

Skywatchers

Newsletter of the China Lake Astronomical Society

Volume 47 No. 7

July 1, 2010

NEXT MEETING 7:30 p.m., Monday, July 5, 2010

Maturango Museum, 100 East Las Flores Avenue, Ridgecrest, California

PROGRAM FOR THE JULY 5 MEETING “EMPIRE OF THE SUN” BBC VIDEO

Ted Hodgkinson and Earl Wilson will present a DVD titled “Empire of the Sun,” hosted by Dr. Brian Cox. This is an episode of the new BBC series, “Wonders of the Solar System.” The program runs 50 minutes, and parts of it were filmed in Death Valley, with Ted and Earl in attendance. We know from a preview that Ted’s telescope is used as the logo of the episode. More about the series at <http://www.bbc.co.uk/programmes/b00qyxfb>

To quote from a review of the series: “The presenter of the series is Professor Brian Cox, who is rapidly becoming known as ‘the cool, good looking scientist.’ Brian is the new Face Of Science – passionate about his subject but not preachy; knowledgeable but not arrogant; good-looking (my female friends tell me) but not too pretty to be taken seriously.” More about Brian at [http://en.wikipedia.org/wiki/Brian_Cox_\(physicist\)](http://en.wikipedia.org/wiki/Brian_Cox_(physicist))

DATES TO KEEP IN MIND

Monday, July 5, 2010: Regular CLAS Meeting at the Maturango Museum, 7:30 p.m.

Thursday, July 8, 2010: Special Star Party for Cub Scouts at the Maturango Museum Observatory.

Friday, July 9, 2010: Regular CLAS Star Party, see below.

Tuesday, July 20, 2010: Deadline for next Skywatchers Newsletter.

Monday, August 2, 2010: Regular CLAS Meeting at the Maturango Museum in Ridgecrest, 7:30 p.m.

STAR PARTY SCHEDULE FOR THE 2010 SEASON:

Star Parties will be held on the dates listed below. Star Parties are an activity where members and guests come together to view the skies. If you have a telescope, bring it; if not, come and look through someone else’s. They are held at a site in the open desert south of Ridgecrest. To reach the site from Ridgecrest, go south on China Lake Boulevard 6.5 miles from its intersection with Ridgecrest Boulevard. Continue straight across Highway 395 and you will be on Brown Road (Old Highway 395). Follow Brown Road as it curves to the right and goes west. After 2.3 miles, there will be a 30-inch orange cone on the left. Turn left and follow the dirt road marked by 12-inch cones. The CLAS star party is 0.5 miles along this road. Signs and cones will be put out about a half hour before viewing starts. Call Carroll Evans 760-375-5681, or Bruce Churchill 760-375-7247, for more information.

Friday, July 9: Signs out at 8:30 p.m., Star viewing at 9:00 p.m.

Friday, August 6: Signs out at 8:30 p.m., Star viewing at 9:00 p.m.

Friday, September 10: Signs out at 7:30 p.m., Star viewing 8:00 p.m.

Friday, October 8: Viewing moved to the annual Cerro Coso Community College Star Party and Barbeque.

Friday, November 5: Signs out at 6:30 p.m., Star viewing at 7:00 p.m.

MUSEUM STAR PARTIES

Public star parties are scheduled, weather permitting, at 8:30 p.m. at the Maturango Museum's observatory, on Thursday evenings, August 5 and September 9.

THE SKY IN JULY by Roger Brower

1. Venus, Mars and Saturn are all prominent in the evening sky this month. At the start of the month they form a line 38 degrees long from the upper left to the lower right when facing west. By the end of the month, they will be within 7.5 degrees of each other low in the west.
2. Mercury joins the other three planets in the evening sky after the middle of the month but remains very low in the west. Look for it in the west-northwest, just after sunset.
3. Jupiter moves from the morning sky to the evening sky this month. By the end of the month, it rises at about 10:30PM. Look for it in the east very late in the evening.

JULIAN STARFEST

Free Public Star Party Saturday Night, August 7, 2010! Julian is in the mountains east of San Diego.

Anyone can enjoy the Julian Starfest by participating in the free public star party on Saturday, August 7, 2010. Arrive in Julian between 7:00 p.m. and 9:00 p.m. and you can enter the Starfest grounds (1150 Julian Orchards Ln, Julian, CA 92036) for free. Take a star tour of the heavens using the many telescopes set up in the viewing area. Experts will be on hand to answer questions about what your looking at and about the telescopes. Parking is available nearby and we suggest you bring a red light flashlight to guide yourself to the observing area. If you don't have a red light flashlight, red film will be provided to cover a white light flashlight. Please, no white lights in the observing area. **If you wish to take part in the raffle at 6:00 p.m., you must arrive before 6:00 p.m. and pay regular admission prices.**

More information at: <http://www.julianstarfest.com/>

**MIDDLE-SCHOOL PROJECT DISCOVERS CAVE SKYLIGHT ON MARS (WHAT A FIELD TRIP!)
http://asunews.asu.edu/20100617_skylight**

They went looking for lava tubes on Mars — and found what may be a hole in the roof of a Martian cave.

The 16 students in Dennis Mitchell's 7th-grade science class at Evergreen Middle School in Cottonwood, Calif., chose to study lava tubes, a common volcanic feature on Earth and Mars. It was their class project for the Mars Student Imaging Program (MSIP), a component of Arizona State University's Mars Education Program, which is run out of the Mars Space Flight Facility on ASU's Tempe campus.

The imaging program involves upper elementary to college students in Mars research by having them develop a geological question to answer about Mars. Then the students actually command a Mars-orbiting camera to take an image to answer their question. Since MSIP began in 2004, more than 50,000 students have participated to varying extents.

"The students developed a research project focused on finding the most common locations of lava tubes on Mars," Mitchell said. "Do they occur most often near the summit of a volcano, on its flanks, or the plains surrounding it?"

To answer the question, the students examined more than 200 images of Mars taken with the Thermal Emission Imaging System (THEMIS), an instrument on NASA's Mars Odyssey orbiter. Philip Christensen, a Regents' Professor of geological sciences in the School of Earth and Space Exploration, is the instrument's designer and principal investigator. The students chose for their targeted THEMIS image (plus a secondary backup image) areas on Pavonis Mons volcano that had yet to be photographed by THEMIS at highest resolution (18 meters, or 59 feet, per pixel).

On their two targeted images the students found lava tubes, as they had hoped. And on the backup image, they also found a small, round black spot. Many Martian lava tubes are marked by aligned chains of collapse pits, which typically have flat floors and sloping sides. The spot the students found, however, appears to have vertical sides.

Such features made a stir in the news in 2007, when Glen Cushing, a U.S. Geological Survey scientist, published a paper showing several Martian examples, which had been located using the heat-sensing capability of THEMIS. He argued that these holes were anomalous as compared to the usual chain pit crater, being smaller and resembling a relatively straight-sided shaft going down into the ground.

Cushing proposed that these anomalous pit craters are "skylights" – places where a small part of the roof of a cave or a lava tube had collapsed, opening the subsurface to the sky. They typically appear cooler than the ground surface by day, but warmer than it by night. This is exactly what would be expected, given that Martian surface temperatures have a large diurnal range, while subsurface temperatures hold fairly even.

"This pit is certainly new to us," Cushing told the students. "And it is only the second one known to be associated with Pavonis Mons." He estimated it to be approximately 190-by-160 meters (620x520 feet) wide and 115 meters (380 feet) deep at least.

In addition, he said, the spot appears clear against the background surface of Pavonis Mons. "It sticks out like a sore thumb in THEMIS predawn thermal observations."

The students have submitted their site as a candidate for imaging by the High Resolution Imaging Science Experiment (HiRISE) camera on NASA's Mars Reconnaissance Orbiter. HiRISE can image the surface at about 30 centimeters (12 inches) per pixel, which may allow a look inside the hole in the ground.

"The Mars Student Imaging Program is certainly one of the greatest educational programs ever developed," Mitchell said. "It gives the students a good understanding of the way research is conducted and how that research can be important for the scientific community. This has been a wonderful experience."

YOUTUBE VIDEO: 2012-NIBIRU, PLANET X & MAYAN CALENDAR—SCIENCE VS. FICTION

http://www.youtube.com/watch?v=xFdSHbDYWw&playnext_from=TL&videos=MyV_eSpYpWs&feature=sub

Donald Yeomans of JPL debunks pseudo-scientific claims surrounding 2012 and the non-existent planet Nibiru.

KEPPLER SPACECRAFT DISCOVERS HUNDREDS OF EXOPLANETS

http://www.planetary.org/news/2010/0621_Kepler_Discovered_Hundreds_of_New.html

MEMBERSHIP INFORMATION

Basic CLAS dues are \$20.00 per year, which includes the Skywatchers Newsletter. As a benefit of membership, you may also receive Astronomy Magazine and/or Sky and Telescope Magazine. The fee schedule is as follows:

Basic membership	\$20.00 per year
Membership with Astronomy magazine	\$54.00 per year
Membership with Sky and Telescope magazine	\$53.00 per year
Membership with both S & T and Astronomy	\$87.00 per year

Send your check to: Roger Brower, Treasurer, China Lake Astronomical Society, P.O. Box 1783, Ridgecrest, CA 93556.

PRESIDENT – Earl Wilson – 760-876-5455 (email zearl.email@gmail.com)
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WESTERN AMATEUR ASTRONOMERS WEB SITE <http://www.waa.av.org/>

Meetings of the China Lake Astronomical Society are at the Maturango Museum at 7:30 p.m. on the first Monday evening of each month, except when the first Monday is a holiday.

**SKYWATCHERS, Newsletter of the
CHINA LAKE ASTRONOMICAL SOCIETY
POST OFFICE BOX 1783
RIDGECREST, CA 93556-1783**

FIRST CLASS

**NEXT MEETING: 7:30 p.m., MONDAY JULY 5, 2010: “EMPIRE OF THE SUN” BBC VIDEO
AT THE MATURANGO MUSEUM, 100 EAST LAS FLORES AVE., RIDGECREST, CALIFORNIA**

**CLAS WEB PAGE <http://www.chinalakeastroc.org>
INDEX OF CLAS NEWSLETTERS <http://www.ridgenet.net/~clevans/clas/>**