07 35, 2.9'x1.8', a faint, large, elongated spiral galaxy.



NGC 615 (Herschel H-282-2), mag. 11.6, 01 35.1 -07 20, 3.4'x1.3', a barred spiral galaxy.
 NGC 1016, mag. 11.6, 02 38.3 +02 07, 2.3' diameter, a faint, small, roundish elliptical galaxy.
 NGC 1032, mag. 11.6, 02 39.4 +01 06, 3.4'x1.4', a spiral galaxy that forms a trapezoid with 3 stars.
 NGC 521, mag. 11.7, 01 24.6 +01 44, 3.1'x2.8', a barred spiral galaxy.
 NGC 895, mag. 11.7, 02 21.6 -05 31, 3.5'x2.6', a spiral galaxy joined to NGC 894.
 NGC 991, mag. 11.7, 02 35.5 -07 09, 3.0'x2.6', a spiral galaxy in the NGC 1052 group.
 NGC 1090, mag. 11.8, 02 46.6 -00 05, 4.1'x1.8', a spiral galaxy with a narrow bar, paired with NGC 1087, in the NGC 1068 group.
 NGC 274, mag. 11.8, 00 51.0 -07 03, 2.0'x1.4', an elliptical galaxy interacting with NGC 275.
 NGC 255, mag. 11.9, 00 47.8 -11 28, 2.9'x2.6', a faint, small, round barred spiral galaxy.
 NGC 309, mag. 11.9, 00 56.7 -09 55, 3.0'x2.3', a bright, large spiral galaxy with many arms.
 NGC 1070, mag. 11.9, 02 43.4 +04 58, 2.4'x2.0', a faint, small, roundish irregular spiral galaxy.
 NGC 271, mag. 12.0, 00 50.5 -01 55, 2.2'x1.7', a faint, small, round, elongated spiral galaxy.
 NGC 681, mag. 12.0, 01 49.2 -10 26, 2.7'x1.8', a barred spiral galaxy, resembles a miniature M104.
 NGC 887, mag. 12.0, 02 19.5 -16 04, 1.9'x1.5', a faint, small, roundish, irregular barred spiral galaxy.
 NGC 955, mag. 12.0, 02 30.6 2.8'x0.8', a bright, small, elongated spiral galaxy.
 NGC 175, mag. 12.1, 00 37.4 -19 56, 2.1'x1.9', a barred spiral galaxy.
 NGC 448, mag. 12.1, 01 15.3 -01 38, 1.8'x0.9', an elliptical/spiral galaxy.
 NGC 731, mag. 12.1, 01 54.9 -09 01, 1.6' diameter, a faint elliptical galaxy, appears stellar.
 NGC 788, mag. 12.1, 02 01.1 -06 49, 2.1'x1.5', a spiral galaxy paired with IC 184.
 NGC 835, mag. 12.1, 02 09.4 -10 08, 0.9'x0.8', a faint, small barred spiral galaxy.
 NGC 945, mag. 12.1, 02 28.6 -10 32, 2.3'x2.2', a faint, large, roundish irregular barred spiral galaxy.
 NGC 1015, mag. 12.1, 02 38.2 -01 19, 2.6'x2.6', a faint, small barred spiral galaxy.
 NGC 1045, mag. 12.1, 02 40.5 -11 17, 1.9'x1.3', an elliptical/spiral galaxy.
 NGC 245, mag. 12.2, 00 46.1 -01 43, 1.3'x1.1', a small, faint irregular galaxy.
 NGC 337A, mag. 12.2, 01 01.6 -07 35, 5.8'x4.6', a barred spiral galaxy.
 NGC 701, mag. 12.2, 01 51.1 -09 42, 2.6'x1.3', a barred spiral galaxy paired with IC 1738.
 NGC 958, mag. 12.2, 02 30.7 -02 56, 3.0'x0.9', a faint, nearly edge on barred spiral galaxy.
 NGC 1035, mag. 12.2, 02 39.5 -08 08, 2.2'x0.6', a nearly edge on peculiar spiral galaxy, in the NGC 1052 group.
 NGC 493, mag. 12.3, 01 22.1, +00 57, 3.5'x1.0', a barred spiral galaxy.
 NGC 600, mag. 12.4, 01 33.1 -07 19, 3.7'x3.6', a barred spiral galaxy.
 NGC 873, mag. 12.4, 02 16.5 -11 21, 1.5'x1.2', a faint, large spiral galaxy.
 NGC 941, mag. 12.4, 02 28.5 -01 09, 2.7'x1.9', a spiral galaxy paired with NGC 936.
 NGC 275, mag. 12.5, 00 51.1 -07 04, 1.4'x1.1', a barred spiral galaxy.
 NGC 530, mag. 13.0, 01 24.7 -01 35, 1.5'x0.3', a barred spiral galaxy.
 NGC 47/58, mag. 13.5, 00 14 30.6 -07 10 03, a barred spiral galaxy.
 NGC 17, mag. 15.3, 00 11 06.6 -12 06 26, a spiral galaxy.

Double/Triple Stars

UV Cet, mag. 12.54, 01 39 01.54 -17 57 01.8, a flare star prototype. A binary pair of red dwarf stars known as Luyten 726-8. A period of 10 hours, magnitude jumps 3 to 4 magnitudes, then back to its faint self. The companion star, Luyten 726-8 B is also a flare star, but not so extreme.

13 Cet, mag. 5.2, 00 35 14.64 -03 35 33.9. A double star with a short period of 6.91 years, and a separation of about 0.35". Primary is a spectroscopic binary with a period of 2.0819 days, and the fainter star is a red dwarf.

AA Cet, mag. 7.53, 01 59 39.17 -22 51 06.7, a triple star. The primary and secondary (mag. 7.24) stars



are eclipsing binaries separated by 8.4 arc seconds, with a period of 0.53617 days. The tertiary star is not visible.

Other Stars

Nu Cet (78 Cet), mag. 4.87, 02 35 52.49 +05 35 35.9, a double star.
48 Cet, mag. 5.11, 01 29 36.10 -21 37 45.6, a double star.
94 Cet, mag. 5.07, 03 12 46.32 -01 11 45.4, has one exo-planet.
75 Cet, mag. 5.36, 02 32 09.44 -01 02 05.3, has one exo-planet.
81 Cet, mag. 5.65, 02 37 41.78 -03 23 45.8, has one exo-planet.
79 Cet, mag. 6.83, 02 35 20.02 -03 33 34.3, has one exo-planet.
HD 11964, mag. 6.42, 01 57 09.82 -10 14 30.6, has two exo-planets.
HD 1461, mag. 6.47, 00 18 412.62 -08 03 09.5, has two exo-planets and two candidates.
HD 7449, mag. 7.50, 01 14 29 -05 02 51, has two exo-planets.
HD 11506, mag. 7.54, 01 52 50.53 -19 30 25.1, has two exo-planets.
HD 5319, mag. 8.05, 00 55 01.40 +00 47 22.4, has one exo-planet.
HD 224693, mag. 8.23, 23 59 53.83 -22 25 41.2, has one exo-planet.
HD 6718, mag. 8.45, 01 07 48.66 -08 14 01.3, has one exo-planet.
HD 1960, mag. 9.17, 00 21 13 -08 16 32, has one exo-planet.
HD 2638, mag. 9.44, 00 29 59.87 -05 45 50.4, has one exo-planet.
BD-17°63, mag. 9.62, 00 28 34.31 -16 13 34.8, has one exo-planet.
HD 16031, mag. 9.76, 02 34 11 -12 23 03, has two exo-planets.
HIP 5158, mag. 10.21, 01 06 02.05 -22 27 11.4, has two exo-planets.
Wasp 71, mag. 10.57, 01 57 03.0 +00 45 32, has one transiting planet.
WASP 77A, mag. 11.29, 02 28 37.0 -07 03 38, has one transiting exo-planet.
WASP 26, mag. 11.30, 00 18 24.70 -15 16 02.3, has one transiting exo-planet.
HAT-P-46, mag. 11.94, 00 32 07.1 -02 58 15, has two transiting exo-planets.
HAT-P-45, mag. 12.79, 00 33 09.9 -03 22 51, has two transiting exo-planets.
WASP-44, mag. 12.90, 00 15 36.77 -11 56 17.3, has two transiting exo-planets.



Sky Happenings for November

Nov. 1st - Venus at greatest elongation (47°) at 3:00 AM CDT.

Mercury is in an inferior conjunction at 3:00 PM CDT.

Nov. 2nd – The Moon passes 0.8° north of Spica at 2:00 AM CDT.

Nov. 3rd – Daylight savings time ends at 2:00 AM.

New moon occurs at 6:50 AM CST.

Nov. 6th – The Moon is at perigee (227,025 miles from earth) at 3:22 AM CST.

Saturn is in conjunction with the Sun at 6:00 PM CST.

Dusk – The Moon passes 7° - 8° north of Venus at 7:00 PM CST.

Nov. 7th – Jupiter is stationary at 1:00 AM CST.

Nov. 9th – First Quarter Moon occurs at 11:57 PM CST.

Nov. 10th – Mercury is stationary at 8:00 AM CST.

Nov. 11th – The Moon passes 6° north of Neptune at 5:00 AM CST.

Nov. 11th to 28th – Dawn – Mid-northern observers should be able to spot Mercury well above the eastern horizon 45 minutes before sunrise.

Nov. 13th – Neptune is stationary at 4:00 PM CST.

The Moon passes 3° north of Uranus at 9:00 PM CST.

Nov. 16th – Asteroid Kleopatra is at opposition at 7:00 AM CST.

Nov. 17th – Full Moon occurs at 9:16 AM CST.

Leonid meteor shower peaks.

Mercury is at greatest elongation (19°) at 9:00 PM CST.

Nov. 17th/18th – Dawn – Comet ISON will pass less than 1° from Spica

Evening – The just past full Moon shines to the right of Aldebaran and the Pleiades on the 17th and on the left of Aldebaran on the 18th.

Nov. 20th – The Moon passes 5° south of Jupiter at 11:00 PM CST.

Nov. 22nd – The Moon is at apogee (251,931 miles from Earth) at 3:49 AM CST.

Dawn – The comet ISON is level with Mercury and $5\frac{1}{2}^\circ$ to the planet's right.

Nov. 25th – Last Quarter Moon occurs at 11:28 PM CST.

Mercury passes 0.3° south of Saturn at 10:00 PM CST.

Nov. 25th – 26th – Dawn – Saturn is less than 1° from much brighter Mercury. Comet ISON may be visible far below them a half hour before sunrise.

Nov. 27th – The Moon passes 6° south of Mars at 10:00 AM CST.

Nov. 28th – Comet ISON reaches perihelion (1,157 million miles from the Sun) at 1:00 PM CST.

Nov. 29th – Spica shines to the lower left of the waning crescent Moon. The Moon goes on to occult Spica, during broad daylight in North America, and passes 0.9° north of Spica at 11:00 AM CST



Planets

Mercury – Passes through inferior conjunction with the Sun on Nov. 1st. It appears significantly higher and brighter each morning after that, becoming visible to the unaided eye around Nov. 9th, at mag. 0.8 that morning. On Nov. 17th, reaches greatest western elongation, standing 10° high in the ESE 45 minutes before sunrise, shining at mag. 0.6, with a disc that is 7" in diameter and 60% lit.

Venus – As darkness falls in Nov., Venus gleams low in the SW sky. On Nov. 1st, Venus stands 11° high an hour after sunset, and by the 30th it is 15° high. Venus brightens from mag. -4.5 to -4.8 during Nov. Venus spends the month in Sagittarius. On Nov. 6th, a waxing crescent Moon passes 8° north of Venus – mid-way between the pair you can find M8 (The Lagoon Nebula) and M20 (The Trifid Nebula). On the 13th, Venus slides 3° south of M22.

Mars – Mars rises above the horizon around 2:30 AM DST on Nov. 1st and around 1:00 AM standard time on Nov. 30th. Mars brightens from mag. +1.5 to +1.2 in Nov., and its disc grows from 4.9" to 5.6". Mars begins the month in Leo, roughly mid-way between Regulus and Denebola and just 2.5° south of M96. Mars moves into Virgo on Nov 25th, ending the month NE of Beta Virginis.

Jupiter – On Nov. 1st, Jupiter rises about 9:00 PM DST and by Nov. 30th, rises at about 6:00 PM CST. Jupiter will brighten from mag. -2.4 to -2.6 in Nov., and its orb grows from 41" to 45" wide. Jupiter will halt its eastward motion on Nov. 7th, remaining about 7 ½ ° from Pollux all month, forming a dogleg with Pollux and Castor. On the night of Nov. 14th/15th, Ganymede's shadow transits Jupiter from Jupiter's rise until 11:25 PM CST. Callisto's grayish disc will be silhouetted against Jupiter until 10:32 PM CST. Ganymede will then transit Jupiter for 3 hours starting at 12:42 AM CST. Toward the end of the month, Jupiter starts edging westward toward Delta Geminorum (Wasat). On Nov. 21st/22nd, a waning gibbous Moon passes 5° south of Jupiter.

Saturn – On Nov. 6th, will be in conjunction with the Sun and will not be easily visible to the unaided eye low in the dawn until the last week of Nov. On Nov. 25th/26th, Mercury passes Saturn just 0.3° apart at 1 hour UT, and will be that separation by the time they rise in the Americas. That morning, Saturn's mag. is +0.6 compared to Mercury's being 3 times brighter.

Uranus – Will be highest in the south around 9:00 PM local time in mid Nov. with a mag. 5.8, travelling slowly westward along the border of Pisces and Cetus. Look 6° SW of Delta Piscium (mag. 4.4)- 44Psc will lie 2° farther from Delta – Uranus will show a 3.6" diameter disc with a distinct blue-green color.

Neptune – Once the evening becomes totally dark, Neptune will be due south and nearly half-way to the zenith in the central part of Aquarius between 5th magnitude stars Sigma and 38 Aquarii. Neptune, mag. 7.9, spends all of Nov. on the line joining these two stars, approximately 3° west of Sigma and 2° east of 38. Neptune will show a blue-grey disc, 2.3" across.

Sun – On Nov. 3rd, there will be a borderline annular/total eclipse, but will not be visible to us.

Moon – A waxing crescent is to the upper right of Venus on Nov. 6th. The waning crescent is to the right of Mars on Nov. 27th. The Moon occults Spica at around 11:30 AM CST on Nov. 29th in North America, but the 14% lit crescent will be hard to locate – less than 45° west of the Sun in the daytime sky.

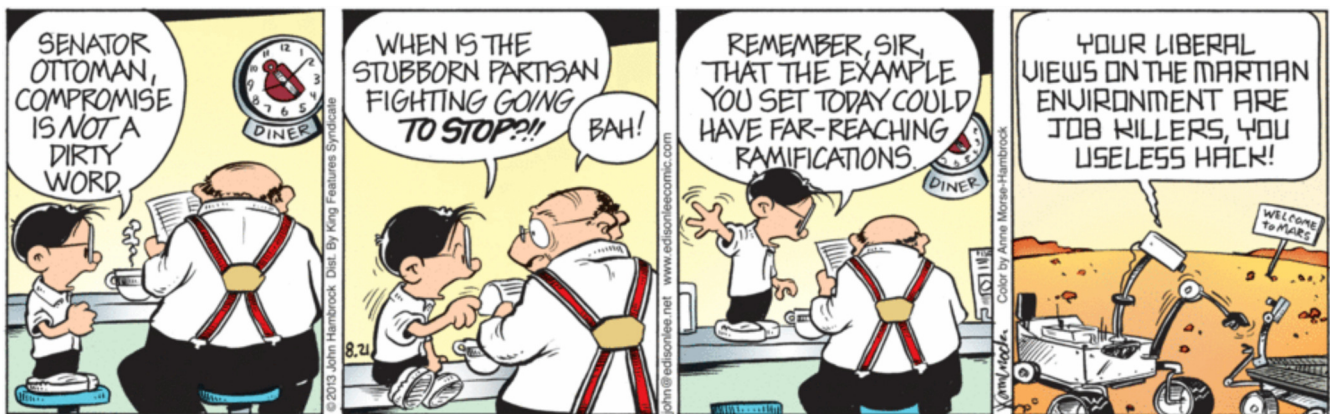
Leonid meteor shower peaks before dawn on Nov. 17th, under a full Moon. The Southern Taurids meteor shower is most active in early Nov., the Northern Taurids by mid Nov.

Asteroid 20 Massalis, 9th magnitude, will be in Aries, 10° south of the double star Gamma Arietis, or 23° south from 19 Arietis (6th magnitude),



Comet ISON – ISON races from Leo across Virgo and Libra into Scorpio this month as it makes its closest approach to the Sun on Nov. 28th. ISON will pass Spica on Nov. 17th/18th, and the following week it appears near Mercury and Saturn. On Nov. 1st, at the start of the morning twilight, ISON will be 30° above the eastern horizon in southern Leo, 12° SW of 2nd magnitude Denebola, or 7° SSE of Mars (mag. 1.5). On Nov. 5th, ISON goes into Virgo where it remains until Nov. 22nd. On Nov. 15th, ISON is 8° WNW of Spica, 5° the next day, and 2° the next day, and should be about mag. 5. Predictions say ISON should be about 4th magnitude on Nov. 22nd, as it passes into Libra. Mercury (mag. -0.7) will be 5° to ISON's left, with Saturn (mag. 0.6) appearing 4° to Mercury's lower left. On Nov. 23rd, ISON, Mercury, and Saturn will be within 6° of each other. ISON reaches perihelion on Nov. 28th (Thanksgiving), just 730,000 miles from the Sun's surface. The IAU predicts ISON will peak at mag. -4.5, and will lie within 1° of the Sun. Best views of perihelion will be from the STEREO, SDO, and SOHO telescopes.

SOHO can be accessed at <http://www.nascom.nasa.gov/data/realtime-images.html>. If ISON does not break up, it should emerge from the other side of the Sun glowing brightly before dawn. It will then swing northward through Scorpius, Ophiucus, Serpens, Hercules, Corona Borealis, and Draco during December.



OUTREACH CHAIRPERSON'S NOTES

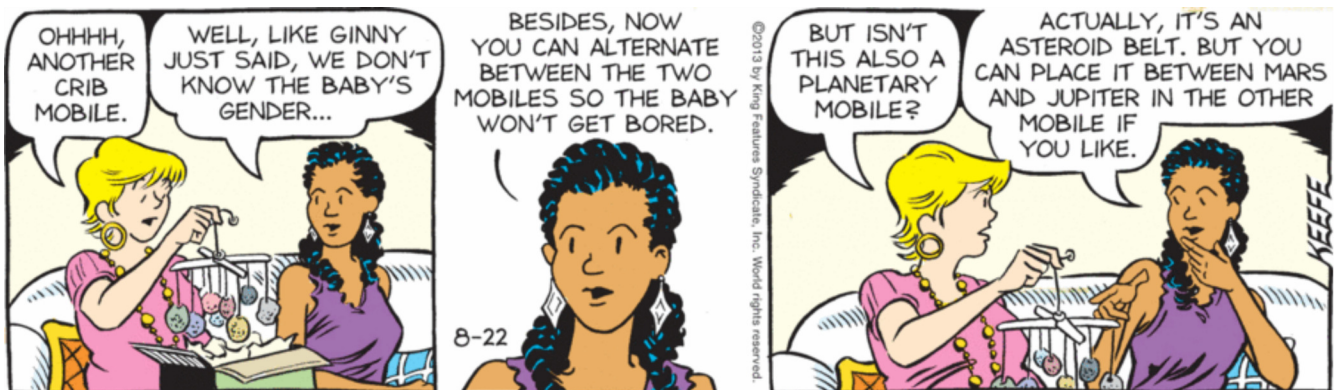
Outreach Report

October saw our inaugural Sidewalk Astronomy event at Jones Creek Branch Library. The first event at a new location always brings with it unique challenges, and this was no exception. We had blinding parking lot lights to deal with, which wrought havoc on our observing all night. Some emails with the coordinator has hopefully rectified that situation. The next event will be November 12th beginning at 6pm and ending at 9pm.

Additionally, the following night, November 13th, we have a request for a Sidewalk Astronomy event at the Baker Branch Library. We will need two volunteers for this event. I will not be there because I teach on Wednesday nights.

In the works right now, I am hoping to set up a better system for members to be notified of upcoming outreach events. I think there are people out there who are interested in volunteering, but who haven't let me know, or that I miss when I send out requests. Hopefully the new system will alleviate those issues.

-Trevor McGuire



MINUTES FROM OCTOBER MEETING

7:16 Meeting begins.

7:17 Recent events and speaker cancelation discussed. 20 and 16 inch telescope problems outlined by Ben.

7:23 New registration guidelines and rules for Deep South SP stated. Admission price increases from \$25 to \$40 on the 18th. Other DS matters also brought up.

7:30 Upcoming outreach event to be set up at Lamar-Dixon on the 17th. Solar observing, food and other telescopes will be there.

7:35 Ben shows off excess telescopes and equipment to be sold and used for spare parts.

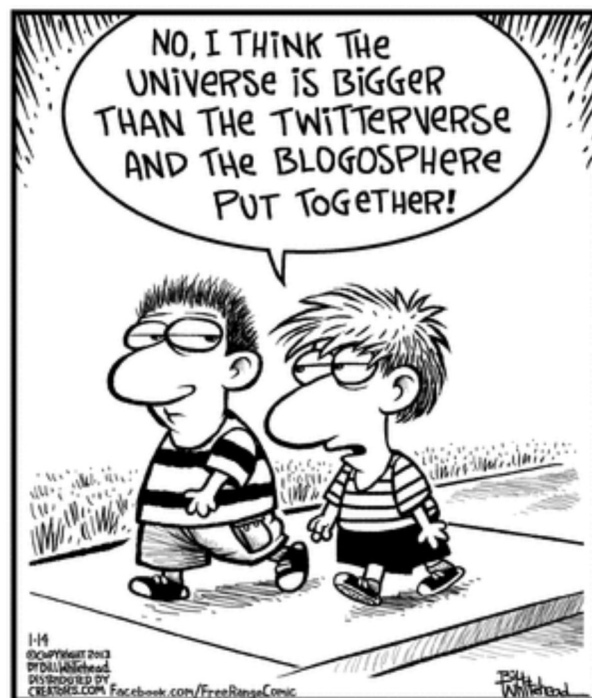
7:40 Club roster proposed. Members may opt out from having their info published.

7:46 Ben fills time with questions about comet ISON, Christmas drive and officer term limits.

7:49 Additional questions about ISON and other comets asked.

7:53 Merrill showed videos on manipulation of atoms, and satellite imagery from Saturn set to music. He also talked about several astronomy related websites.

7:59 The meeting was adjourned



BATON ROUGE ASTRONOMICAL SOCIETY

MEMBERSHIP APPLICATION



You can pay your membership dues at our next meeting or send your dues to:

Baton Rouge Astronomical Society, Inc.
c/o Geoff Michelli, Treasurer
10457 Barry Dr.
Baton Rouge, LA 70809

If you have questions about dues or receiving your newsletter, call Geoff at (225) 573-4313 or send an email to geoff@michelli.net

For new members joining, the amount is pro-rated for the initial year based on which quarter the membership begins. The rates are reflected below. 4th quarter rates also cover the following year.			Membership renewals are \$20, and are due in January of each year.	
Jan - Mar	\$20.00	\$ _____	Date _____	
Apr - Jun	\$15.00		Name _____	
Jul - Sep	\$10.00		Address _____	
Oct - Dec	\$25.00		_____	
Each Additional Family Member	\$5.00	\$ _____	Phone Home _____	
Student Membership (through age 17)	\$10.00	\$ _____	Cell _____	
Donation* toward club building fund or (specify) _____		\$ _____	Work _____	
TOTAL ENCLOSED		\$ _____	Email _____	

The Society's newsletter Night Visions is sent via email.

If you prefer to receive the newsletter via mail, please check this box ☐

PLEASE CHECK THAT YOUR ADDRESS AND E-MAIL ARE CURRENT AND CORRECT

Meetings are usually held the second Monday of each month at 7PM, except for June and July. Most meetings are held at the Highland Road Park Observatory

* All donations to the Baton Rouge Astronomical Society, Inc. are tax-deductible under IRS section 501(c)(3) & (a)(1) and also 170(b)(1)(A)(vi).
 The Baton Rouge Astronomical Society, Inc. is a nonprofit corporation chartered under the laws of the State of Louisiana

