



*Season's Greetings*



**Longmont Astronomy Society Newsletter  
December 2007**

## **From the President:**

Hello astronomers:

The Home Planet stellar views have been limited this past month. Coldest December in long time, still have snow on ground, with low temps of single digits, cold weather does take it's toll on viewing. Roland's Astro Corral has been closed, with snowy fields, might be awhile before we can do our next new moon viewing there.

Mars is the big news right now with closest approach to earth right about now. Christmas time treat for viewing with time off work, look at Mars from the backyard. Great thing about planet observing is yard views, no traveling to dark skies, you can image or view late, then go warm up again. I have been trying with the Web camera for some halfway good shots of Mars this past week .I was out last Sunday in dome doing pictures, 2 degrees out, Friday night it was 4 to 5 degrees, then Saturday night it was a warmer 8 degrees in dome. Despite the cold, now is the time to take pictures of Mars. Seeing is the key so every chance I get now we will try.

Comet Holmes is still visible and huge, so faint it's hard to see in eyepiece, you have to pan around to see the edges of comet ball shape. I heard it could outgas again and get brighter again. It happened 75 days after first being discovered over hundred years ago. This is a good one to keep watching. Vern Raben has recorded and visually seen over 30 comets in the past few years. Very good Vern, there has to be an award for that I am sure.

Brian Kimball's photos of comet Holmes has made APOD with his superimposed comet shot over the full moon, to show scale of comet size - way cool picture thanks Brian for your hard work and sharing them with us. We are trying to make you famous.. You can see Galaxies in faint tail of comma of Comet Holmes in Brian's other shots, great work, we love seeing them. Anybody else in club who wants to turn in some pictures send them off to Birch or me for newsletter pictures, club members at star parties, scope new toys etc. I like to hear and see about them.

Election of new officers is this month at LAS meeting. Try to be there. We are still taking nominations and anybody who is a member can run for any office..

We are also having swap meet this month at LAS Meeting. Bring your old eyepieces or whatever you have related to astronomy to share your treasures with others who might buy up your old stuff, then you have to buy their old stuff. Great way to save money and hear what others have to say about cool old products and even new ones. Astronomy software and fast computers, so much more you can be done today in Astronomy from what it was like 20 years ago. So much more info to be had so fast and with Internet can be shared so quickly. This is indeed the information age. I love it.

Banquet is now in full swing for Saturday night, January 19th, 4:30 PM , Izaak Walton Hall, south Sunset in Longmont, same as last year's place, still amazing low price of 15 dollars per person. Good work Bob Spohn in getting caterer and hall for us again, thanks. Lets get everybody there if possible, this is our once a year bash. We have Dr. Bob Stencel giving short talk , then our own Member Bill Possel from Boulder's LASP, will do talk on operations and launches he has over seen. We are so lucky to have so many local greats doing our guest talks for meetings and Banquet each year, thanks to great people who volunteer their precious time for us. Life long learning adventures continue.

We were supposed to do Mead school star party but weather has cancelled us once, may hit us again? I will keep you all posted for any new star party events. Bear Creek Elementary school in Boulder, we had count out of over 175 people, with at least 12

scopes. Thanks Volunteers - again, we did very good. Thanks to BASS club and LAS club members who dazzled many - we also lucked out on winds too, not bad.

Merry Christmas and Happy New Year to all the LAS gang and families. Have a safe Holiday, do not drink and drive, we want to see all of you again at next LAS meeting and new moon adventures.

Mars attack, did anybody ever see that really goofy movie with Jack Nicholson ?? Classic worst movie of all time maybe, made me laugh out loud even. (editors note: doesn't even come close to "Attack of the Killer Tomatoes")

Anyway, I've been working in the cold to get the best Mars shots going for me with closest approach of Mars this week. Tonight it is a heat wave, 17 degrees here. Dome is always colder it seems that weather reports, I sit in low valley where cold settles in. Comet Holmes still hanging around. Remember to keep looking up, later, Gary



### **In the sky this month:**

#### **Meteor Showers**

Jan 4<sup>th</sup>: the Quadrantids peak at 120/hour, with the Moon out of the way until 5 AM.

#### **Planets**

Mars is the star – it will be maximum brightness on January 1 and opposition on Dec 24. Catch it now, or wait until 2016 for another chance. Highest in the sky for the last 48 years, while we're at it.. Halts retrograde motion on Jan 30.

Mercury – greatest elongation on Jan 21, with it setting a full 90 minutes after the Sun.

Venus – fading in the morning skies.

Jupiter – appearing in the mornings, it will be visible in midmonth. Conjoins with Venus on Feb 1 just east of M22 – at 1 degree apart, should be looking good.

Saturn – rises at 10 PM at New Year's and brightens to magnitude 0.4 this month. Last chances to see the rings as they narrow. Opposition on Feb 24<sup>th</sup>.

#### **Interesting Sights:**

Comet 8P/Tuttle should make visibility the end of December into the new year at a predicted magnitude of 5.5. Passes the Pinwheel Galaxy (M33) on Dec 30, and binocs and dark skies should show the pair.

#### **Club Calendar:**

# 21<sup>st</sup> Annual LAS Banquet

Saturday, January 19th, 2008

Izaak Walton park Clubhouse, 18 South Sunset St., Longmont

Doors open at 4:30

Dinner at 5:30

\$15.00 per Person

This year the presentation will be “A Solar System Tour through the Eyes of LASP”. Bill Possel, the Director for Mission Operations and Data Systems at LASP, will present an overview of the past, current, and future space missions being done in our own “backyard.” The Laboratory for Atmospheric and Space Physics, at the University of Colorado, was born in 1948 as the Upper Atmosphere Lab (UAL) to initiate the era of space exploration. Researchers and engineers from the UAL flew experiments into space on over 50 rocket flights before Sputnik. By 1965, the UAL had grown substantially and evolved into the Laboratory for Atmospheric and Space Physics or LASP. LASP is now exploring mysteries surrounding our own Earth's atmosphere, the sun, and even sending instruments to every planet in the solar system.

Bonus talk: Dr. Bob Stencel from DU, will do talk at Banquet on New ideas in stellar evolution theory.

This year's banquet will again be catered by The Rib House by Chef Extraordinaire. Menu: Smoked sausage, BBQ brisket and pork, cheesy corn bake, coleslaw, potato salad, iced tea, lemonade, coffee, chocolate cake. No alcohol allowed on the premises.

*You will receive an announcement and return envelope in the mail in a few days. Please return it to Bob Spohn before Jan 12th. He needs to tell the Rib House the number of people coming a week in advance.*

## **Other Clubs:**

Get in the drawing for a reservation to the Texas Star Party June 1-7, 2008(only 700 may attend – limited space) by going to <http://www.texasstarparty.org/draw.html> or fill out the Request Form immediately at:

<http://www.alphadata.net/cgi-bin/forms/forms.cgi?form=3>

Monthly open house at the Little Thompson in Berthoud is this Friday 12/21. Talk at 7:30 on the next Hubble Servicing Mission, followed by public viewing through the 18 inch scope.

## **Fiske Planetarium:**

Thursday, Dec. 20 & 27: 1:00 and 7:30

"**Astronomical Star of Bethlehem**" with Gil Buller. What was it that may have led wise men to their voyage of discovery more than 2000 years ago?

Thursday Jan 17: 7:30

Colorado Skies: Messenger at Mercury (Addie Dove)  
Fri Jan 18: 7:30  
The Milky Way: A City of Stars  
Thurs Jan 24: 7:30  
Colorado Skies: Observational Astronomy (Justin Searles)  
Fri Jan 25: 7:30  
Mars Revealed

### **Internet Resources:**

<http://www.auger.org/> **The Pierre Auger Cosmic Ray Observatory** is studying ultra-high energy cosmic rays, the most energetic and rarest of particles in the universe. When these particles strike the earth's atmosphere, they produce extensive air showers made of billions of secondary particles. While much progress has been made in nearly a century of research in understanding cosmic rays with low to moderate energies, those with extremely high energies remain mysterious. And you can explore the Observatory using Google Earth [http://www.phys.psu.edu/%7Ecoutu/Auger\\_Google\\_Earth.htm](http://www.phys.psu.edu/%7Ecoutu/Auger_Google_Earth.htm) including some of the observed events at [http://www.phys.psu.edu/%7Ecoutu/Auger\\_Google\\_Earth.htm#AGED](http://www.phys.psu.edu/%7Ecoutu/Auger_Google_Earth.htm#AGED) (This is way cool...)  
And some nice "tour" movies that run about 185 Meg.

Most LAS members are familiar with [www.heavens-above.com](http://www.heavens-above.com) for ISS tracking, sky maps, and Iridium flashes. There's another one [www.n2yo.com](http://www.n2yo.com) that allows you to plot the passes on a world map, kinda fun. It also animates the current position of the ISS and bigger satellites, also interesting.

The Sky & Telescope magazine website is looking a lot better. Try the following subsites:

[www.skyandtelescope.com/satellites](http://www.skyandtelescope.com/satellites) for the passes  
[www.skyandtelescope.com/astronomyonline](http://www.skyandtelescope.com/astronomyonline) for astronomy tv, websites and more  
[www.skyandtelescope.com/newsletters](http://www.skyandtelescope.com/newsletters) for news for advanced amateurs  
[www.skyandtelescope.com/glossary](http://www.skyandtelescope.com/glossary) for your basic dictionary for those big words  
[www.skyandtelescope.com/calendar](http://www.skyandtelescope.com/calendar) for the sky parties  
[www.skyandtelescope.com/gallery](http://www.skyandtelescope.com/gallery) for the best amateur pictures

### **Galaxy Zoo:**

Those of you who have taken part in the "help out the astronomers by classifying galaxies" – the first results are in, and the Universe has a bias! As a double check, the same image was shown to several users and the scientists have been struck by how good the amateurs are at classifying 30 million images. "We've proved that random people are as good as professional astronomers," Dr Lintott said. More remarkable, the find suggests that one small click for an amateur stargazer could be one giant leap for physics. "Preliminary results suggest that spiral galaxies seem to point clockwise," he said, adding that that meant they rotate anticlockwise from our perspective. If this new finding turns out to hold true, "you will have to throw away the standard model of cosmology."

<http://tinyurl.com/24qr2o> has a liveblog of the first galaxy zoo meeting, and if you've ever attended an informal science meeting, this is typical and worth reading.

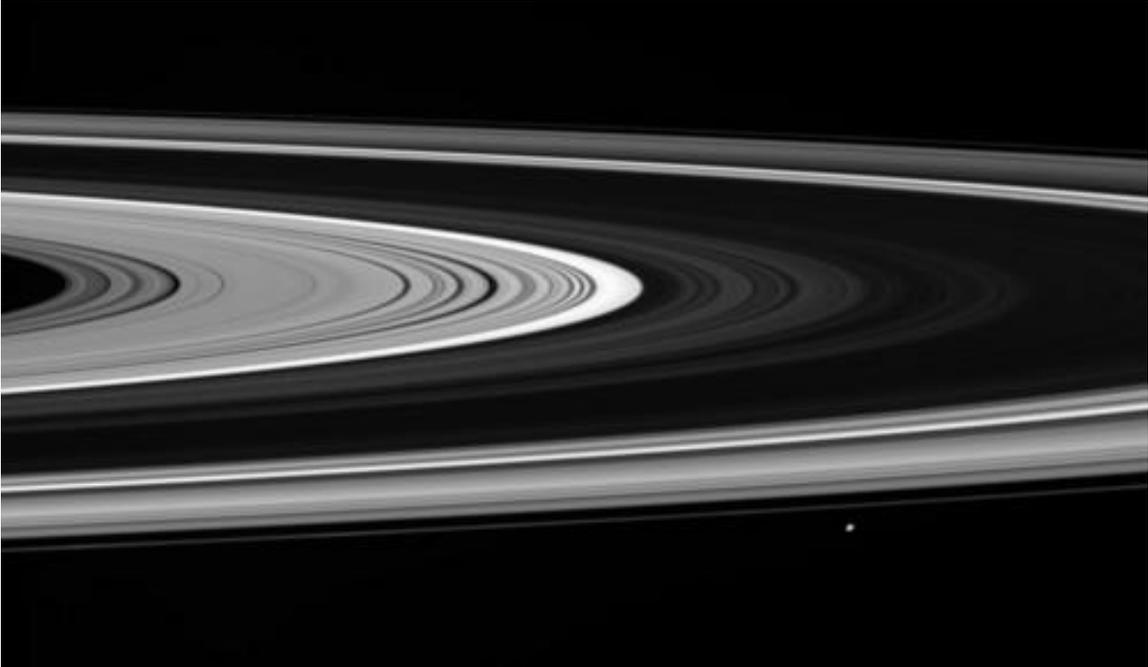
### **Upcoming Space Missions:**

A NASA satellite designed, built and controlled by the University of Colorado at Boulder is expected to help scientists resolve wide-ranging predictions about the coming solar cycle peak in 2012 and its influence on Earth's warming climate - NASA's \$88 million Solar Radiation and Climate Experiment (SORCE) is the satellite run by the [Laboratory for Atmospheric and Space Physics \(LASP\)](#), and <http://www.astronomy.com/asy/default.aspx?c=a&id=6212> and <http://lasp.colorado.edu/sorce/index.htm> will get you some more information.

The Messenger mission finally makes it's first pass at Mercury on January 14<sup>th</sup>. You can follow the mission at <http://messenger.jhuapl.edu/> Final orbital insertion will take place in 2011 after a couple of more planetary passes of Venus. It should have some decent camera work on this pass.

The Dawn mission was launched on September 27 this year and recently tested its ion engine successfully. Off to Vesta and Ceres on an asteroid exploration mission. Love those dwarf planets (like Pluto). Should reach Ceres in another 1350 days, give or take. (remind me to put this newsletter in a cornerstone for my grandkids....) <http://dawn.jpl.nasa.gov/> for the mission pages. Don't quite understand how "ion propulsion" works? Check out [http://dawn.jpl.nasa.gov/DawnClassrooms/2\\_ion\\_prop/index.asp](http://dawn.jpl.nasa.gov/DawnClassrooms/2_ion_prop/index.asp) for some information. And then there's New Horizons reaching Pluto in 2015 for a real delayed result.

The pictures from the Cassini mission are getting better and more extensive. A few hundred meg await your perusing at <http://Saturn.jpl.nasa.gov>, like this one.... And then the flyby of Iapetus has some nice pictures up on the site.



### **This month's Wacky Idea:**

Help out NASA:

Those amateur astronomers hooked on the Moon can help Marshall Space Center monitor for meteor strikes on the surface. Very low pay, but you're watching the Moon anyway. Check out the website at <http://www.nasa.gov/centers/marshall/news/lunar/> The astronomers with the big telescopes have other things to do, so they're relying on us and our copious free viewing time.

### **In the news:**

Chandra has recently discovered a new record breaker, as it imaged a neutron star moving at a blistering 3 million mph! Details at:

[http://science.nasa.gov/headlines/y2007/28nov\\_cosmiccannonball.htm?list937934](http://science.nasa.gov/headlines/y2007/28nov_cosmiccannonball.htm?list937934)

For those who have wondered "how the corona can be a million degrees and the surface is only a few thousand", the answer is uv jets from the Solar poles. Read the news from Japan's Hinode space mission, watch the cool movie at

[http://science.nasa.gov/headlines/y2007/06dec\\_xrayjets.htm?list937934](http://science.nasa.gov/headlines/y2007/06dec_xrayjets.htm?list937934)

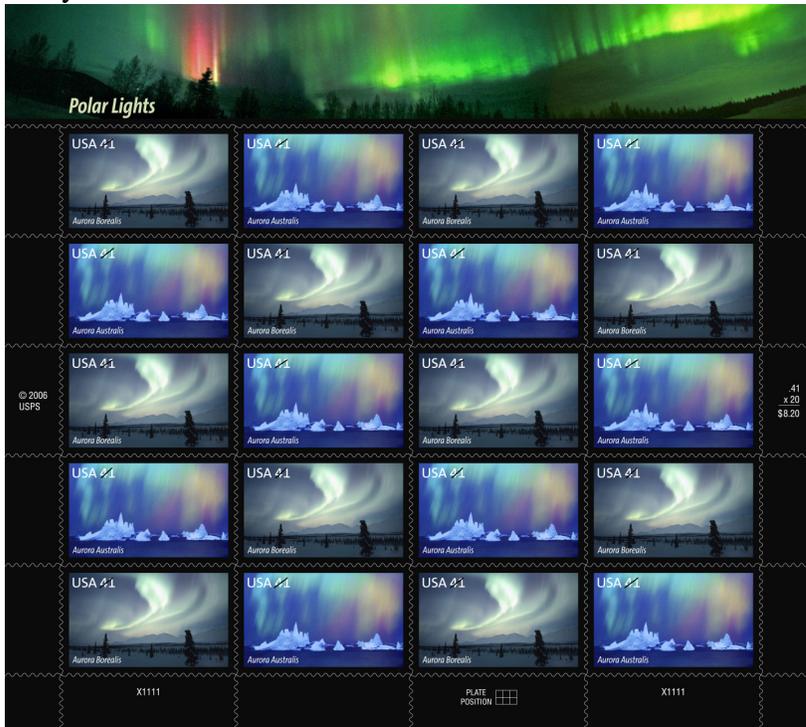
Lot of coverage in the papers about the galaxy that is blasting its neighbor with a jet of gamma rays, etc. If that happened here, "we'd be toast" is the headline they are mostly featuring. Could it? Why, sure.... (but your odds are better with the Powerball) Read all the details and see the pictures at

[http://science.nasa.gov/headlines/y2007/18dec\\_assault.htm?list937934](http://science.nasa.gov/headlines/y2007/18dec_assault.htm?list937934)

While you're at it, read about the physics of black hole jets at [http://imagine.gsfc.nasa.gov/docs/ask\\_astro/answers/990923a.html](http://imagine.gsfc.nasa.gov/docs/ask_astro/answers/990923a.html) Best bet is to read it if you're having trouble getting to sleep.

New solar cycle starting? It's about time.... Peak should be 2011-12. Read the details at [http://science.nasa.gov/headlines/y2007/14dec\\_excitement.htm?list937934](http://science.nasa.gov/headlines/y2007/14dec_excitement.htm?list937934)

Stop off at your local post office and buy some aurora stamps to show your bill collectors that you're an astronomer and not to be messed with!



## Humor Dept:

### ***Defining Terms Used in Marketing***

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*Culled off the newsgroup sci.astro.amateur (Author Unknown)*

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**With the advent of CCDs and the new computer-controlled telescope drives, this may be your first brush with the arcane world of really high-tech. For anyone who may be considering some of the advanced products now on the market, this page will provide an interpretation of a few terms that you've no doubt seen widely used in advertisements.**

**ALL NEW** - The power supply, connectors, and software are not compatible with previous versions. Even the screw threads are different.

**ADVANCED DESIGN** - Salespeople don't understand it.

**BREAKTHROUGH** - It nearly worked on the first try.

**DESIGN SIMPLICITY** - It was developed on a shoestring budget.

**EXCLUSIVE** - We're the only ones who have the directions telling how to use it.

**FIELD TESTED** - The manufacturer has no way to test it.

**FOOLPROOF OPERATION** - It's unrepairable, short of sending it back to the factory (which can't fix it either).

**FUTURISTIC** - It only runs with the help of a next-generation computer, which isn't available yet.

**HIGH ACCURACY** - The screw threads match the threads of the holes they're supposed to mate with.

**IT'S HERE AT LAST** - We've released a 26-week project in 48 weeks.

**MAINTENANCE FREE** - see Foolproof Operation.

**MEETS OR EXCEEDS OPTICAL STANDARDS** - We haven't the foggiest idea about the total wavefront accuracy.

**NEW** - It comes in a different color than the first version.

**PERFORMANCE PROVEN** - It worked through beta test.

**QUALITY STANDARDS** - It works most of the time.

**REVOLUTIONARY** - Everything that's supposed to go round and round actually goes round and round.

**SATISFACTION GUARANTEED** - We'll send you another manual if this one fails to work.

**STOCK ITEM** - We shipped it once before and we can do it again, probably.

**UNMATCHED** - No one else wants to copy our design.

**UNPRECEDENTED PERFORMANCE** - May mean two different things:

1. Actually worked the first time right out of the box.
2. Nothing before ever ran so erratically.

**YEARS OF DEVELOPMENT** - We finally got one to work.