

Skywatchers

Newsletter of the China Lake Astronomical Society

Volume 45 No. 7

July 1, 2008

NEXT MEETING 7:30 p.m., Monday, July 7, 2008

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

PROGRAM FOR THE JULY 7 MEETING – SHAPES AND ORIGINS OF GALAXIES

At our April discussion of Spring Galaxies, considerable material was presented about the shapes and origins of galaxies. Let's continue our discussion of that topic at our July meeting. Two members have already contributed information. If you have some information to share, bring it to the meeting.

DATES TO KEEP IN MIND

Monday, July 7, 2008: Regular CLAS Meeting at the Maturango Museum, 7:30 p.m.

Friday, July 4, 2008: Public Star Party at Brown Road Site, see below.

Wednesday, July 23, 2008: Deadline for next Skywatchers Newsletter

Monday, August 4, 2008: Regular CLAS Meeting at the Maturango Museum in Ridgecrest, 7:30 p.m.

STAR PARTY SCHEDULE FOR THE 2008 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 4: Signs out at 8:30 p.m., Star viewing at 9:00 p.m.

Friday, August 1: Signs out at 8:30 p.m., Star viewing at 9:00 p.m.

Friday, August 29: Signs out at 7:30 p.m., Star viewing at 8:00 p.m.

Friday, September 26: Signs out at 7:30 p.m., Star viewing 8:00 p.m.

Friday, October 24: Signs out at 7:00 p.m., Star viewing at 7:30 p.m.

Friday, November 28: Signs out at 5:30 p.m., Star viewing at 6:00 p.m.

This is your newsletter, please contribute an article.

2008 ROYAL ASTRONOMICAL SOCIETY HANDBOOKS AND CALENDARS AVAILABLE

For many years the China Lake Astronomical Society has provided the RASC Observer's Handbook to our membership. The retail price for a single copy (delivered) is \$31.95 US. We get them at a group rate, and share the savings with our members. For the past two years we have sold them at less than cost, as a service to members. However, prices have increased to where we must again cover costs. If you buy in person we are charging \$17.00 for the handbook, and \$10.00 for the calendar.

Most of you know all about the handbooks and calendars. Suffice to say that the *Observer's Handbook* is 324 pages of astronomical data, which is presented as tables, charts and annual and daily information. The calendars also present useful information, along with excellent astronomical photographs.

THE SKY IN JULY by Roger Brower

1. Jupiter rises about midnight but remains low in the south-southeast. Look for it to the left of the Teapot of Sagittarius in the morning sky.
2. Saturn remains in Leo near the star Regulus. Look for it high in the south as night descends.
3. Mars joins Saturn in Leo this month. Watch as it approaches Saturn from the west. Look for it high in the southwest after the sun sets.
4. The Bootid meteor shower peaks on the 26th. Look high in the sky before midnight when the 3rd quarter moon washes out the fainter meteors.

MOUNT WILSON OBSERVATORY REVISITED by Carroll Evans

I have mentioned before that my two youngest brothers, Ken and Larry Evans, have been involved in many projects at the Mount Wilson Observatory. These projects involve the infrastructure at the observatory, ranging from the rotation system for the 60-inch telescope dome to helping install a new fire alarm system. Their noisiest project was the refurbishing of the 1911 Fairbanks Morse engine, which used to drive the generator, which charged the batteries that supplied the DC power for the mountaintop. Faithful readers will recall that last month I published Larry's story of how CalTech seismologists can be in their downtown Pasadena laboratories and measure the revolutions per minutes of this engine. My brothers have also been involved in the removal and reinstallation of the 60-inch and 100-inch telescope mirrors when it was time to re-aluminize them. Pictures of this process can be seen at <http://www.oldengine.org/members/levans/mirror/>

In recognition of their many efforts, Ken and Larry were given use of the 60-inch telescope. They were allowed to invite 24 friends and one relative to an evening on Mt. Wilson. When Ken invited me, there was no way that I could say no. Saturday evening, June 21, was selected, with just about the latest sunset of the year. This coupled with moonrise at 10:34 p.m. had an effect on the selection of objects for viewing.

The visit began at 6:00 p.m. at the locked gate to the grounds. When most of us were gathered, Larry led us to our parking spots. The rest of the group was not far behind, and we were given an orientation talk. We then proceeded to walk down the path to the engine room and machine shop. On the way we passed the CalTech seismometer. My brothers started the engine for us, and then, after a while, turned it off. One minute and fifty-five seconds later, the engine stopped turning. It has two massive flywheels. Now, electrical power is supplied by Southern California Edison. Some of this power is rectified to direct current, which is still used to power much of the observatory, including the maintenance machine shop, which is adjacent to the engine room.

We then walked over to the 100-inch Hooker telescope, the largest in the world when it was put in service in 1918. It is still in use for research purposes. We were given an excellent tour of the entire 100-inch facility. Our host was Dave Jurasevich, Superintendent of the Mount Wilson Observatory. We were shown, for example, the extremely smooth ride that you get when the dome and its floor are turned. We had the illusion that the telescope was turning while we, on the dome, were stationary.

We were told that the 150-ton telescope mechanism floats in mercury, with only a small part of the weight handled by conventional bearings, and we were shown the original, but still used, whiffletree fixture for lifting the mirror out of its cell when it must be re-aluminized. We were also provided with the answer to a possible trivia question. What is the diameter of the 100-inch telescope? Answer: 101 inches. I bet you did not know that.

We watched sunset from the catwalk of the dome, some 50 feet above ground level, and then went to the 60-inch dome for the observing session. This of course is the same telescope, now nearly one-hundred years old, that C.L.A.S. members visited a few years ago for a half-night of viewing. There have been two major innovations in the physical facilities since then. First, the 120-volt live conductors that power the dome and the exposed wheels that the dome rotates on, are now kept from curious hands by aluminum screens. Design and installation of the screens was done by Ken with Larry's help. The other innovation is that there are now chairs provided for the visitors. Dave Jurasevich was again our host; the telescope operator was Tom Meneghini.

The sky was not yet dark when we began observations. First was a spectacular view of the planet Saturn. Next was the double star 24 Comae Berenices. The two stars are of different colors (yellowish orange and blue) and my first thought was of Alberio, but of course, that did not compute. Next, M-13, the Great Globular Cluster in Hercules, followed by a look at 3C273, the brightest Quasar. Next, Dave's favorite, the Cats's Eye, a planetary nebula in Draco. The evening was capped off by a view of Jupiter. Jupiter was close enough to the horizon to require great care in the aiming of the telescope, as the Newtonian observing platform must be avoided. We were looking at a modified Cassegrainian focus at the side of the tube near the main mirror.

By that time the 91-percent illuminated moon had risen; we thanked our hosts and went back down the hill. Dave Jurasevich has a superb web site of astrophotography at <http://www.starimager.com>.

SOME THINGS FROM THE WEB by Robert Shaw

An Australian amateur astronomer has put together an audio slide show of astronomical photographs, including some he took of electrical storms on Saturn.

<http://news.bbc.co.uk/2/hi/science/nature/7468832.stm>

This URL tells you of the search for extra-solar planets. As techniques for finding planets are refined, we can find planets as small as our earth. So, now we will know that the planets are out there, but it will still be a while before we can communicate with the inhabitants, if any.

<http://www.msnbc.msn.com/id/25350155/>

TOTAL SOLAR ECLIPSE IN CHINA IN 2009

This URL is presented without recommendation, as an opportunity to have the Solar Eclipse experience of a lifetime.

<http://www.tq-international.com/China2009/Chinahome.htm>

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)
VICE-PRESIDENT – Bruce Churchill - 760-375-7247 (email rbc605gem@yahoo.com)
SECRETARY – Ted Hodgkinson - 661- 824-2738 (email ghodkinson@sbcglobal.net)
TREASURER – Roger Brower - 760-375-1181 (email brower@iwvisp.com)
NEWSLETTER EDITOR – Carroll Evans Jr. - 760-375-5681 (email clevans@ridgenet.net)

WESTERN AMATEUR ASTRONOMERS WEB SITE <http://www.waa.av.org/>

Meetings of the China Lake Astronomical Society are held 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 7, 2008: “SHAPES AND ORIGINS OF GALAXIES”
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/>**