

The Observer

SAN BERNARDINO VALLEY AMATEUR ASTRONOMERS

Member of The Astronomical League

<http://sbvaa.org/>



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Since 1958

June, 2016

Meeting:

June 18, 2016

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.,

Pepper Steak
Restaurant
26589 Highland
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 Red Planet

June's program will be a slide show and talk by our own Chris Clarke followed by a viewing of Mars after the meeting.



Jupiter and Saturn will also be on view. It should be a great night for planetary observing

Bring your telescope to observe!

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Calendar of Upcoming Events

July 2, Star Party, Oak Glen

July 9, Outreach, Pioneer Town

July 16, Club Meeting

Aug. 5, Outreach, Burrage Mansion,
Redlands, for Cub Scouts

Aug. 6, Star Party, Johnson Valley

Aug. 10, Outreach, Hermosa School,
Alta Loma

***Other star parties, outreaches and events for
2016, TBA***



Planetary Triple

As Jupiter sets toward the west we will see Mars and Saturn brightly riding the scorpion in the southern sky. Currently, Mars is very bright at a magnitude of roughly -2, outshining Saturn which is glowing at a "paltry" 0.0.

It's a somewhat rare event that two very bright planets come to opposition within a relatively short period of time. It's been 16 years since Jupiter and Saturn put on a show. Mars and Saturn are now giving us an encore performance of their show thirty two years ago.

These are rare occurrences gentle reader and we should get out and enjoy them while we can. I can remember over forty years ago seeing, Mercury, Venus, Mars Jupiter and Saturn in the evening sky from a dark site at Joshua Tree. Very special time!

Rudy Rodriguez Scholarship Fund

A scholarship fund has been set up in the name of our former colleague, Rudy Rodriguez. As many of you may remember, Rudy was very generous every year at A.B. Miller High School, providing telescopes and scholarship funds from his own pocket to deserving students.

Ideally, A.B. Miller High would like for this scholarship fund to continue on as time goes by. The fund would help offset the cost of continuing education for at least one (if not more) deserving senior. Rudy's sister, Sandy, and his niece, Jacquie (an A.B. Miller graduate) are in conversation with some close friends and will be directly involved with the selection process. It gives them great joy to know that Rudy's legacy might live on in this way.



If you would like to contribute to this fund, the school would welcome your support. Checks should be made out to A.B. Miller High School, making sure to designate this fund in the memo section.

If you have any questions, feel free to call Kent E. Moore at the school, extension 10153.

Your editor does not know if this is (or will be) a registered 501 3(c) non-profit fund. However, it is in support of a public school and therefore likely to be tax deductible. Check with your tax advisor to clarify.

Lowell Observatory Events

If you are going to be traveling the southern route through Arizona this month, you may want to check to see if the dates for some of Lowell's special events line up with your calendar.

Friday 10

2nd Friday Science Night: Chemistry II
Experiments at 6 p.m.

Wednesday 29

Stars on Mars Hill
6 p.m. | FREE

Thursday 30

Asteroid Day

REGULAR VISITOR HOURS

Mon-Sat | *10 a.m. - 10 p.m.*

Sun | *10 a.m. - 5 p.m.*

Plus

There aren't many places in the world where the public can meet a professional astronomer and ask him or her questions. In this spirit, we're kicking off our new "Meet an Astronomer" initiative. Come up to Mars Hill and meet a Lowell astronomer almost every Friday and Saturday evening from 7:30-10:00 p.m. during the busy summer months of June, July and August*. Plus, take a peek at real-time images of planets, stars, galaxies and other celestial objects to be displayed on a large television screen outdoors with our new MallinCam. This is your opportunity to see interesting objects in the night sky, learn about an astronomer's research, and ask questions you might have about any topic in astronomy.

Great Observatories of the World

The Giant Magellan Telescope



← Site of the GMT at Las Campanas, Chile.

Two workers rough polishing one of the seven mirrors. →



The Giant Magellan Telescope will be one member of the next class of super giant earth-based telescopes that promises to revolutionize our view and understanding of the universe. It will be constructed in the Las Campanas Observatory in Chile. Commissioning of the telescope is scheduled to begin in 2021.

The GMT has a unique design that offers several advantages. It is a segmented mirror telescope that employs seven of today's largest stiff monolith mirrors as segments. Six off-axis 8.4 meter or 27-foot segments surround a central on-axis segment, forming a single optical surface 24.5 meters, or 80 feet, in diameter with a total collecting area of 368 square meters. The GMT will have a resolving power 10 times greater than the Hubble Space Telescope. The GMT project is the work of a distinguished international consortium of leading universities and science institutions.

One of the most sophisticated engineering aspects of the telescope is what is known as “adaptive optics.” The telescope's secondary mirrors are actually flexible. Under each secondary mirror surface, there are hundreds of actuators that will constantly adjust the mirrors to counteract atmospheric turbulence. These actuators, controlled by advanced computers, will transform twinkling stars into clear steady points of light. It is in this way that the GMT will offer images that are 10 times sharper than the Hubble Space Telescope.

Perhaps one of the most exciting questions yet to be answered is: are we alone? The Giant Magellan Telescope may help us answer that. Finding evidence of life on other planets would be a momentous discovery—certainly one of the greatest in the history of human exploration. But taking pictures of these so called “extrasolar” planets, which orbit other stars, is extraordinarily difficult. In addition to the vast distance—the very closest star to earth is four light-years away—the biggest problem is the glare of the host star which blocks out most of the reflected light of a small distant planet.

This is why the great collecting area of the GMT is so important. The GMT mirrors will collect more light than any telescope ever built and the resolution will be the best ever achieved.

This unprecedented light gathering ability and resolution will help with many other fascinating questions in 21st century astronomy. How did the first galaxies form? What are dark matter and dark energy that comprise most of our universe? How did stellar matter from the Big Bang congeal into what we see today? What is the fate of the universe?

Commissioning of the GMT is scheduled for some time in 2021.