

Newsletter of the Baton Rouge Astronomical Society

**AUGUST 2011**

***The next meeting of the Baton Rouge Astronomical Society will be August 8. The meeting starts at 7:00pm at the Highland Road Park Observatory.***

Hi Everyone,

Hopefully you are all having a great summer. It was great to see many of you out at LIGO for last month's outing. BRAS had about 40 people in attendance and we were joined by 9 members of the Pontchartrain Astronomy Society. Everyone outdid themselves with the food offerings, too! Rain a little later on made it a bit chaotic to try to go from building to building for the tour, but over all I would say it was a fun and successful outing. Thanks again to all who came out.

**Program: *Understanding the Electromagnetic Spectrum***

This month we are back into our regularly scheduled meeting place and time. We will be hosting Kirk Aymond from PAS. (Rescheduled from this past February.) Kirk is the current 1st Vice President of the Pontchartrain Astronomy Society and has been a member for 12 years. His educational background includes many disciplines of science (i.e. Electrical Engineering at UNO, Environmental Management at LSU, etc.) and he has taught a class on Astronomy at UNO as part of the continuing education college curriculum.

His presentation is entitled "Understanding the Electromagnetic Spectrum." It sounds like it will be a very interesting talk so I hope you all can make it out to give a good welcome to our PAS neighbor.

As always, please pass the word around to your friends, neighbors and co-workers. Our meetings are always open to the public and we would love to add some more members.

Ben Toman  
BRAS VP

*(ED. Note – Ben has been doing a great job providing excellent programs at club meetings. Please support his hard work by planning to attend our meetings (The second Monday of each month.) If you know of a contact for a program, or would like to do a presentation yourself please contact Ben Toman at [tomanben@gmail.com](mailto:tomanben@gmail.com). – Craig)*

***THIRTY YEARS AND COUNTING!***

1981 to 2011  
**Baton Rouge Astronomical Society**

# Presidents Message

We have made it through another summer with good success. Although we normally do not have meetings during the dog days, we changed this year and had a good June meeting at the LASC Planetarium and a visit and tour of the LIGO facility in Livingston Parish in July. Now we are off and running for another school year and looking forward to newer and better things.

In a world where we have just put a scientific satellite into orbit around the asteroid Vesta, have concluded a successful lifetime for the shuttle program and are looking forward to a fly-by of Pluto, we must admit that we are living in the most technological time in the history of the world. Maybe Galileo was far reaching in 1610 when he first turned the telescope toward the sky, there is nothing that any of the astronomers of prior centuries could have done to top our current successes. I will concede, as Newton so aptly put it over 300 years ago, that we can only see great things because we are standing on the shoulders of great people from the past. I would love to be able to talk to Galileo about the current stage of development but I am sure that he would be totally baffled by it all, even as I continue to be baffled over my iPhone.

## Newsletter Editor

We have had the great services of Craig Brenden for a number of years as the newsletter editor. I want to personally thank Craig for his tireless effort in putting out a good newsletter over the years and would like to see him continue in that job. However, his father in Seattle has been in ill health and Craig has been required to spend a lot of time there. Thus, BRAS is in need of a replacement newsletter editor. The pay is just as high as the compensation for your president so you cannot expect to prosper financially but it is a totally rewarding task that we need to have filled. If you are interested, please let me or Ben Toman know and we can get you set up to begin with the issue next month.

## Dues Payment Plan

We had announced a couple of meetings ago that we would like to change our membership dues billing schedule from one that is based on the month that each member joined to a billing on the calendar year. The annual dues will remain at the low price of only \$20 per year. For members joining during a year in the future, their dues would be the full year's dues of \$20 if joining during the first quarter, \$15 if joining during the second quarter, \$10 if joining in the third quarter and a mere \$5 if joining during the 4<sup>th</sup> quarter. For those joining in the fourth quarter, the plan would be that they would pay for that quarter plus the next full year upon joining to save having to account for a small payment of only \$5. I hope to present this proposal to the membership at the August meeting to be voted on.

  
Marvin E Owen, President, BRAS



## MESSAGE FROM HRPO



This will be a very short “message” since most of the information I wanted to transmit is elsewhere on this page.

I have posted on the BRAS Forum the August local times for viewing the Great Red Spot. There is one night this month during which the GRS can be seen before midnight; there are about six or so morning it’s visible around 5am. Christopher

### CALL FOR VOLUNTEERS ON SITE

\*Saturday, 6 August from 5pm to 8pm. *One volunteer for the entire shift.* Assistance with Vesta Fiesta. Refreshment table, mainly.

\*Friday, 12 August from 9pm to 1am. *One to two volunteers for two- or three-hour shifts.* Assistance with the Perseid viewing. Floating, mainly.

### VESTA FIESTA

*Saturday, 6 August from 5pm to 8pm.*

The Dawn spacecraft is now orbiting the asteroid Vesta, the brightest asteroid in the Solar System. A nationwide celebration of all things Vesta takes place this weekend. Baton Rouge's celebration will occur at the Highland Road Park Observatory—expect refreshments, games and displays. HRPO's Vesta Fiesta goes into regular Saturday night sky viewing, which will last until 10pm.



### PERSEID METEOR SHOWER

*Friday, 12 August from 9pm to 1pm.*

The Perseids are one of the major meteor showers of the year, caused by debris left from the passings of Comet Swift-Tuttle. Come learn about meteors and let's see if we can spot some “earthgrazers.” Although



telescopes aren't needed for the Perseids, we'll have a telescope available from 9:00 pm to midnight for leisurely gazing at other celestial objects. But look fast for the meteors; Perseid meteoroids hit our atmosphere traveling about 60 kilometers a second—that's over 130,000 miles per hour! If you're lucky, you may see a fireball....

### 2<sup>nd</sup> ANNUAL HRPO DONATION DRIVE

*During the month of September.*

Since we obtained 14% more money than we were asking for during last year's donation drive for the clocks, we're going to have another this year. The monetary goal and the display items for which we'll be striving will be announced on the HRPO site by 7 August.

# BRAS Observing Notes

## August / September 2011

### Constellation of the Month

## Sagittarius: The Archer

In Greek mythology, Sagittarius is depicted as a centaur, with the body and four legs of a horse but the upper torso of a man. He is shown wearing a cloak and drawing a bow, aimed in the direction of the neighboring Scorpion. The Babylonians, identified Sagittarius as the god Pabilsag (which had wings and a lion's head).

The center of our galaxy, the Milky Way, lies in the direction of Sagittarius. Consequently, Sagittarius contains many star clusters and nebulae. One of the brightest of the star clusters is Messier 55. The grouping of Lagoon Nebula, Trifid Nebula, and NGC 6559 is often called the Sagittarius triplet. Sagittarius is also the constellation which contains the most stars with planets; 14 of its stars are known to have planets.

### Position in the Sky

Right Ascension: 19 hrs  
Declination: -25 degrees

### Deep Sky Objects

M8 The Lagoon Nebula, M17 The Horseshoe Nebula, M18 open cluster, M20 The Trifid Nebula, M21 open cluster, M22 globular cluster, M23 open cluster, M24 star cloud, M25 open cluster, M28 globular cluster, M54 globular cluster, M55 globular cluster, M69 globular cluster, M70 globular cluster, M75 globular cluster

### Named Stars

Rukbat, Arkab Prior, Arkab Posterior, Nash, Kaus Meridionalis, Kaus Australis, Ascella, Kaus Borealis, Ain al Rami, Albaldah, Nunki, Terebellum

### August Meteor Showers:

#### Perseids

Duration: July 17 – August 24

Peak: August 13<sup>th</sup>

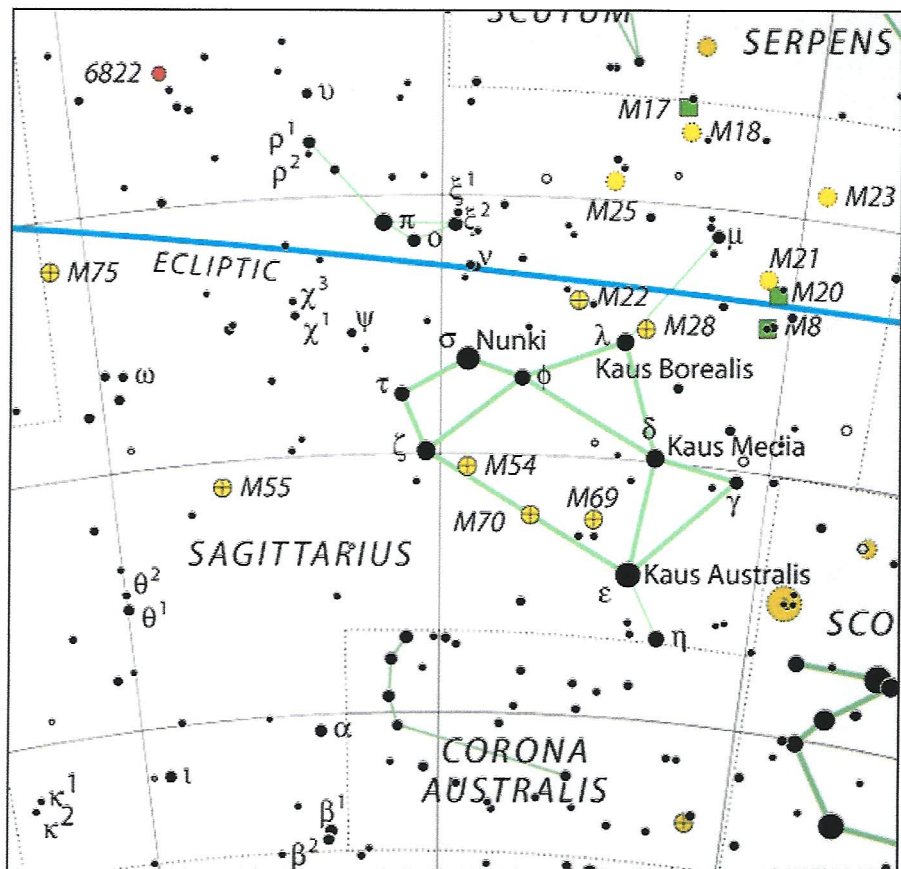
Radiant: Constellation Perseus

Right Ascension: 3 hours

Declination: 58 degrees

Expected Rate: up to 90 per hour

Origin: Comet Swift-Tuttle



### BRAS Dark Sky Site Viewing Dates

August 20<sup>th</sup> and 27<sup>th</sup> 2011

September 3<sup>rd</sup> and 24<sup>th</sup> 2011

For more information check out the BRAS website at <http://www.brastro.org>

Art Barrios

BRAS Observing Chairman

[art.barrios@cox.net](mailto:art.barrios@cox.net)

# The Evening Sky Map

FREE\* EACH MONTH FOR YOU TO EXPLORE, LEARN & ENJOY THE NIGHT SKY

## Sky Calendar – August 2011

Get Sky Calendar on Twitter  
<http://twitter.com/skymaps>

- 1 Moon near Regulus (21° from Sun, evening sky) at 7h UT.
- 1 Moon near Mercury (22° from Sun, evening sky) at 9h UT.
- 2 Moon at perigee (closest to Earth) at 21h UT (365,761 km; 32.7°).
- 4 Moon near Saturn (evening sky) at 6h UT. Mag. +0.9.
- 5 Moon near Spica (evening sky) at 1h UT.
- 6 First Quarter Moon at 11:08 UT.
- 8 Moon near Antares (evening sky) at 7h UT.
- 13 Perseid meteor shower maximum predicted between 1h and 13h UT, perhaps at 6h UT. Active from July 17 to August 24. Produces swift, bright meteors (50 to 100 per hour) many with persistent trains. Very unfavorable this year due to strong moonlight.
- 13 Full Moon at 18:57 UT.
- 16 Venus at superior conjunction with the Sun at 12h UT. Passes into the evening sky (not visible).
- 17 Mercury at inferior conjunction with the Sun at 1h UT. Mercury passes into the morning sky.
- 18 Moon at apogee (farthest from Earth) at 16h UT (distance 405,161 km; angular size 29.5').
- 20 Moon near Jupiter (morning sky) at 9h UT. Mag. -2.6.
- 21 Last Quarter Moon at 21:54 UT.
- 22 Moon near the Pleiades (88° from Sun, morning sky) at 0h UT.
- 22 Moon near Aldebaran (morning sky) at 22h UT.
- 22 Neptune at opposition (midnight sky) at 23h UT. The best time to view the most distant planet in the Solar System. Requires a telescope (see map). Mag. +7.8.
- 25 Moon near Mars (47° from Sun, morning sky) at 13h UT. Mag. +1.4.
- 26 Moon near Pollux (morning sky) at 3h UT.
- 27 Moon near Beehive cluster (morning sky) at 3h UT.
- 29 New Moon at 3:04 UT. Start of lunation 1097.
- 30 Moon at perigee (closest to Earth) at 18h UT (360,858 km; 33.1').
- 31 Moon near Saturn (evening sky) at 20h UT. Mag. +0.9.

More sky events and links at <http://Skymaps.com/skycalendar/>  
 All times in Universal Time (UT). (USA Eastern Summer Time = UT - 4 hours.)



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- STAR ATLASES & PLANISPHERES
- STAR CHARTS & ASTRO POSTERS
- BOOKS FOR SKY WATCHERS
- TELESCOPES & BINOCULARS

All sales support the production and free distribution of The Evening Sky Map.

## NORTHERN HEMISPHERE AUGUST 2011

SKY MAP SHOWS HOW  
THE NIGHT SKY LOOKS

EARLY AUG 9 PM

LATE AUG 8 PM

(Add 1 Hour For Daylight Saving)

SKY MAP DRAWN FOR

A LATITUDE OF 40°

NORTH AND IS

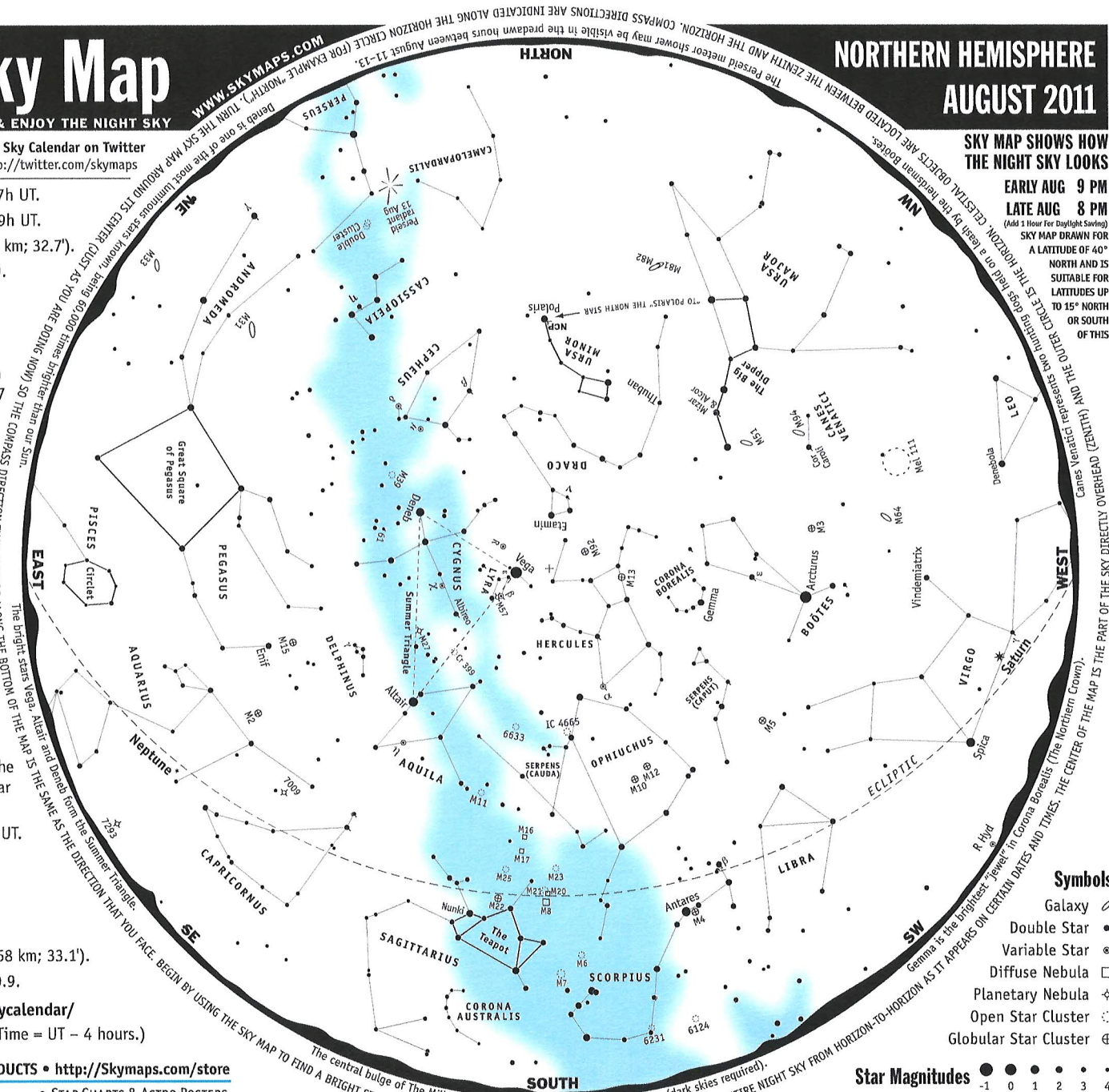
SUITABLE FOR

LATITUDES UP

TO 15° NORTH

OR SOUTH

OF THIS



### Symbols

- Galaxy ☾
- Double Star ●●
- Variable Star ⊙
- Diffuse Nebula □
- Planetary Nebula ○
- Open Star Cluster ☆
- Globular Star Cluster ⊕

Star Magnitudes ● ● ● ● ● ●  
 -1 0 1 2 3 4

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The central bulge of the Milky Way is visible above the southern horizon (dark skies required).  
 Gemma is the brightest 'jewel' in Corona Borealis (The Northern Crown).  
 The Perseid meteor shower may be visible in the predawn hours between August 11–13.  
 The bright stars Vega, Altair and Deneb form the Summer Triangle.  
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INSTRUCTIONS: THE SKY MAP SHOWS THE ENTIRE NIGHT SKY FROM HORIZON-TO-HORIZON AS IT APPEARS ON CERTAIN DATES AND TIMES. THE CENTER OF THE MAP IS THE PART OF THE SKY DIRECTLY OVERHEAD (ZENITH). COMPASS DIRECTIONS ARE LOCATED BETWEEN THE ZENITH AND THE HORIZON. CELESTIAL OBJECTS ARE LOCATED BY THE HORIZON CIRCLE. COMPASS DIRECTIONS ARE INDICATED ALONG THE HORIZON CIRCLE (FOR EXAMPLE "NORTH").

## **TRAIL OF CRUMBS DISCOVERED FROM POTENTIALLY HAZARDOUS COMET**

The February Eta Draconids appear to originate from a long-period comet that passes close to Earth's orbit.  
By SETI Institute, Mountain View, California — Published: July 29, 2011

This +2 magnitude February Eta Draconid was filmed by Peter Jenniskens with one of the low-light-level video cameras of the Cameras for Allsky Meteor Surveillance (CAMS) station in Mountain View, California, February 4, 2011. *NASA-Ames*

The Central Bureau issued a telegram July 10 for Astronomical Telegrams of the International Astronomical Union (IAU) announcing that a stream of dust from a potentially dangerous comet impacted Earth for a few hours last February 4.



"This particular shower happens only once or twice every 60 years," said Peter Jenniskens from the Search for Extraterrestrial Intelligence (SETI) Institute, Mountain View, California. "The stream of dust is always there, but quite invisible just outside of Earth's orbit. Only when the planets steer the dust in Earth's path do we get to know it is there."

Since last October, the SETI Institute has teamed up with Fremont Peak Observatory in San Juan Batista, California, and UCO/Lick Observatory just east of San Jose, California, in monitoring the night sky with low-light video cameras in an effort to map the meteor showers in the sky over the San Francisco Bay Area. They triangulate the meteor trajectories and determine their orbits in space.

The IAU keeps score of showers that were claimed to exist in the past and now has a list of more than 300 showers that need confirmation. Only 64 showers have been established so far. Jenniskens' goal is to establish many more.

While reducing the Fremont Peak and Mountain View station observations from February 4, Jenniskens discovered a handful of meteoroids that arrived at Earth from the exact same direction in the sky. They came from the direction of the star Eta Draconis, and the shower is now recognized by the IAU as the February Eta Draconids. This was the first new shower discovered in the Cameras for Allsky Meteor Surveillance (CAMS) project.

The meteoroids in question were moving on an elongated orbit, typical of that of long-period comets such as Hale-Bopp. Unlike Hale-Bopp, this one passes close to Earth's orbit. Long-period comets rarely come back to the Sun, and if any one is on a trajectory to hit Earth, we could have little warning.

Now, Jenniskens has found the trail of crumbs of such a comet, which passed close to Earth's orbit the last time it was near the Sun. That could have been only a few hundred years ago, or many thousands. At that time, the comet released a cloud of dust that is now returning. Some dust grains return earlier than others, depending on how elongated their orbit was, and the result is a continuous stream of returning dust grains. That stream is detected only when it encounters Earth, when the meteoroids cause a brief 2-hour meteor shower.

"Earth gets hosed typically only once or twice every 60 years by such streams," said Jenniskens. "Only when Jupiter and Saturn are back at their original positions do they steer the dust trail in our path. The trail wags in and out of Earth's path much like the Sun moves around in response to the motion of these heavy planets."

The February Eta Draconids follow a short list of other such known showers, which include the November 22 Alpha Monocerotids, which were last seen in 1995, and the September 1 Aurigids, which created a spectacular shower in 2007. Jenniskens predicted the return of those showers.

Now that the February Eta Draconid shower has been discovered, Jenniskens is confident that a next return can be predicted. He teamed up with Finnish astronomer Esko Lyytinen to investigate. Lyytinen calculated a possible return in 2016 or 2023, after that not again until 2076.

Future observations of this shower may bring other information about the comet that caused this stream of meteoroids, which is a potential danger to Earth. "If the meteoroids can hit us, so can the comet," said Jenniskens, "We don't know whether the comet has already passed us by or is still on approach." To get some advance warning, one could look along the measured orbit to those spots where the comet could arrive at Earth's orbit on a future February 4 date.

"Even then, chances are very small that the comet will actually hit us, as such impacts are rare in Earth's history," Jenniskens added.

## Sky Calendar -- August 2011

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- 6 **First Quarter Moon** at 11:08 UT.
- 8 **Moon near Antares** (evening sky) at 7h UT.
- 8 **Meeting of the *Baton Rouge Astronomical Society*** 8 pm CDT at HRPO
- 13 **Perseid meteor shower** maximum predicted between 1h and 13h UT, perhaps at 6h UT. Active from July 17 to August 24. Produces swift, bright meteors (50 to 100 per hour) many with persistent trains. Very unfavorable this year due to strong moonlight.
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Founded 1981



# Baton Rouge Astronomical Society, Inc.

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the Highland Road Park Observatory.*

## **Program: Understanding the Electromagnetic Spectrum**

BATON ROUGE ASTRONOMICAL SOCIETY,  
Inc.

Craig Brenden, Editor

6348 Double Tree Dr.

Baton Rouge, LA 70817-8915

- Your annual membership needs to be renewed.*
- Our records show that you have not paid your annual dues. Please contact the Treasurer if you plan to continue as a member.*

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