



The Observer

SAN BERNARDINO VALLEY AMATEUR ASTRONOMERS

Member of The Astronomical League

<http://sbvaa.org/>



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Since 1958

February, 2018

Meeting:

February 3, 2018

Location:

First Christian Church
2102 E. Foothill Dr.
San Bernardino, CA

7:00 p.m.

Pre-meeting Dinner,
5:00 to 6:30 p.m.,

Jenny's Family
Restaurant
7750 Palm Ave.
Highland, CA

After the meeting telescopes will be set up for viewing and members will be available to answer questions. Bring your telescope to observe with us.

*No telescope is too humble,
and beginners are always
made welcome!*

Program

The Antennae Galaxies: When Galaxies Collide

How and why do galaxies collide? What happens when they do? Our Milky Way and Andromeda galaxies are due to collide in about two billion years; what the result will be or at least look like might be suggested by the Antennae Galaxies.

Professor David M. Mayer will explain the significance of this image.



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Calendar of Upcoming Events

Feb. 17, Star Party, Loc. TBD

Mar. 3, Club Meeting

Mar. 17, Star Party, Oak Glen

Mar. 20, Vernal Equinox

Apr. 7, Club Meeting

Apr. 14, Outreach, Oak Glen

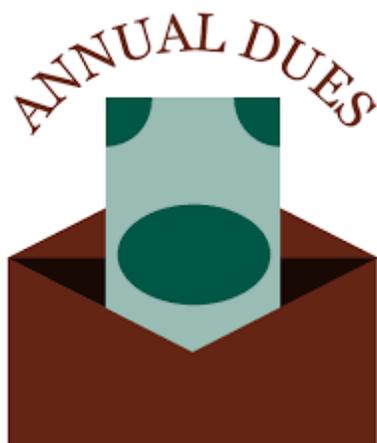
May 5, Club Meeting

May 12, Star Party, Loc. TBD

May 25 - 28, RTMC

June 2, Club Meeting

It's That Time Again



Yes, dues are due. It's still just \$30 for an individual or family membership.

See Fidel at the meeting -- with your check of course.

Super, Blue, Blood Moon

Coming January 31

Set your alarm early the morning of Wednesday, Jan. 31 for a lunar trifecta: a pre-dawn "super blue blood moon."

The Jan. 31 full moon is special for three reasons: it's the third in a series of "supermoons," when the Moon is closer to Earth in its orbit -- known as perigee -- and about 14 percent brighter than usual. It's also the second full moon of the month, commonly known as a "blue moon." The super blue moon will pass through Earth's shadow to give viewers in the right location a total lunar eclipse. While the Moon is in the Earth's shadow it will take on a reddish tint, known as a "blood moon."

Yet Another Mars Revelation

Researchers have found that huge deposits of water ice lay just a few feet below the planet's surface -- 300 feet thick in some areas!



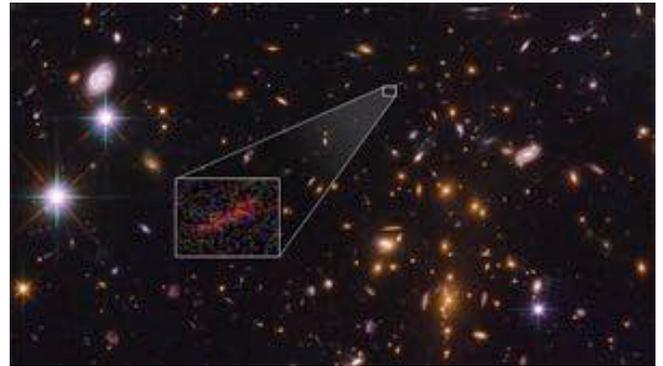
In a study published on January 11, in the journal *Science*, researchers using the Mars Reconnaissance Orbiter (MRO) investigated eight steep and eroded slopes (known as scarps) at various locations across Mars. At each of these locations, they found thick shelves of relatively pure water ice located as little as 3.3 feet (1 meter) below the planet's surface. Furthermore, some of these massive ice deposits were found to be more than 330 feet (100 meters) thick.

The discovery of these large reservoirs of pure water ice adds yet another piece of evidence supporting the increasingly held theory that water ice not only exists on Mars, but also is surprisingly common. Although the ice could obviously be used as a source of water for future manned missions to Mars, scientists have a long way to go before then. However, with the [Mars 2020 rover](#) just a few years away, the discovery of eight more tantalizing sites ripe for investigation is still an exciting find.

For more details, go to:

astronomy.com

NASA Captures Photo of Most Distant Galaxy Ever Resolved



With the help of advanced telescopes and gravitational glasses, NASA captured an image of SPT0615-JD, the most distant galaxy ever caught on camera. This ancient galaxy was already around when the infant universe was just 500 million years old. Although we've seen other galaxies that existed during this time period, we haven't been able to capture distinct images of them due to their significant distance from Earth. Galaxies this far off usually resemble indiscernible red dots, but due to gravitational lensing, researchers were able to capture a clear image of SPT0615-JD.

preliminary analysis, made with Hubble and Spitzer's data, estimates that the image captured the galaxy as it was 13.3 billion years ago, about half a billion years after the Big Bang. It also suggests that SPT0615-JD has a maximum weight of 3 billion solar masses, roughly 1/100th the mass of the Milky Way, and is no more than 2,500 light-years across. For comparison, the Milky Way is 100,000 light-years across. Stats like this make it an archetypal example of other young galaxies that formed soon after the Big Bang.

For more, go to: astronomy.com

File under “Here We Go Again!”

From Space.com, January 20

In recent days, a few media outlets have reported (in some cases, rather sensationally) that a "potentially hazardous" asteroid will fly close to Earth on Feb. 4. Are the reports correct? Absolutely! Is there any need to panic? Absolutely not!

It's true that the building-size asteroid 2002 AJ129 will pass by Earth within about 10 times the distance from Earth to the moon (about 2.6 million miles, or 4.2 million kilometers), according to NASA.



NASA representatives say there's no chance that it will collide with Earth. "We have been tracking this asteroid for over 14 years and know its orbit very accurately," Paul Chodas, manager of the Center for Near-Earth-Object Studies at NASA's Jet Propulsion Laboratory, said in a statement "Our calculations indicate that asteroid 2002 AJ129 has no chance — zero — of colliding with Earth on Feb. 4 or any time over the next 100 years."

Nonetheless, with no context, asteroid 2002 AJ129's close flyby might seem remarkable. But what many outlets failed to mention is that rocks of this size fly

close to Earth somewhat regularly; in fact, two space rocks came significantly closer to our planet just this week.

Thursday (Jan. 18), the car-size asteroid 2018 BD (discovered just this year) came to within 0.09 times the distance from the Earth to the moon (about 21,500 miles or 34,600 km), according to NASA's Solar System Dynamics website and the Minor Planet Center. And Asteroid 2018 BX, which is also about the size of a car or bus, made its close flyby of Earth late Friday night (U.S. Eastern time on Jan. 19), zipping past Earth at a distance of about 0.073 times the distance from the Earth to the moon (about 174,400 miles or 280,670 km).

(Social media misinformation messengers had a field day!)

For more details, go to:
space.com

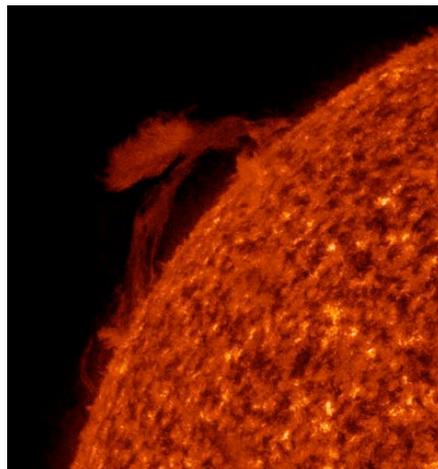


Photo credit: NASA,
Solar Dynamics Observatory