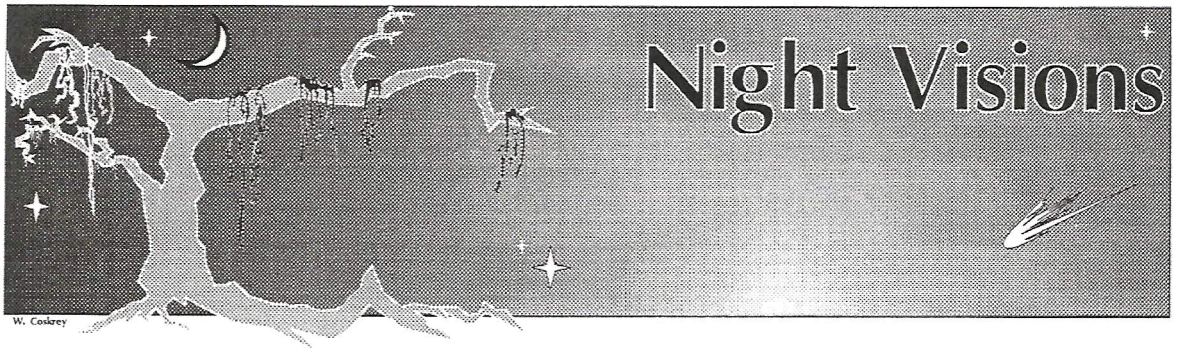

Newsletter of the Baton Rouge Astronomical Society

April 2011

The next meeting of the Baton Rouge Astronomical Society will be April 11. We will meet at the Highland Road Observatory. The meeting will start at 7:00 p.m. Please arrive a few minutes early.

Program: *Planetary Acoustics - Sounds of the Planets*

Hey Everyone,

I hope everyone that made it out to the last meeting had as good a time with John Filostrat as I did. The Michoud Assembly Facility certainly has a lot of potential. John told us that we are more than welcome to bring a group down there for a nice tour of the facility. That may be a fun summer outing.

I'm excited about our guest speaker for this month. He is Dr. Andi Petculescu of the University of Louisiana Lafayette's Physics department. Dr. Petculescu specializes in experimental acoustics and does a lot of work with planetary acoustics. Imagine people setting foot on Mars for the first time. We have a pretty good idea of what they would be seeing, but what would they hear? There are several celestial bodies in our Solar System that have atmospheres that allow sound to travel. Titan, Mars, Venus...just to name a few. Dr. Petculescu's work includes creating simulations of what human speech would sound like in some of these different atmospheres, and even a Bach Toccata and Fugue. He has been spearheading proposals to NASA to include more sound capturing / measuring devices on the various landers that have been (and ARE being) developed. I hope you will all join us to come hear what promises to be one of the more unique presentations we've had at one of our meetings.

We also may get to hear a bit about this year's Hodges Gardens Star Party which happened March 30th - April 3rd. We had several club members in attendance this year, and if you were one of them, please come and share some of your experiences with the rest of us. So, come on out to this month's meeting! It would be great to see you and nice to have a good size audience for our guest. As always, don't hesitate to tell a friend or neighbor.

Thanks and see you soon!
Ben, VP, Programs
Ben Toman <tomanben@gmail.com>

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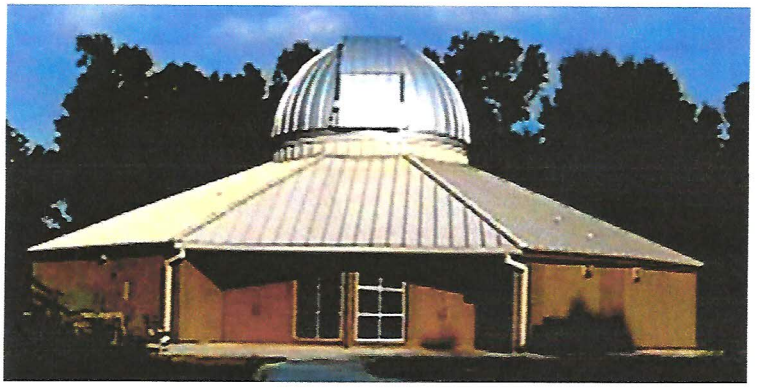


MESSAGE FROM HRPO

Or should I say, "message from HGSP" because that's still where my mind is. It was awesome! Wednesday evening was spotty at best, with haze seemingly developing right above our heads (although I was able to sketch Leo Minor, Leo and Ursa Major). Thursday evening started the same way, but from 3am to sunrise the clouds disappeared and the seeing and transparency improved greatly. It was a treat to see the summer constellations in their full glory—Böotes, Hercules and the like. Even the "C" of Corona Borealis was quite distinct. Ben Toman, Trevor McGuire and I (mostly Ben and Trevor) accomplished a lot in our continued pursuit of various AL certificates. Steve Edmiston kindly allowed us to view Omega Centauri through his 18" Dob. Barrow Leake impressed everyone with his array of observing equipment. I sincerely hope anyone who could not make it this year try to be a part of the Hodges Gardens experience in 2012. If I'm not mistaken, Don Weinell already has the date set. Thanks to him for his unerring management of this star party. Thanks to Kim Kelly for being our helpful point person on the staff up there.

CALL FOR VOLUNTEERS

ON SITE

Evening Sky Viewing: Saturday, 9 April from 6pm to 10pm. *One or two volunteers.* To staff marshmallow roast, work simple 6" Dob, demonstrate air cannon, gyroscope, etc. All needed training given.

International Astronomy Day: Saturday, 7 May from 3pm to 10pm. *Ten to twelve volunteers for three- to six-hour shifts.* Any number of activities; contact me as soon as you can. All needed training given. NOTE: This is the largest and most successful HRPO event of the year. Last year we received over 700 visitors and on 7 May 2011 we expect at least 1000. We really do need all the help we can get, so don't be shy about volunteering!

OUTREACH

Earth Day: Sunday, 17 April from 12pm to 8:30pm. *Two or three volunteers for three- to four-hour shifts.* Hydrogen-alpha telescope and demos.

Christopher

HRPO
Calendar of Events

Evening Sky Viewing
Fridays form 8:30-10 p.m. and Saturdays from 7:30-10 p.m.; free and for all ages.

April 9: 4th Dimension Display and a marshmellow roast

Lecture Series
Fridays at 7:30 p.m.; free and for ages 14 and older

April 8: "An Introduction to the Sun" All human life depends upon our parent star, and yet we take it for granted. How did the Sun come to be? How have cultures looked upon it throughout the centuries? What have spacecraft like SOHO and STEREO taught us about the Sun? What can we expect during this current rise in solar activity?

April 15: "Wonders of the Spring Sky" This is the first talk for HRPO Program Aide Cody Arceneaux, a recent graduate from LSU's Department of Physics and Astronomy. He takes the audience on a fascinating tour of Baton Rouge's spring season. He highlights the celestial gems that will sparkle throughout the next three months-gems that visitors will be able to see live if they continue to visit HRPO!

April 22: "Dating the Crucifixion" It is one of the most profound events to influence Western history. Can ancient texts and the motions of the universe help pinpoint the actual date? For the sixth consecutive year, LSU physics professor Brad Schaefer returns for Good Friday and leads the audience step-by-step through the investigation.

Solar Viewing
April 9 and 23 from noon to 1 p.m.; free
The observatory recommends visitors wear protective clothing and sunscreen. The observatory provides handouts and information about UV radiation and solar power.

Baton Rouge Astronomical Society Meeting
April 11 from 7-9 p.m.; free ***"Experimental Acoustics," by Andi Petculescu***
Celebrating its 30th anniversary, BRAS has educated countless numbers of citizens in the joys of planetary and deep-sky gazing, the perils of light pollution and factors to consider when buying a pair of binoculars or a telescope. BRAS members have published in "Astronomy", "Sky & Telescope" and "Scientific American".

Launch: Space Shuttle Endeavour
April 19 from 6-7 p.m.; free and for all ages
Don't miss history! The second-to-last planned shuttle launch is slated for 6:48pm CDT. The Space Shuttle will deliver the Express Logistics Carrier-3 and the Alpha Magnetic Spectrometer to the International Space Station. Refreshments and handouts will be on hand.

International Astronomy Day
May 7 from 3-11 p.m.; free admission and for all ages
This is HRPO's fifth consecutive year hosting this fantastic worldwide event-and this one will be bigger and better than ever. Within the next seven days a front page link will be up at the HRPO site. It will contain a complete schedule of all sessions, celestial objects to be viewed, exhibitors, raffle items and merchandise, foodstuffs and rides (the legendary GyroXtreme will be offered for anyone who dares to climb inside). Check back often for regular updates!

The Evening Sky Map

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

WWW.SKYMAPS.COM

NORTHERN HEMISPHERE
APRIL 2011

Sky Calendar – April 2011

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

April is Global Astronomy Month http://www.gam-awb.org/

2 **Moon at apogee** (farthest from Earth) at 9h UT (distance 406,656 km; angular size 29.4').

3 **New Moon** at 14:33 UT. Start of lunation 1092.

4 **Saturn at opposition** (opposite the Sun) at 0h UT. Visible all night long, the ringed planet is at its brightest (mag. +0.6) and closest all year (disk diameter 19.4"). Saturn's rings appear magnificent even in a small telescope.

6 **Jupiter at conjunction** with the Sun at 15h UT. Passes into the morning sky (not visible).

7 **Moon near the Pleiades** at 11h UT (evening sky).

8 **Moon near Aldebaran** (evening sky) at 7h UT.

9 **Mercury at inferior conjunction** with the Sun at 20h UT. Mercury passes into the morning sky.

11 **First Quarter Moon** at 12:06 UT.

11 **Moon near Pollux** (evening sky) at 15h UT.

12 **Moon near Beehive cluster** (evening sky) at 17h UT.

14 **Moon near Regulus** (evening sky) at 5h UT.

17 **Moon near Saturn** (evening sky) at 3h UT. Mag. +0.4.

17 **Moon at perigee** (closest to Earth) at 6h UT (358,090 km; 33.4').

17 **Moon near Spica** (midnight sky) at 22h UT.

18 **Full Moon** at 2:44 UT.

21 **Moon near Antares** (morning sky) at 0h UT.

22 **Lyrid meteor shower** peaks at 23h UT. Active April 16-25. Radiant is between Hercules and Lyra. Expect 10 to 20 bright, fast meteors per hour at its peak.

23 **Venus 0.85° SSE from Uranus** (30° from Sun, morning sky) at 2h UT. Mags. –3.9 and +5.9.

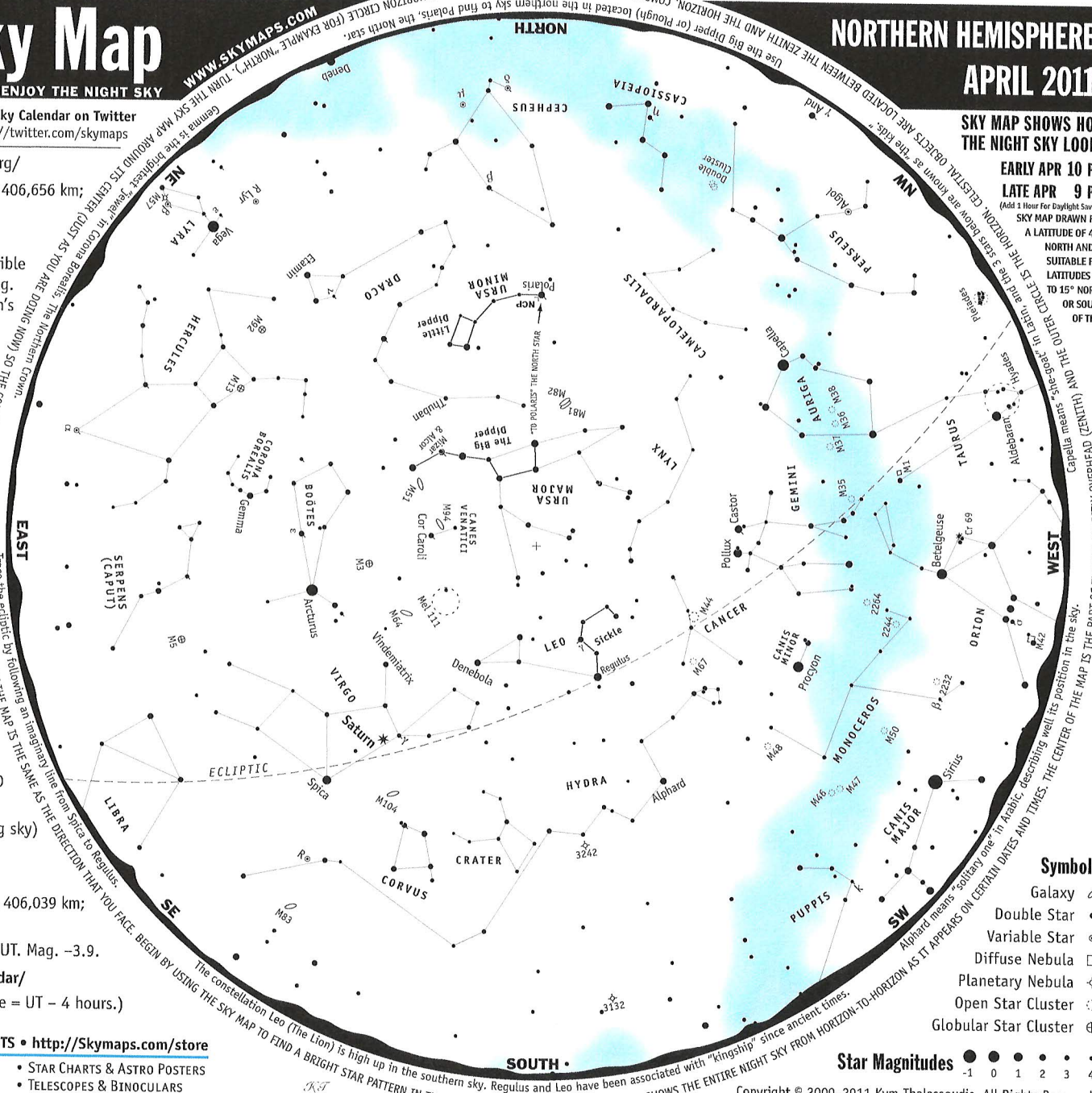
25 **Last Quarter Moon** at 2:47 UT.

29 **Moon at apogee** (farthest from Earth) at 18h UT (distance 406,039 km; angular size 29.4').

30 **Moon near Venus** (28° from Sun, morning sky) at 18h UT. Mag. –3.9.

More sky events and links at http://Skymaps.com/skycalendar/

All times in Universal Time (UT). (USA Eastern Summer Time = UT – 4 hours.)



SKY MAP SHOWS HOW THE NIGHT SKY LOOKS

EARLY APR 10 PM
LATE APR 9 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

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).

Tips for Observing in Light Polluted Area

Sometimes it can be difficult observing in heavily light polluted skies. But by following a few procedures, your observing session can be more enjoyable and more rewarding. The following are tips that our crack team of observers offered to help increase your satisfaction in observing in light polluted areas.

- Observe during new moon. Just like observing in dark skies, the moon adds light to the night sky and reduces contrast.
- Observe after 11:00 p.m., Many stores have closed by this time, and because they turn off their lights, a city's light glow is reduced considerably.
- Observe after 1:00 a.m. After the stores have closed, most shoppers and workers have gone home which means that there is a lot less traffic on the streets and freeways, and light pollution is reduced.
- Ask your neighbors over for an observing session. After seeing the effect of light pollution on observing, they will be more cooperative in turning off their lights for you.
- Try to catch your target objects straight overhead. This is always the darkest part of the sky.
- Select the right objects to observe. Magnitude is not everything. A bright galaxy may be invisible, whereas a dim planetary may be easily seen. Small, high surface brightness and stellar objects are easier to observe than large, diffuse objects.
- If you have an altazimuth mount (Dobsonian), try to observe near the meridian. Up-down, left-right motions translate into north-south, east-west motions and makes following a path on a star chart easier.
- Observe after 10:00 P.M.. This gives the dust and water in the air a chance to settle. Dust and water reflect light that can turn a good night into a bad one.
- Pay close attention to the weather. Cool, dry nights are best at any location, but are more pronounced in the city.
- Learn to read the quality of the sky by the observing of stars with the naked eye. A clear night might seem perfect for observing, but may in fact be bad for viewing if the seeing is not good.
- Observe after a rain storm. The skies appear darker as light is no longer reflected off of dust particles in the air.
- Observe after a cold front has come through. The air is more stable and the air pollution has been blown out.
- Use a dark cloth to cover your head and eyepiece to shield them from stray light.
- Use a dew shield on your telescope to shade it from stray light.
- Clean and collimate all optics. Dirty optics scatter light.
- Light pollution and O-III filters are good for planetary and emission nebulae.
- Use a pirate's eyepatch to keep out stray light.
- Pick the darkest section of your site and make an extra effort to block out stray light. Using a light baffle made of a tarp and tent pegs help, as well as a three-sided wall made out of cardboard. Try to make the immediate area around your site as darkened and non-reflective as possible. Use existing structures and foliage to block the direct view of lights.
- A right-angle finder with amici prism under a dark cloth is helpful for finding objects.
- Setting circles are a great aid for finding difficult objects, especially when those objects are quite some distance from a naked eye star.
- A good star atlas, a pair of binoculars, and a one power finder (e.g., Telrad) with a template for that finder, are important for finding objects in bright, low contrast skies. Telrad-hopping can sometimes be easier and just as useful as star-hopping with a finder. Viewing the sky through your Telrad with binoculars is also a nice trick.
- Use earphones or a radio to mask neighborhood noise. Noise can be very distracting.

Finally, attitude is very important. Any observing is better than no observing or TV.

Compiled by Ken E. Boquis, Bill Geertsen, David Hasenauer, Lee Maisler, Chris Randall, Roberto Torres, John Wagoner

BRAS Observing Notes
April / May 2011

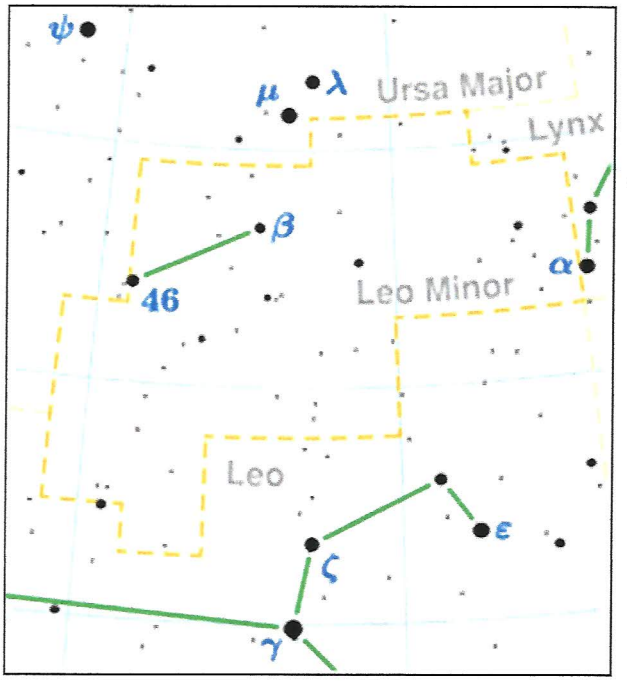
Constellation of the Month Leo Minor: The Little Lion

Last month we talked about the smaller companion of Canis Major. This time we will take a look at the little friend of Leo the Lion, namely Leo Minor. You can find this faint lion cub by looking just above and a bit to the left of the head of Leo.

The constellation Leo Minor was created by Johannes Hevelius in 1687. He must have felt that the dim stars between Ursa Major and Leo deserved their own character in the sky. Through a minor, (no pun intended), slip up the constellation's brightest star does not have the designation "alpha" like most other constellations. Hevelius did not give any of the stars of his new constellation designations. The stars were not named by Hevelius but actually by British astronomer Francis Baily in 1845. For unknown reasons he gave the second brightest start the designation "beta" but gave no designation to the brightest star. It eventually received the unflattering numeric designation 46.

We can thank a Dutch school teacher and amateur astronomer named of Hanny van Arkel for helping spice up Leo Minor. In 2007 he discovered a strange object of unknown nature there which has been called Hanny's Voorwerp. This object is about the size of the Milky Way Galaxy but instead of a central budge of stars it has a huge central void that is 16,000 light years across. Star formation has been detected in the rim of the object as well as the emission lines of oxygen. Some theories state that a transient quasar or super massive black hole may have played a part in creating this strange object.

Star Chart



Position in the Sky
Right Ascension: 10 hrs
Declination: 35 degrees

Named Stars
None

May Meteor Showers: Eta Aquarids
Duration: April 19 – May 28
Peak: May 6th
Radiant: Constellation Aquarius
Right Ascension: 23 hours
Declination: -15 degrees
Expected Rate: 60 per hour
Origin: Halley's Comet

BRAS Dark Sky Site Viewing Dates
30th 2011
May 7th and 28th 2011

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

Art Barrios
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