Some nice Sand Dunes from space, but these are on Mars!

Longmont Astronomy Society Newsletter
February 2012
From the President:
The monthly general meeting of the Longmont Astronomical Society will be on
Thursday, February 16th at the IHop Restaurant, 2040 Ken Pratt Blvd., Longmont, CO.
Join NASA/JPL Solar System Ambassador Mike Hotka for this special presentation
about the historic discovery of the planet Neptune. This discussion will examine the
European astronomical mindset of the time and the incredible, independent work of two
mathematicians that lead to the ultimate discovery of Neptune. This is a fascinating story
of ignorance and triumph that will leave you with a wonderful tale of exploration.

The City of Longmont Parks and Open Space Advisory Board authorized city staff to
begin negotiations with LAS regarding design, funding, management and operation of the
observatory to prepare for presentation to city council and another review by Park Board.
Motion was passed unanimously by the board.

Thanks to Dan Davis for his excellent presentation and to Gary Garzone, Bill Possel, Bill
Tshumy, Bob Spohn, Dr. Frank Melsheimer, Dr. Alan Kiplinger, and Meinte Veldhuis
for answering the board’s questions. Rich Barcelow, Barcelow Architectural Illustration,
Boulder, CO, provided the excellent digital renderings of the observatory for the
presentation.

A Sunset Observatory Advisory Committee and email list has been set up and is process
of reviewing the design. The committee will make decisions regarding observatory
structure, telescope, and draft a facility management proposal to the city.

Upcoming Public Star Parties
Scopes and volunteers needed for the following events:

· Star party for the City of Lafayette Parks and Recreation on Friday
  February 17th. The presentation begins at 6:30 pm in the Rothman Room at the
  Bob L. Burger Recreation Center, 111 W. Baseline Rd., Lafayette, CO and will be
  followed by star party at the nearby Outdoor Classroom at the same address
· Star party for Kunismiller Arts Academy, 2250 South Quitman Way,
  Denver, CO on Friday March 2nd
· Star party for the Longmont Christian School at private home south
  Longmont on Friday, March 9. Directions will be emailed to members
· Skyline High School star party on Saturday March 10 at Sandstone Ranch
  south shelter by the trail head
· Star party for Legacy Elementary School in Frederick on Thursday April 26

In the sky this month:
Meteor Showers – wait awhile….

Planets
Mercury: very low in the west at sunset and hidden in the peaks
Venus: high in the west at sunset, sets about 9, receding
Mars: rises at 7:17, improving
Jupiter: pride of the southern sky still at sunset and still bright
Saturn: rises at 10:38, improving

**Interesting Stars/Galaxies**


http://media.skyandtelescope.com/audio/SkyTour+February+2012+new.mp3 Podcast to tour the Feb Sky...

**Suggested Targets for February 2-9, 2012**

Six open clusters in Canis Major: NGC 2345, NGC 2354, NGC 2367, NGC 2374, NGC 2383, and NGC 2384

**Fiske Planetarium:** Admission costs $3.50 for kids and seniors and $6 for adults

**Thursday, February 23** 7:30 pm
CO Skies: Standing on the Shoulders of Giants

**Friday, February 24** 7:30 pm
The Crowded Sky

**Thursday/Friday, March 1/2** 7:30 pm
Live Faculty Talk: Oldest Light*

**Thursday/Friday, March 8/9** 7:30 pm
Live Faculty Talk: Planet Formation*

**Thursday, March 15** 7:30 pm
CO Skies: Galaxy Evolution

**Internet Resources:**

**Vast New Trove of Variable Stars**

The largest such variable-star database yet has just been announced by the [Catalina Sky Survey](http://skyeye.arc.nasa.gov/catalina/) and the [Catalina Real-time Transient Survey](http://www.catalinastarwatch.com/). Their job is looking for near-Earth asteroids and watching for transient events among the background stars and galaxies. But along the way they have collected 20 billion brightness measurements of 198 million stars and other objects. That's an average of 100 brightness measurements for each one. The objects range from magnitude 12.5 to 20 and span an area of just over half the celestial sphere.

The new light curves include more than 1,000 distant supernovae, some of unusual and novel varieties; about 3,000 other transient objects from flare stars and dwarf novae to erupting galactic nuclei; and tens of thousands of new variable stars of every other kind. So – let's take a look at some of the light curves!
This is the Algol type of variable-star.

The RR-Lyrae type of variable-star:

The W-UMa type of variable-star:

There you go – pictures!
Current Space Missions:

Stars pop onto the scene in new WISE image

Observations provide new evidence for a process called triggered star formation in which the winds and sizzling radiation from massive stars compress gas and dust, inducing a second generation of stars.

A new, large mosaic from NASA’s Wide-Field Infrared Survey Explorer (WISE) showcases a vast stretch of cosmic clouds bubbling with new star birth. The region — a 1,000-square-degree chunk of our Milky Way Galaxy — is home to numerous star-forming clouds where massive stars have blown out bubbles in the gas and dust.

Upcoming Space Missions:

NuSTAR ships to Vandenberg for March 14 launch

The NuSTAR mission is unique because it will be the first to focus X-rays in the high-energy range, creating the most detailed images ever taken in this slice of the electromagnetic spectrum.

Europe’s Rosetta spacecraft is en route to intercept a comet--and to make history. In 2014, Rosetta will enter orbit around 67P/Churyumov-Gerasimenko and land a probe on it for a front row seat as the comet heads toward the disintegrating heat of the sun.

FULL STORY at http://science.nasa.gov/science-news/science-at-nasa/2012/02feb_rosetta/

A video version of this story is available at http://www.youtube.com/watch?v=FoePrO4-fGQ
This month’s Bright Idea:

The editor just “attended” a Webinar conducted by CoCoRAHS (the weather organization) and learned a lot about weather satellites. As soon as I find out where it's located on the website, I'll give you the address and you can go through the PowerPoint yourself. To get a taste of the new generation of weather satellites, check out the NEXSAT website at http://www.nrlmry.navy.mil/NEXSAT.html and click around the pretty pictures and maps. That one is in a synchronous orbit.

The other new generation weather satellite is Suomi in low orbit over the poles. Check that one out at http://npp.gsfc.nasa.gov/

Or just admire the High-def image that it takes (this is a composite of many orbits)
Humor Dept:

The Sunset Observatory, as LAS members gather in 2015 for an evening star party.

Room for one picture…..

NGC 1499 from the computer of LAS member Gary Garzone