



## Monthly Meeting Monday, February 12<sup>th</sup> at 7PM at HRPO

(Monthly meetings are on 2<sup>nd</sup> Mondays, Highland Road Park Observatory).

**Program: Star Clusters, a presentation by Rory Bentley.**

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<http://brastro.org/newsletters.html>**



## President's Message

We are now entering the month of February 2018. This month will be unusual for the fact there will be no full moon. This lack of a full moon can happen because the Moon's synodic orbit around Earth takes longer than the 28 days in February.

I would remind you that our monthly meeting is on 12th of February at 7 pm. There will be a talk on star clusters given by Rory Bentley.

I would also like to remind you of our Business Meeting which will be 7 pm on 7th of February at HRPO. We are investigating ideas which include:

- an asteroid observing group
- an astrophotography study group
- a BRAS Youtube channel
- adding additional stargazes for BRAS members
- ways to better utilize BRAS equipment
- adding another dark sky site

We may not do everything listed if there is not sufficient interest from members, so if you are willing to help let us know. Furthermore, if you have an idea not listed let us know.

Also, I would like to take this opportunity to invite members to write high-quality articles for our newsletter.

Please check with Ben Toman if you are willing to help with our Outreach Requests. Remember, Outreach into our community is a lot of what we do.

Clear Skies

Steven M. Tilley

### 2018 Officers:

President: Steven M. Tilley  
 Vice-President: Scott Louque  
 Secretary: Krista Reed  
 Treasurer: Trey Anding

### BRAS Liaison for BREC:

Chris Kersey

### BRAS Liaison for LSU:

Greg Guzik

### Committees/Coordinators:

Light Pollution:

John Nagle

Newsletter:

Michele Fry

Observing:

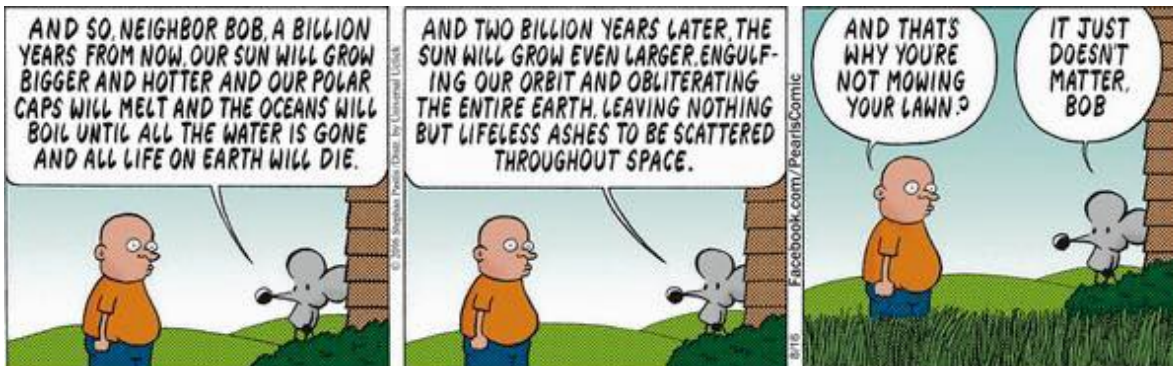
John Nagle

Outreach:

Ben Toman

Webmaster:

Frederick Barnett



# Secretary's Summary of January Meeting

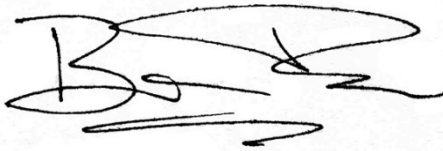
Hi Everyone,

Krista was sick for this meeting so I took my usual notes for her:

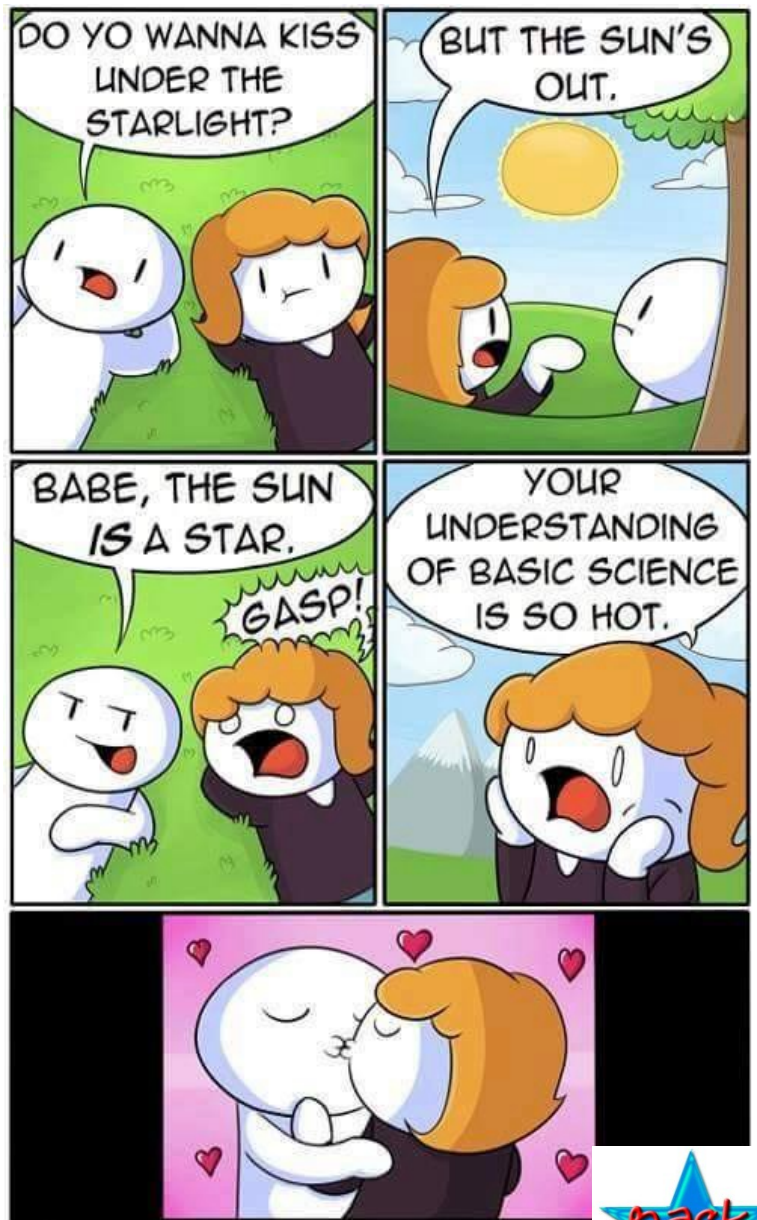
- Meeting opened by club President Steven Tilley
- He pointed out there were sign up sheets for folks to help out with various tasks.
- Scott Louque gave a quick show and tell about his astrophotography.
- Several members did show and tell about stuff they got during the holidays including a nice donation for the club (Celestron 8" SCT)
- Ben Toman gave lapel pins from the Night Sky Network to last year volunteers.
- Don Weinell talked about the upcoming Rockefeller Star Party.
- Ben talked about upcoming outreach opportunities.
- Chris Kersey talked about the current Globe at Night and the current state of the main telescope operations

Meeting adjourned

Clear Skies,



Ben Toman, filling in for Krista Reed



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from the editor

# Valentine's Day

is

# February 14

( Don't miss your chance to impress someone special with your vast astronomical knowledge! )



## BRAS Outreach Report

We are getting 2018 going with a lot of outreach requests! We have some new tool kits from the Night Sky Network that should help make those even more fun.

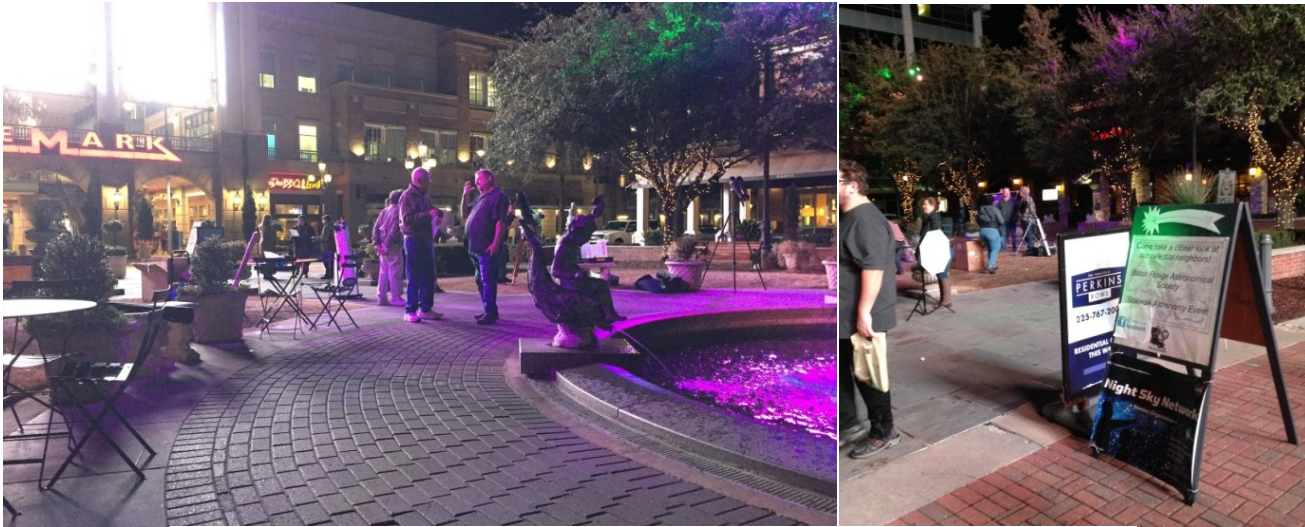
Most recently, we had our first outing for 2018 on Tuesday, January 23rd for our Sidewalk Astronomy at Perkins Rowe. 10 club members came out to the event! That might be a record for a non-Astronomy Day event. Most importantly, we had about 75 or more visitors that got to learn some neat stuff about the night sky and our club.

Thanks to: Chris *Kersey*, *Steve Tilley*, *Scott Louque*, *Scott Cadwallader*, *John Nagle*, *Merrill Hess*, *Craig Brenden*, *Coy Wagoner*, *James Ernest* and *Ben Toman* for coming out. Thanks to them, we had scopes of all sizes, banners, flyers, binoculars and even a projector showing a live image of the Moon.



Below are a few pictures at Perkins Rowe, contributed by Ben Toman and Coy Wagoner





Our first planned event at the LSU Museum of Art was postponed due to the frozen weather we had that week, but as you'll see below, it's been rescheduled.

We've got a lot coming up and some of it soon. Please take a look at these dates/times and let me know ASAP if you are able to help out. We particularly need one or two more hands for the Oak Grove STEAM night on February 8th.

**Thursday, February 8th**  
 6pm-8pm  
 Oak Grove Primary (Prairieville)  
 2nd annual STEAM night  
 (Indoor table with demos/info)

**Thursday, February 8th**  
 6:45pm-8:30pm  
 LSU Museum of Art  
 (Telescope viewing on rooftop Terrace of Shaw Center)

**Thursday, February 22nd**  
 5:30pm-7:30pm  
 L'auberge Hotel and Casino rooftop (Baton Rouge)  
 (Telescope viewing)

This is a planned social to go along with the theme and help promote the Launch Party on the 24th for the One Book, One Community event at the Main Library

**Saturday, February 24th**  
 6pm-?

Main Library at Goodwood  
 From the Library's request: "We're gearing up for our annual One Book, One Community programming and are currently planning our Launch Party for this year's selection, *Hidden Figures* by Margot Lee Shetterly.



Launch Party will take place outdoors on the Plaza. STEM organizations will be showcased expo-style. Each organization will have a table where they can interact with patrons and discuss their work. In addition to the STEM theme, the event will be a blast from the past with retro food and music, as well as some costumed staff and volunteers."

(We'd need a few volunteers to staff a table with some info/demos. If the weather is clear, there will be a nice Moon up so even if lights are bright, we could have a scope for Lunar viewing set up.)

**Thursday, March 1<sup>st</sup>**  
6:30pm-7:30pm  
Main Library in Livingston  
(Short presentation and telescope viewing.)


**Thursday, March 8<sup>th</sup>**  
7pm-8pm  
Main Library in Denham Springs  
(Short presentation and telescope viewing)

**Saturday, March 10<sup>th</sup>**  
9am-4pm  
Bluebonnet Swamp and Nature Center  
Rockin' at the Swamp  
(Solar observing, demos, info. 8 or more volunteers desired for this long event. Let me know a shift you'd like to do.)

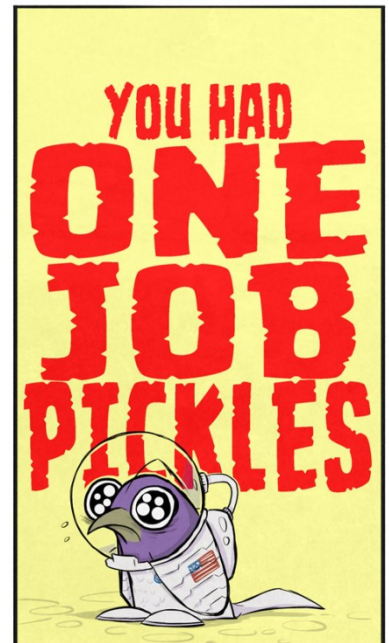
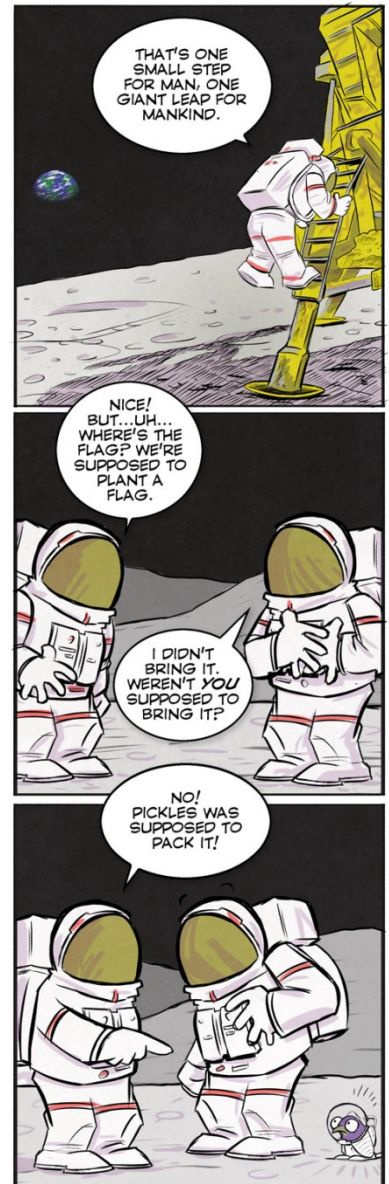
I told you we have a busy year shaping up! Again, please let me know ASAP if you can help out. Don't be shy. These events are great ways to learn new tidbits of astronomy yourself!

P.S. I didn't include the Friday, February 2nd outreach since it may have already happened by the time you read this and we currently have plenty of volunteers to assist with that event.

Clear Skies,



Ben Toman  
Outreach Coordinator





## BRAS Light Pollution Committee Report

This committee meets at 5:45, same day as the 6:30 BRAS Business Meeting (which takes place on the Wednesday before the Monthly Meeting)

Everyone is welcome to join in.

Meeting called to order by new Chairperson, John R. Nagle

No new members, with 8 members in attendance

December's minutes published in January newsletter

Minutes of the January meeting read and approved

### Old Business:

1. Proposed amplified criteria for the Good Lighting Award read to committee
2. Some of writing for update of the Dark Sky Advocacy web pages read
3. Petition for the reduction of Light Pollution to be re-written, and looking into it having a separate page on the Dark Sky Advocacy web pages
4. Four Light Meters, to test for Light Pollution were discussed. Referred to the BRAS Executive Board for purchase of one
5. Possible donors for the light meter(s) not now needed
6. Training on lighting types, color temperature of luminaries, Kelvin temperatures, was discussed, training materials to be written, and possibly having a public training at the Library also discussed.

### New Business:

1. Chris informed us that there will be one more Move 20/20 municipal meeting. Chris will let us know when and where it will be held.
2. Chris asked us to check out BREC's web pages for Environmental Impact. Amanda is the contact person, and we can ask for an update to be given to Chris.

Meeting Adjourned



Submitted by John Nagle, Acting Secretary for this meeting





## Recent Entries in the BRAS Forum

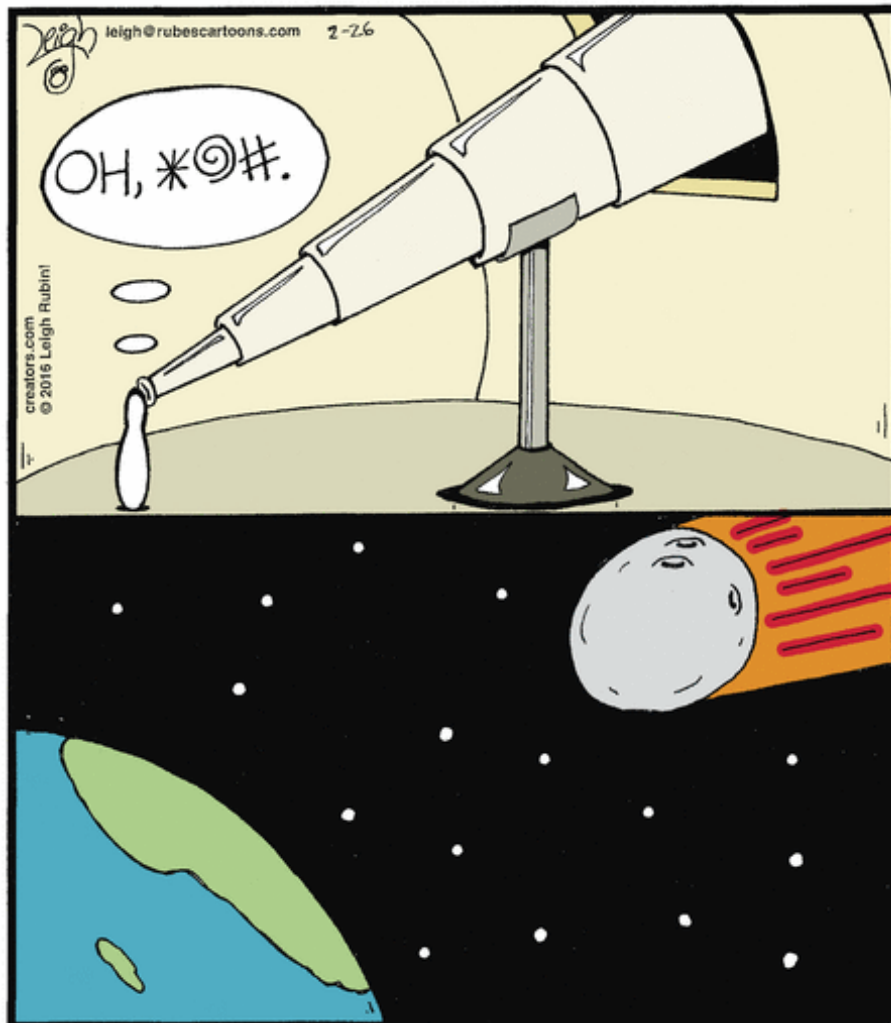
***Below are selected additions to the BRAS Forum. There are also nine active polls. The Forum has reached 5000 posts.***

New Documentary Highlights [History of the Airplane](#)  
The [Lunar Halos](#) Return with the Cold  
[Iridium Flares](#) to End in 2018  
[Bright Green Geminid Fireball](#) Spotted at HRPO  
First [Interstellar Asteroid](#) Observed  
[NanoDays](#) Coming a Month Early in 2018  
A Good Turnout for Last “[Star of Bethlehem](#)” Talk



## 20/20 Vision Campaign

This campaign’s goal was to raise the SQM measurement at HRPO’s back viewing pad to 20.0 by this past November. There is talk of keeping it perpetual until the goal is reached, but the Light Pollution Committee will have to decide.







# Messages from HRPO

*Highland Road Park Observatory*



## FRIDAY NIGHT LECTURE SERIES

*all start at 7:30pm*

**2 February: “The Great Martian Apparition”** It’s happening. As Earth speeds closer to it the Red Planet rises earlier, grows larger and shines brighter in the night. It will be seventeen years before it is this impressive again!

**9 February: “The Final Iridium Flares”** For years these intense brief increases in light from orbiting communications satellites have thrilled families and friends. Sadly, the replacement machines are nowhere near as reflective...and so this is the end of an era. What is an Iridium flare? How does one look in the right place at the right time to see a flare?

**16 February: “Protecting the Power Grid”** There are several different ways entire sections of our nation’s Grid can be damaged or destroyed. Indeed, it’s happened before...at least on a small scale. What about a large-scale event? Many believe it’s a matter of when, not if. Are we prepared?

## SCIENCE ACADEMY

**Saturdays from 10am to 12pm**

*For ages eight to twelve. \$5/\$6 per child.*

**3 February: “Observing the Universe—Telescopes”**

**10 February: “Names and Catalogs”**

**17 February: “Expedition 12”**

## ONE-TIME CALLS FOR VOLUNTEERS

**\*Saturday 3 February, 7pm to 10pm.** *One or two volunteers.* **Evening Sky Viewing Plus.** Telescope operation, physical science demonstrations, front desk duty. Easy to moderate difficulty.

**\*Saturday 17 February, 5:30pm to 7:30pm.** *Three or four volunteers.* **Learn Your Telescope.** Showing patrons how to set up and use their personal telescopes. Moderate difficulty.

**\*Saturday 24 February, 2pm to 6pm.** *One or two volunteers.* **NanoDays.** Front desk. Experiments and demonstrations related to nanotechnology. Low to moderate difficulty.

**\*Saturday 21 April, 3pm to 11pm.** *Fifteen volunteers.* **International Astronomy Day.** HRPO’s largest public offering. Front desk duty, telescope operation, physical science demonstrations, children’s ride monitoring, relaying messages, welcome

table. Low to high difficulty.

### **ONGOING CALL FOR VOLUNTEERS**

HRPO periodically needs BRAS volunteers for crafting (gluing, cutting, painting, etc.); training is offered for these easy to moderate tasks. We also have plenty of “grunt work”. We are asking any members with the time to do so to assist. Thank you.



## **Adult Astronomy Courses**

**From 3:30pm to 7:30pm**

**For ages eighteen and older.**

**\$15 per in-parish registrant; \$18 per out-of-parish registrant.**

### **17 February: Learn Your Telescope**

how to set up your telescope / how to care for your telescope / major telescopic features in the Baton Rouge sky, and how to find them / how to darken the sky from your home / upcoming telescopic events / actual practice aiming and focusing on celestial objects (weather permitting)



### ***GLOBE at Night: 5 to 14 February [Orion]***

Instructions to participate in this project are at...

<http://www.braastro.org/phpBB3/viewtopic.php?f=29&t=2760>



## **INTERNATIONAL ASTRONOMY DAY**

**Saturday, 21 April from 3pm to 11pm**

**Twelfth Consecutive Year!**

***Volunteers needed! HRPO will be calling!***

**RAFFLE TICKETS, \$5 EACH**

**EXPECTED EXHIBITORS...**

American Institute of Aeronautics and Astronautics  
Baton Rouge Amateur Radio Club



Baton Rouge Metropolitan Airport  
Baton Rouge Mosquito Abatement  
Baton Rouge Zoo  
Bluebonnet Swamp Nature Center  
Civil Air Patrol  
LIGO  
MARS Van  
Saint Joseph's Academy

**POTENTIAL RIDES...**

18" Dry Slide  
Spacewalk  
Obstacle Course  
Hamster Ball

**OTHER...**

Adventure Quest  
Face Painting  
Homemade Comet  
Scope-on-a-Rope

**Early volunteer sign-up is needed. It is extremely difficult to schedule a volunteer if that person reveals his availability with only two or three days to go. Sign-up now, please!**





# Observing Notes:

by John Nagle

## Canis Minor – the Little Dog

**Position: RA 07 28, Dec. +06 56**

### *Named Stars:*

**Procyon** (Alpha CMi), “Little Dog Star”, “before the dog”, “Al Shi’ra al Shamiyyah”, “The Northern Sirius”, mag. 0.34, 07 39 18.54 +05 13 39.0, is the eighth brightest star in the night sky, and a binary star. **Procyon A** is a yellow-white, main sequence, sub-giant star. Its companion, **Procyon B**, is a white dwarf star of magnitude 10.8, with a separation of 4.59 arc seconds, and a period of 40.83 years. There is an optical companion, **Procyon C**, which is not part of the star system. **Procyon** is part of the **Winter Triangle** asterism, along with **Sirius** and **Betelgeuse**, and is also one of the vertices of the **Winter Hexagon** asterism.

**Gomeisa** (Beta CMi), “al-ghumaisa”, “the bleary-eyed one”, mag. 2.98, 07 27 09.07 +08 17 21.9, is a blue-white dwarf star and a rapid rotator, with an equatorial speed of 250 km per second. **Gomeisa** is classified as an eruptive irregular variable star with a circumstellar disk. The **Washington Double Star Catalog** lists nine companions associated with **Gomeisa**, with all of them likely common proper motion components, and all of which are between magnitudes 11.6 and 19.8, and separations from 4.0” to 139”.

**Luyten’s Star**, mag. 9.87, 07 27 24.9 +05 13 32.8, is a red dwarf star named after Willem Jacob Luyten, the Dutch-American astronomer who first determined the star’s proper motion (proper motion of 3.7 arc seconds). The star is located slightly less than 3° due west of **Procyon**.

### *Deep Sky:*

**There is nothing above magnitude 10 in this constellation.**

**Asterisms:** The **Winter Triangle** – **Procyon** (Alpha CMi), along with **Sirius** (Alpha CMa) and **Betelgeuse** (Alpha Orionis) form this asterism.

The **Winter Hexagon** – **Procyon** (Alpha CMi), **Capella** (Alpha Aur), **Aldebaran** (Alpha Tau), **Castor** (Alpha Gem), **Rigel** (Beta Ori), and **Sirius** (Alpha CMa) form this asterism.

**Below magnitude 10 there are: 15 NGC; 4 IC; 2 UGC; 3 Abell; 1 ADS; 2 MCG; 2 Berkley; and on Dolitze item.**

### *Other Stars:*

**Delta CMi** is composed of three stars that mark the paws of the left hind leg of the **Lesser Dog**. **Delta<sup>1</sup>CMi**, mag. 5.24, 07 32 05.95 +01 54 52.1, is a yellow-white giant star, also known as **8 CMi**.

**Delta<sup>2</sup>CMi**, mag. 5.59, 07 33 11.68 +03 17 25.0, is a main sequence star.

**Delta<sup>3</sup>CMi**, mag. 5.83, 07 34 15.89 +03 22 18.3, is a white main sequence star.

**HD 66141**, mag. 4.39, 08 02 15.9 +02 20 03.5, is an orange giant star that is 6.8 billion years old. This star was mistakenly named **13 Puppis** as its celestial coordinates were recorded incorrectly when catalogued. A planet, with a mass of 6 times that of **Jupiter**, is in a 480 day orbit around the star.

**Note:** PSS 544-7 is an 18<sup>th</sup> magnitude red dwarf star of about 20% the mass of the Sun. First noticed in 1991, it is thought to be a cannon ball star, shot out of a star cluster and now moving rapidly through space directly away from the galactic disk.

**There is one star beyond magnitude 10 that has a transiting planet (HAT-P-50).**

## *Sky Happenings: February, 2018*

*(what follows pertains ONLY to the current month. Material above is good year after year.)*



- Feb. 1<sup>st</sup>** – The **Moon** passes 1° north of **Regulus** at 1 PM CST.
- Feb. 7<sup>th</sup>** – **Last Quarter Moon** occurs at 9:54 AM CST,  
The **Moon** passes 4° north of **Jupiter** at 2 PM CST.
- Feb. 8<sup>th</sup>** – A waning crescent **Moon** sits midway between the bright planets **Mars** and **Jupiter** in this morning sky,  
Dawn: **Antares**, **Mars**, the waning crescent **Moon**, and **Jupiter** form a celestial arc that straddles **Scorpio** and **Libra**,  
The **Moon** passes 4° north of **Mars** at 11 PM CST.
- Feb. 9<sup>th</sup>** – The **Moon** passes 0.9° south of asteroid **Vesta** at 7 AM CST.
- Feb. 10<sup>th</sup>** – **Mars** passes 5° north of **Antares** at 9 AM CST.
- Feb. 11<sup>th</sup>** – Morning: **Mars** leads **Antares** at about 5° above or upper left as they climb the ecliptic,  
Dawn: Low in the southeast, a sliver of a crescent **Moon** hangs 2° above **Saturn**, which in turn floats 3° above the **Teapot** in **Sagittarius**,  
The **Moon** is at apogee (252,090 miles from **Earth**) at 8:16 AM CST,  
The **Moon** passes 2° north of **Saturn** at 9 AM CST.
- Feb. 14<sup>th</sup>** – Asteroid **Juno** is in conjunction with the **Sun** at 5 AM CST.
- Feb. 15<sup>th</sup>** – **New Moon** occurs at 3:05 PM CST,  
Partial **Solar Eclipse** for **South America** and the **Antarctic** – no portion will be visible from **North America**.
- Feb. 17<sup>th</sup>** – **Mercury** is in superior conjunction with the **Sun** at 6 AM CST.
- Feb. 20<sup>th</sup>** – The **Moon** passes 5° south of **Uranus** at 2 AM CST.
- Feb. 23<sup>rd</sup>** – **First Quarter Moon** occurs at 2:09 AM CST,  
The **Moon** passes 0.7° north of **Aldebaran** at 12 noon CST, with an occultation visible from northeastern **North America**, most of **Europe**, and northern **Asia**,  
Evening: **First Quarter Moon** is in **Taurus**, less than 5° to the left or upper left of **Aldebaran**.
- Feb. 27<sup>th</sup>** – The **Moon** is at perigee (226,137 miles from **Earth**) at 8:39 AM CST.
- Feb. 28<sup>th</sup>** – All night: The almost full **Moon** leads **Regulus** across the sky. The gap slowly decreases, with the **Moon** occulting **Regulus** for much of **North America**, **Greenland**, northern and western **Europe**.

## *Planets:*

**Mercury** – **Mercury** is in superior conjunction with the **Sun** on February 17<sup>th</sup>, re-appearing at dusk soon thereafter, pursuing **Venus**. **Mercury**, at magnitude -1.4, will lie 2.3° to the lower left of **Venus** on the 28<sup>th</sup>. The two planets edge closer together in the following days, and will pass 1.4° from each other in the first week of March.

**Venus** – As February opens, **Venus** will be challenging to observe, at less than 4° high at sunset and will set less than a half-hour after the **Sun**. On February 28<sup>th</sup>, **Venus**, at magnitude -3.9, appears about 10° high, with **Mercury** 2.3° to the lower left.

**Mars** – **Mars** begins the month in the southeast about 12° to the lower left of **Jupiter**, and about 0.4° south of the wide double star **Beta Scorpius (Graffias)** in the head of **Scorpius**, and about 8° northwest of **Antares**. During February, **Mars** races eastward into **Ophiuchus** on the 8<sup>th</sup>, when a fat crescent **Moon** lies

between **Mars** and **Jupiter**. The following morning, a slimmer crescent **Moon** appears 5° to **Mars**' upper left. On February 10<sup>th</sup>, **Mars** passes 5° due north of **Antares**. On February 24<sup>th</sup>, the planet passes 15' due north of 9<sup>th</sup> magnitude globular cluster **NGC 6287**. **Mars** shines at magnitude 1.2 on the first, 1.0 on the 15<sup>th</sup>, and 0.8 on the 28<sup>th</sup>. In the eyepiece, **Mars** increases from 5½" to just over 6½" in angular diameter during February.

**Jupiter** – **Jupiter** rises before 2 AM local time in early February, and a little before midnight as February ends. The planet is in **Libra**, brightening from magnitude -2.0 to -2.2 during the month, with its globe growing from 36" to 39" wide in telescopes. The **Last Quarter Moon** passes 4° to the upper right of **Jupiter** on the 7<sup>th</sup>. **Io**, the fastest moving moon of **Jupiter**, completes an orbit every 1.8 days, while **Europa** takes 3.6 days, **Ganymede** 7.2 days, and **Callisto** 16.7 days. On February 3<sup>rd</sup>, at 3 AM CST, **Io**'s shadow falls near the center of **Jupiter**'s disk, while **Io** itself lies just off the planet's eastern limb. **East Coast** observers can see **Ganymede** eerily fade away west of the planet on February 6<sup>th</sup> starting at 1:43 AM CST. As the moon enters the planet's shadow, it takes about 15 minutes to disappear completely. **Ganymede** will start to re-appear at 3:24 AM CST. **Callisto** does not pass in front of or behind **Jupiter** because of the satellite's orbit. You can spot this moon due south of the planet just before dawn on the 11<sup>th</sup>. That morning brings two other events: **Europa** disappears into **Jupiter**'s shadow starting at 4:08 AM CST; and **Io** re-appears from behind the planet 10 minutes later.

**Saturn** – **Saturn** rises at about 5 AM local time on February 1<sup>st</sup>, climbing 10° above the southeast horizon in **Sagittarius**, shining at magnitude 0.6. **Mars** will close the gap between it and **Saturn**, from 31° to around 17° during February, shining about halfway between **Saturn** and **Jupiter** around February 19<sup>th</sup> to 21<sup>st</sup>. A slender crescent **Moon** appears 2° above the planet on February 11<sup>th</sup>. **Saturn** hovers some 3° above the top most star of the **Teapot of Sagittarius**. Not far away is the globular cluster **M 22**, below and to the left, at 4° separation on the 1<sup>st</sup>, 3° separation on the 14<sup>th</sup>, and 2° separation on the 28<sup>th</sup>, and the **Small Sagittarius Star Cloud (M 24)**, will be some 4° to 5° above it. A telescope will show the planet's 16" diameter disk wrapped in its ring system that spans 36", and tilts 26° to our line of sight.

**Uranus** – **Uranus** stands half-way to the zenith, in the southwest, as twilight closes in early February. The 6<sup>th</sup> magnitude planet resides among the background stars of eastern **Pisces**. On February 1<sup>st</sup>, it lies 3° from both 4<sup>th</sup> magnitude **Omicron Piscium** and 5<sup>th</sup> magnitude **Mu Psc**. **Uranus**' eastward motion carries it to a point 2.3° west of **Omicron Psc** on the 28<sup>th</sup>. The planet sets shortly after 11 PM local time in early February, and close to two hours before that by month's end. **Uranus** will show a 3.5" diameter disk that glows with a distinctive blue-green hue.

**Neptune** – On February 1<sup>st</sup>, the planet stands 10° high in the west-southwest as the last glints of twilight fade away. You can find it against the backdrop of **Aquarius**. First locate 4<sup>th</sup> magnitude **Lambda Aquarii**. **Neptune** lies 1.1° due east (upper left) of this star. The pair dips lower with each passing day, and disappears in twilight during the 2<sup>nd</sup> week of February. On the evening of February 20<sup>th</sup>/21<sup>st</sup>, **Neptune** will pass within 1° of **Venus**, but will be invisible in the twilight.

**Pluto** – On February 15<sup>th</sup>, **Pluto** will be located at RA 19 26.3, Dec. -21 34, below the "steam" of the **Teapot of Sagittarius** asterism.

**Sun** – The **Sun** undergoes a partial eclipse on February 15<sup>th</sup> for observers in most of **Antarctica** and southern **South America**.

**Moon** – The **Moon** is near its last quarter when it is just over 6° to the upper right of **Jupiter** before dawn on February 7<sup>th</sup>. The next morning, the **Moon** is almost 8° to the planet's left. A thin waning lunar crescent hangs 2° above **Saturn** at dawn on February 11<sup>th</sup>. A hair-thin waxing lunar crescent floats just under 3½ to the upper left of **Venus** on February 16<sup>th</sup>, but the two are low near the west-southwest horizon only about 20 to 30 minutes after sunset. A slightly gibbous **Moon** is about 4½° to the left of **Aldebaran** at nightfall on the 23<sup>rd</sup>. The nearly full **Moon** beams above **Regulus** on the 28<sup>th</sup>.

**Asteroids** – **Ceres** can be found by first locating 4<sup>th</sup> magnitude **Iota Cancri**. Then head a few degrees northeast to the four 5<sup>th</sup> and 6<sup>th</sup> magnitude stars labeled **Sigma<sup>1</sup> to Sigma<sup>6</sup> Cancri**. Just south of them lies a relatively empty region through which the 7<sup>th</sup> magnitude **Ceres** slowly treks.

Asteroid **20 Massalia**, on the night of February 16<sup>th</sup>, will occult a star in **Taurus** (9.2 magnitude **HD**

**35003**) for up to 19 seconds along a path across southern **Canada** and the northern **United States**.

Asteroid **540 Rosamunde**, at magnitude 15.6, will occult a star (8.6 magnitude **HD 15564**) for 0.8 seconds along a path connecting **Baha California Sur** to central **Florida** on the night of February 13<sup>th</sup>.

**Comets** – Comet **PANSTARRS (C/2016 R2)**, glowing at 10<sup>th</sup> or 11<sup>th</sup> magnitude, rides high in the south as darkness settles in. Appearing against the backdrop of **Taurus**, near the **Pleiades** star cluster (**M 45**), you will be looking for a small, round, diffuse glow. On February 3<sup>rd</sup>, 4<sup>th</sup>, and 5<sup>th</sup>, the comet will be 1° to 2° east of the **Pleiades**, and on the 23<sup>rd</sup>/24<sup>th</sup>, the comet will be just over 1° west of **Psi Taurii**.

**Meteor Showers** – There are no major meteor showers this month. The two minor showers (with three meteors per hour at zenith) are the **Pi Hydrids** from February 3<sup>rd</sup> through the 9<sup>th</sup>, with the peak on the 6<sup>th</sup>; and the **Alpha Centaurids** from the 2<sup>nd</sup> through the 19<sup>th</sup>, with the peak on the 8<sup>th</sup>.

**When to View the Planets:**

Evening Sky

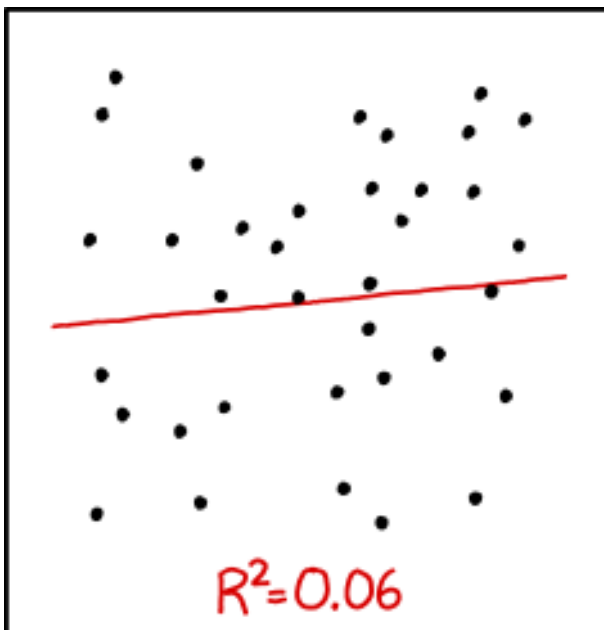
- Mercury (west)
- Venus (west)
- Uranus (southwest)
- Neptune (west)

Midnight

Morning Sky

- Mars (south)
- Jupiter (south)
- Saturn (southeast)

**DARK SKY VIEWING · PRIMARY ON FEBRUARY 17TH, SECONDARY ON FEBRUARY 24TH**



I DON'T TRUST LINEAR REGRESSIONS WHEN IT'S HARDER TO GUESS THE DIRECTION OF THE CORRELATION FROM THE SCATTER PLOT THAN TO FIND NEW CONSTELLATIONS ON IT.



# Mythology

## Canis Minor – the Little Dog

This constellation originally consisted of just its brightest star, Procyon, whose name in Greek means “before the dog”, from the fact that it rises earlier than the other celestial dog, Canis Major. It is a small constellation and contains little of interest other than the star Procyon itself, a white star 11.3 light years away, the eighth brightest star in the night sky.

Canis Minor is usually identified as one of the dogs of Orion. But in a famous legend from Attica (the area around Athens), recounted by the mythographer Hyginus, the constellation represents Maera, dog of Icarus, the man whom the god Dionysus first taught to make wine. When Icarus gave his wine to some shepherds for tasting, they rapidly became drunk. Suspecting that Icarus had poisoned them, they killed him. Maera the dog ran howling to Icarus’s daughter Erigone, caught hold of her dress by his teeth, and led her to her father’s body. Both Erigone and the dog took their own life where Icarus lay. Zeus placed their images among the stars as a reminder of the unfortunate affair. To atone for their tragic mistake, the people of Athens instituted a yearly celebration in the honor of Icarus and Erigone. In this story, Icarus is identified with the constellation Boötes, Erigone is Virgo, and Maera is Canis Minor.

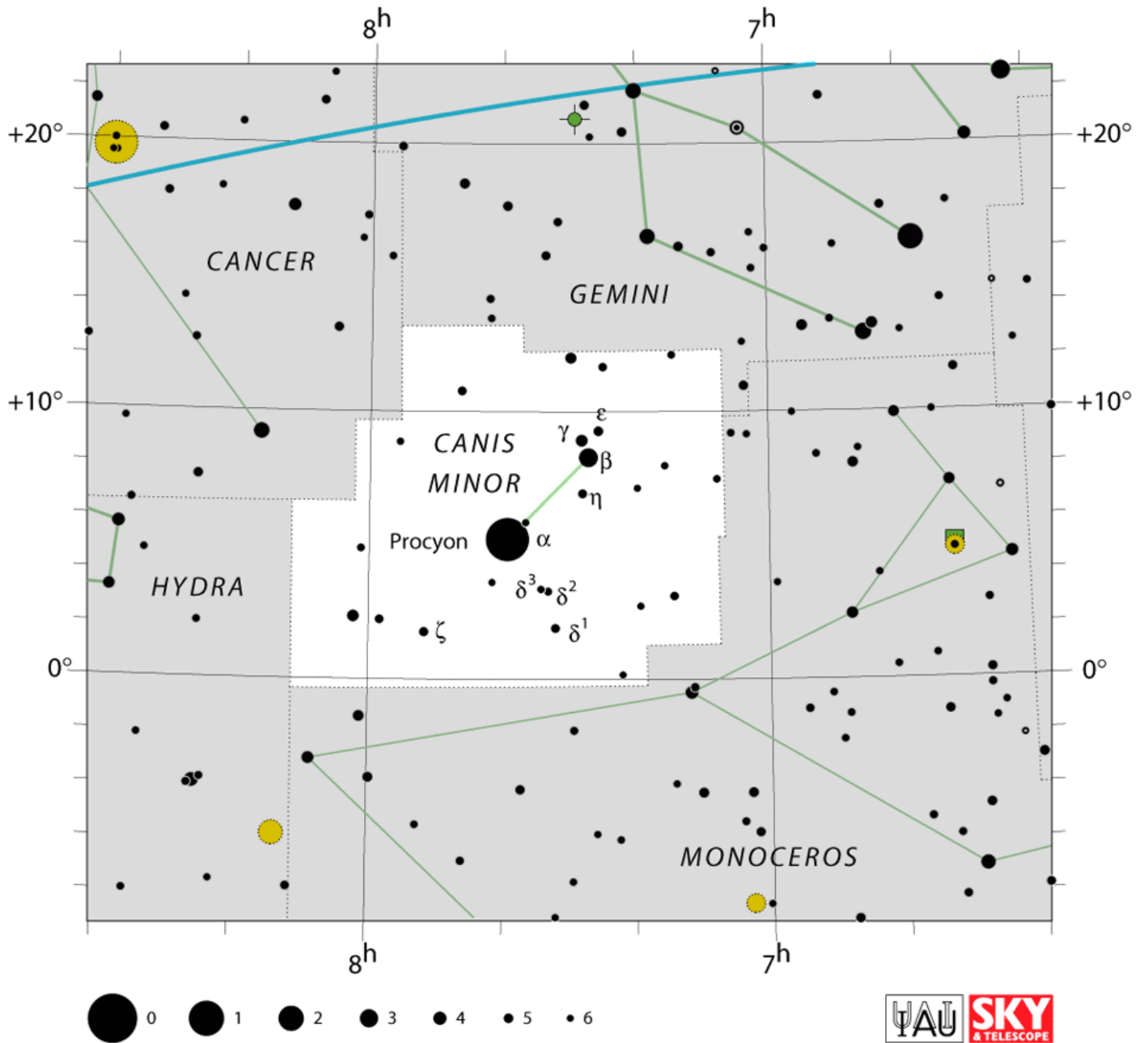


According to Hyginus, the murderers of Icarus fled to the island of Ceos, off the coast of Attica, but their wrong doing followed them. The Island was plagued with famine and sickness, attributed in the legend to the scorching effect of the Dog Star (here Procyon seems to be confused with the greater Dog Star Sirius in Canis Major). King Aristaeus of Ceos, son of the god Apollo, asked his father for advice and was told to pray to Zeus for relief. Zeus sent the Etesian winds, which every year blow for forty days from the rising of the Dog Star to cool all of Greece and its islands in the summer heat. After this, the priests of Ceos instituted the practice of making yearly sacrifices before the rising of the Dog Star.

Procyon is of particular interest to astronomers because it has a small, hot companion star called a white dwarf that orbits it every forty years. Coincidentally, the other Dog Star Sirius also has one of these small, highly dense white dwarf stars as a companion.







THE END

