UNA Planetarium Newsletter

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Archeologists search through the debris of ancient civilizations to try to understand how we got where we are today. They sift through dirt and carefully note the location of different artifacts to determine what happened and when. Astronomers are faced with a similar situation when we study stars. We see the stars of different mass, composition, age and location in the Milky Way and we try to tease out of the data how the Galaxy came to be. This is not easy. Stars evolve very slowly compared to te time an astronomer has to do the work. A star like the Sun for instance takes nearly 10 billion years to evolve to its final endpoint. A star less massive than the Sun can take tens of billions of years. The least-massive stars are called the M-dwarfs. Every one of these every formed is still out there. The most massive stars, the O stars last sometimes "only" 10 million years. This is still long compared to the career of an astronomer.

How we overcome this problem is to study objects of differing age and look at their average properties and how they compare. We get the ages through applying the laws of physic to stars. If our calculations are good, they match the observed data. If not then we try to find out why. However, our models of stars are now quite good and we are confident on our conclusions about the history of the Galaxy. The archeology of the Galaxy gives us one more piece of the picture of how we came looking out into space wondering how it all came to be.

Mel Blake.

UNA Planetarium and Observatory, is operated by the Dept. of Physics and Earth Science

Image of the Month

This image shows the face on spiral galaxy NGC3982 in the constellation of Ursa Major. If one were to view the Milky Way from the outside it would resemble this galaxy. The red regions show areas where young stars are forming causing the gas nearby to glow. The yellow-orange bulge in the center contains older stars. This galaxy is about 30 000 light years across, and is 68 million light years away. The light from this image left it during the age of the dinosaurs! **Image courtesy NASA.**

Astro Quote: "*Life, for ever dying to be born afresh, for ever young and eager, will presently stand upon this earth as upon a footstool, and stretch out its realm amidst the stars."*
H. G. Wells, The Outline of History.

Observing Highlights

The Geminid meteors peak on November 17-18th. These meteors generally produce about 20 meteors per hour, but sometimes produce "meteor storms" of thousands per hour.

Calendar for Nov. 2010

Nov 1. Planetarium Afternoon Program

Nov 2. Planetarium Afternoon Program

Nov 5. First Fridays Sidewalk Astronomy

Nov 8. Planetarium Afternoon Program

Nov 9. Planetarium Evening Program

Nov 10. Comet Flyby Day

Nov 11 Geminid Meteors Peak

Nov 15. Planetarium Afternoon Program

Nov 16. Planetarium Evening Program

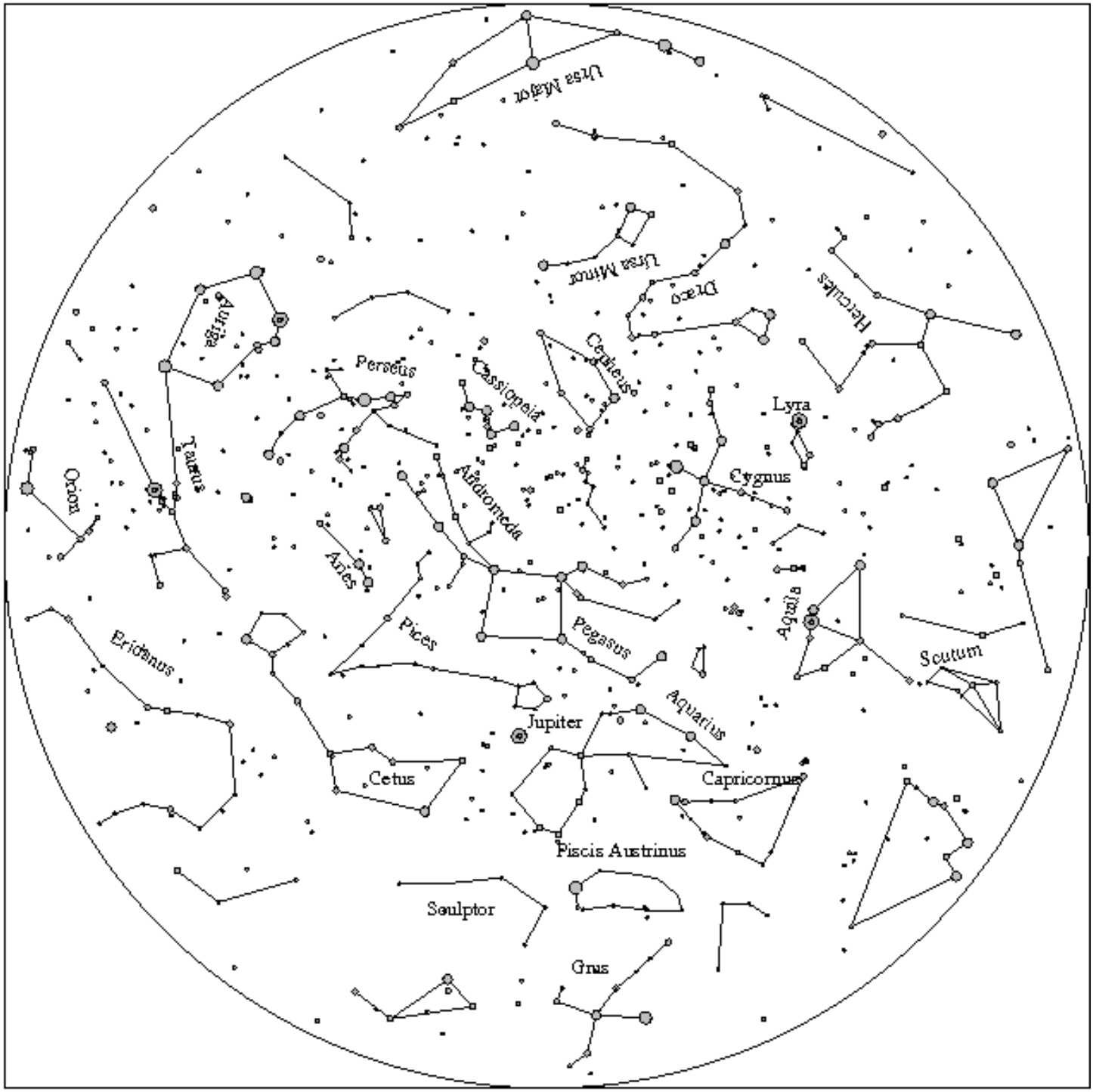
Nov 22. Planetarium Afternoon Program

Nov 23. Planetarium Evening Program

Nov 29. Planetarium Afternoon Program

Nov 30. Planetarium Evening Program

The November 2010 Sky for North Alabama



How to use this Chart: The sky is shown for 8:00PM, November 15th for Florence, Alabama. It will appear this way one hour earlier for each week difference in time. The stars brightness's are represented by different sized dots. The faintest stars you can see are the small dots; the brightest ones are large dots. Hold the chart with the direction you are facing down. So if you are facing north, hold the chart with north down. The circle represents the horizon and the center of the chart the point directly over your head. So an object half-way between the center and edge of the chart is half-way up in the sky. This chart was prepared using the SkyNow software of R. M. Blake. This chart may be reproduced for non-commercial purposes with the following acknowledgement included: Courtesy UNA Planetarium and Observatory. http://www.una.edu/planetarium/.

Introducing our Scholarship Fundraiser

Over the years the planetarium chairs have taken a lot of abuse. In addition, the chairs in the planetarium have little neck and head support. Some of the chairs are broken, but are hard to replace now that better seating is available. The most common comment we get is that people enjoy the programs, "… but those chairs!" They need to be replaced with modern seating. In addition, we need scholarships for the students in Physics and Earth Science to encourage more students to take these majors. There is a severe shortage of graduates in these fields and the US faces a shortage of qualified physicists to continue the nations' lead in research. To address these problems we would like to announce our Physics and Earth Science Department Scholarship Fundraiser. Donors will be asked to donate the cost of a chair replacement plus a similar amount to establish a scholarship fund for students studying Physics and Earth Science at UNA. Donors at the Galaxy level will have a name plate attached to the chair when it is installed in recognition of their contribution. Donors may also donate smaller amounts towards the cost of the project if they wish. All donors will have their names posted prominently in the planetarium lobby along with their level of support. So help out the planetarium and the students in the Physics and Earth Science Department! I am including below a handy form to fill in for your convenience. We appreciate any support you can give us!

Donation to the UNA Planetarium Scholarship Fundraiser

Please find enclosed a check or money order for the amount of $700 to contribute to the full amount for a chair replacement and scholarship donation.

Donors Name:_____

I would like to donate at the following level:

Planetary Level	$1 - $199	Amount: _____
Stellar Level	$200 - $499	Amount: _____
Nebular Level	$500 - $999	Amount: _____
Galaxy Level	$1000 and higher	Amount: _____

Please mail the form with your check or money order made tout to University of North Alabama to

UNA Foundation, University of North Alabama, Florence, Alabama, 35630.

Recent Programs

Sidewalk Astronomy with Shoals Astronomy Club

UNA Planetarium partnered with the Shoals Astronomy club on two sidewalk astronomy events in October. The first was for the First Friday's street festival on October 1st. We looked at Jupiter and spoke to nearly 100 people. The second event took place at the Florence Public Library where we looked at Jupiter and the Moon. We spoke to about 40 people at the event. Join us for the First Fridays event Nov 5th and at the library on Nov 15th. We will start around 6Pm for both events. These efforts are supported by NASA's Night Sky Network which supplies handouts for the vents. The Shoals Astronomy club is open to anyone interested in astronomy of all ages and backgrounds. We meet at UNA Planetarium. November's meeting will be at 7PM on Thursday, November 18th.

Amateur David (right) talks about Jupiter with his telescope nearby at First Friday.

Amateur Matthew Sherril (center) at the Florence Library sidewalk observing.

Amateur Scott Alderidge (left) shows Jupiter through his orange telescope.

Comet Days

To celebrate the successful flyby of Comet Hartley 2 by the EPOXI mission, UNA planetarium will host three public programs Monday, Nov 8th at 4:30PM, Tuesday, Nov 9th at 7PM and Wednesday Nov 10th 7:00PM. We will discuss the motivation and background on studying comets and show some of the images and results from the mission. We will conclude with a discussion of the fall constellations and the upcoming Leonid meteors.

November Leonid Meteors

The annual Leonid meteor shower will reach its peak on the night of November 17th. This year's shower is favorable with the moon setting early. The meteor shower will exhibit about 20 meteors per hours in a dark location away from streetlights. The shower will sometimes burst showing hundreds of meteors per hour. While the shower peaks on the night of Nov 17th, you will see extra meteors before and after this date. To watch the meteors you should go to a dark location after midnight and sweep the southeast part of the sky to the zenith (the point directly over your head. Bring a deck chair, hot chocolate and some friends. Not other equipment is needed.

From the Astronomical Society of the Pacific

Free Online Astronomy Workshop for Interpreters from Parks & Nature Centers

Does your park or nature center have dark star-filled skies? Are your visitors excited about astronomy, but you need a confidence boost in order to interpret the sky for them? Want to be able to find more in the sky than just the Big Dipper and Orion? Join our upcoming Sky Rangers online workshop so we can enable you to share the night sky as another important natural resource of your park.

Applications are now being accepted for the upcoming Sky Rangers Workshop from the Astronomical Society of the Pacific, taking place January 17 - March 11, 2011. This free online workshop provides materials and training for interpreters and outdoor educators who want to learn how to tell the story of the sky and bring the excitement of astronomy to their audiences.

Apply on-line by December 1. Find more information and the application on this page:
http://www.afguonline.org/mod/resource/view.php?id=1857