The Observer

SAN BERNARDINO VALLEY AMATEUR ASTRON
Member of The Astronomical Leagu
http://sbvaa.org/

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Meeting:

July 7, 2018

Location:

The Sizzler

1800 *S. Waterman*

(S.Waterman at Vanderbilt Way in San Bernardino)

from 5:00 to 7:00

(At least I think the time is correct — no one has confirmed anything with your harried editor)

beginners are always made welcome!

Program
Sizzling Summer Social

Friends
Fellowship
Food &
Folderol

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Calendar of Upcoming Events

July 14, Star Party, Oak Glen

Aug. 4, Annual Club Picnic

Aug. 11, Outreach, Pioneer Town

Sept. 1, Club Meeting

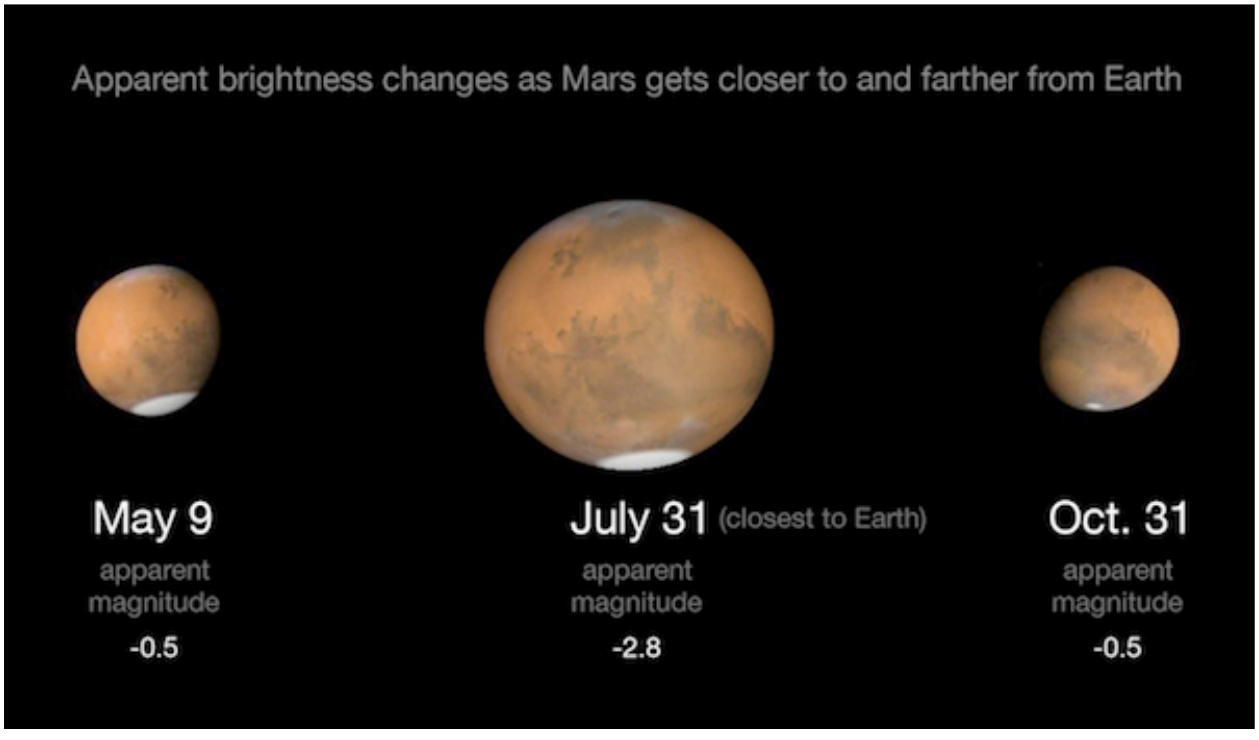
Sept. 7-9, GRANDVIEW

Sept. 18, Outreach, Dominguez School, San Bernardino

Oct. 6, Club Meeting

Oct. 13, Outreach, Oak Glen

Mars is Coming



Close up View of Mars

In July 2018, skywatchers can get an up close view of Mars—even without a telescope! In fact, on July 31, Mars will be closer to Earth than it has been in 15 years.

Keep in mind that even during its closest approach, Mars is still more than 35 million miles away from Earth. That's really far. So, Mars won't appear as big as the Moon in the sky, but it will appear bigger than it usually does.

July and August will be a great time to check out Mars. Through a telescope, you should normally be able to make out some of the light and dark features of the Red Planet—and sometimes even polar ice. However, a huge Martian dust storm is obscuring these features right now, so less planetary detail is visible.

There is another important Mars date in July: Mars opposition. Mars opposition is when Mars, Earth and the Sun all line up, with Earth directly in the middle. This event is happening on July 27 this year.

Although you may see news focusing on one of these two dates, Mars will be visible for many months. For about three weeks before and three weeks after opposition and closest approach, the planet will appear the same size

From July 7 through September 7 Mars will be the third brightest object in the sky (after the Moon and Venus), shining even brighter than Jupiter. The best time to view Mars during this time is several hours after sunset, when Mars will appear higher in the sky.

Mars Past Life?

In early June, NASA announced that the Curiosity Mars rover found organics hidden in its mudstones and methane in its atmosphere. The space agency did not say it had found evidence of alien life. However, these new results are still tantalizing.

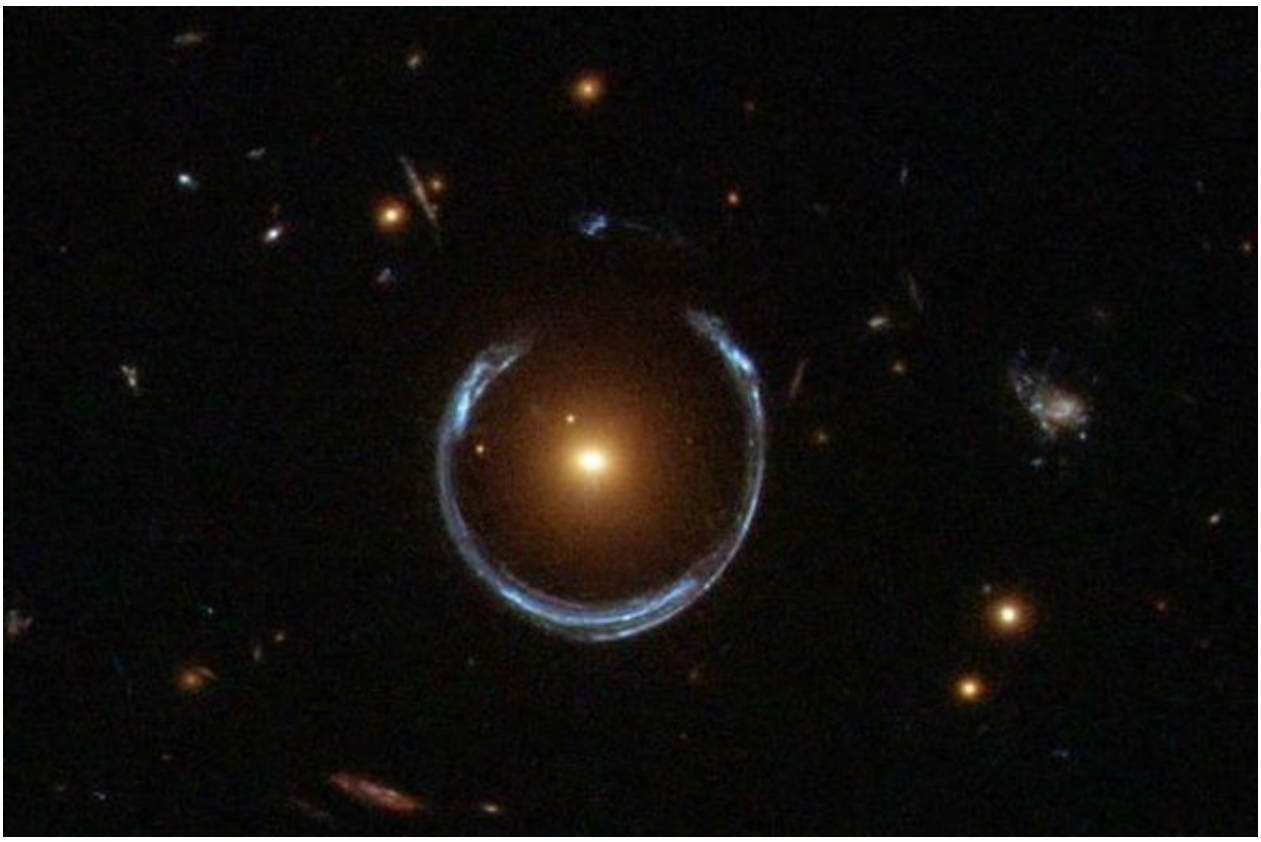
Curiosity landed on Mars back in 2012 and it's been slowly climbing up Mount Sharp, a large hill formed when an asteroid impact created Gale Crater, simultaneously exposing multi-billion year old sedimentary rocks laid down in an ancient lakebed. The rover came equipped with a suite of instruments known as Sample Analysis at Mars, or SAM. And its main goal was to find organic molecules. These commonly form in non-biological processes, but they're also the building blocks of life.

Methane was the key discovery as it is considered one of the key factors for life. Now scientists have to determine if Mars' atmospheric methane is due from organics or from frozen subterranean "pools." The methane appears to have seasonal "surges" and scientists want to know why.

NASA's Mars 2020 rover which will launch in a couple of years, is custom built to search for definitive signs of life and answer to methane question. The adventure continues.

Einstein Proven Right — Again!

By Chelsea Gohd, staff writer, space.com



A new study validates Einstein's theory of general relativity in a distant galaxy for the first time. This study supports our current understanding of gravity and provides more evidence for the existence of dark matter and dark energy — two mysterious concepts that scientists know about only indirectly by observing their effects on cosmic objects.

The researchers tested the assumption that "the same laws of physics we see working here on Earth are true anywhere else," Terry Oswalt, an astronomer and chair of physical sciences at Embry-Riddle Aeronautical University in Florida, said in an email to Space.com. Verifying general relativity "at all possible scales (especially the largest scale) is fundamentally important to physics as a whole, and to cosmology in particular," added Oswalt, who was not involved in the new study.

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For more details, go to: space.com