

Skywatchers

Newsletter of the China Lake Astronomical Society

Volume 43 No. 02

February 1, 2006

NEXT MEETING 7:30 p.m., Monday, February 6, 2006

Maturango Museum, 100 East Las Flores Avenue, Ridgecrest

PROGRAM FOR THE FEBRUARY 6 MEETING

At our December meeting we talked about the satellites of our solar system beyond Saturn. Although many of these objects have been discovered recently, Voyager II provided some fine camera shots of Uranus, Neptune, and their satellites. I would like to show slides of Voyager II photos at our January meeting. Hopefully this will foster continued discussion on the topic.

DATES TO KEEP IN MIND

Monday, 6, 2006: Regular CLAS Meeting at the Maturango Museum in Ridgecrest, 7:30 p.m.

Wednesday, February 22, 2006: Deadline for next Skywatchers Newsletter

Monday, March 6, 2006: Regular CLAS Meeting at the Maturango Museum in Ridgecrest, 7:30 p.m.

ATTENTION! The Royal Astronomical Society of Canada Observer's Handbooks for 2006 are now on hand, along with their superb Astronomical Calendar. As a benefit of membership we have held the price to last year's amounts. The handbook will cost you \$15.00, and the calendar will be \$10.00. Thus, \$25.00 for the set.

STAR PARTIES WILL RESUME MARCH 24, 2006

THE SKY IN FEBRUARY (Roger Brower)

1. Venus has moved to the morning sky but remains brilliant despite being very low. Look for it low in the southeast at dawn.
2. Mercury makes a brief appearance in the evening sky. Look for it in the west at dusk after the second week and before the end of the month.
3. Jupiter rises about 1 a.m., so by morning it is clearly visible high in the southeast.
4. Saturn is just past opposition so will be well placed for observation all night. Look for it in the east at sunset and watch it move across the sky as the night progresses.
5. Mars continues to dim throughout the month but remains brighter than any stars around it. Look for it high in south after sunset.

STAR PARTY FOR TEENAGE YOUTH GROUP (Alex Shlanta)

On 20 Jan 2006 a Star Party was held at the Cerro Coso College Astronomical Observatory for the Youth Group from the 4th Ward Ridgecrest Latter Day Saints Church in Ridgecrest. There were 28 teenagers attending accompanied by eight adults. The group was lively and interested in seeing the celestial wonders. It was a bit cold for this event (40° F). But now, by having four domes at the observatory, we were able to provide some shelter from the environment. Hot chocolate and donuts were served by the adult leaders of the group for all those participating and added to the enjoyment for the evening.

The viewing started at 7:00 p.m., and lasted about an hour and a half. We had five viewing stations set up for viewing at the Star Party with one set of binoculars and four telescopes. The optical equipment just loved the cool weather and seeing was good. It was partially cloudy at first but everything cleared up really well. Helping with the star party and manning the telescopes were CLAS members Chuck Morgan, Ken Pringle, Peter Eiserloh, and Scott Fuller. Favorites for the evening were the viewing of Saturn, M42 Orion Nebula, M31 Andromeda Galaxy and M45 Pleiades. The young people were impressed as usual by the laser pointers as major constellations and stars were pointed out to the group. They wanted to know how much the pointers cost and where they could get them. We told the young people of some of the misuses of laser pointers and that there are responsibilities that go along with owning them.

STAR PARTY AT THE MATURANGO MUSEUM FOR BOY SCOUTS (Carroll Evans)

On Saturday evening, January 21 Chuck Morgan and I hosted Boy Scouts and parents from Bakersfield Troop 44. Chuck opened the dome and used the 8-inch Meade to show the group a few of the available night sky objects. Chuck showed Saturn first, followed by Mars, the Andromeda galaxy and a few others.

FROM EARL TOWSON

STARDUST: Note: This is an advance write-up. Stardust landed on schedule and where it should. If all goes well, scientists will have about a milligram of comet dust to study. A lot of work and some excellent engineering to produce the result.

NASA's Stardust mission return capsule will land Sunday, Jan. 15, at approximately 2:12 a.m. Pacific time on the Utah Test and Training Range at Dugway - I've been there; it's really in the middle of nowhere - it is where we use to test chemical weapons until Nixon stopped this nation's CBR programs. The spacecraft performs its last maneuver to put it on the correct path to enter Earth's atmosphere on Friday, Jan. 13, tonight at 8:53 p.m. Pacific time The speed of the sample return capsule as it enters Earth's atmosphere at 46,440 kilometers per hour (28,860 miles per hour) will be the greatest of any human-made object on record. The previous record was set in May 1969 by the returning Apollo 10 command module. The capsule will release a parachute at approximately 32 kilometers (105,000 feet) and descend to the salt flats. Weather permitting, it will be recovered by helicopter teams and taken to a cleanroom at the Michael Army Air Field, Dugway Proving Ground, for initial processing.

PLANETS CAN FORM AROUND BINARY STARS: A new computer simulation developed at the Carnegie Institution suggests that planets can form and survive around binary star systems. Astronomers previously believed that the complex gravity would make gas and dust too unstable to form planets, but this simulation indicates that this gravity might actually accelerate the process, causing large clumps to form in a matter of only 1,000 years. Since 2 out of 3 stars are members of multiple star systems, this raises the number of planets that might be in the Universe. http://carnegieinstitution.org/news_releases/news_0601_10.html

OCCULTATION OF PLUTO'S MOON CHARON: Astronomers from MIT and Williams College were fortunate enough to be watching Pluto's moon Charon at the moment that it passed in front of a very dim star. By measuring how the light from this star dimmed as it passed behind the tiny, distant moon, they were able to

come up with a very accurate measurement of Charon's size (606 km or 377 miles). They also determined that the moon doesn't have any appreciable atmosphere, lending evidence that it was formed when something smashed into a proto-Pluto millions of years ago.

VEGA IS ROTATING RAPIDLY - EQUATORIAL REGIONS ARE COOLER: Strong polar darkening of Vega suggests that the fifth brightest star in Earth's sky has a huge temperature difference of 4,000 degrees Fahrenheit from its cool equatorial region to its hot poles. Models of the star based on these observations suggest that Vega is rotating at 92 percent of the angular velocity that would cause it to physically break apart, an international team of astronomers announced today in Washington, DC, at the 207th meeting of the American Astronomical Society. This result confirms the idea that very rapidly rotating stars are cooler at their equators and hotter at their poles, and it indicates that the dusty debris disk known to exist around Vega is significantly less illuminated by the star's light than previously recognized. "These findings are significant because they resolve some confusing measurements of the star, and they should help us gain a much better understanding of Vega's circumstellar debris disk. This debris disk arises mainly from the collision of rocky asteroid-like bodies. "The spectrum of Vega as viewed from its equatorial plane, the same plane as the debris disk, should be about half as luminous as the spectrum viewed from the pole, based on these new results. Original Source: <http://www.noao.edu/outreach/press/pr06/pr0603.html>

HUBBLE'S VIEW OF ORION REVEALS THOUSANDS OF STARS: In one of the most detailed astronomical images ever produced, NASA's Hubble Space Telescope is offering an unprecedented look at the celestial objects. In a mosaic containing a billion pixels, Hubble's Advanced Camera for Surveys (ACS) uncovered 3,000 stars of various sizes. Some of them have never been spied in visible light. Some are merely 1/100 the brightness of stars seen previously in the nebula. Among the stars Hubble spotted are possible young brown dwarfs, the first time these objects have been seen in the Orion Nebula in visible light. <http://spaceflightnow.com/news/n0601/11hubbleorion/>

THERE'S MORE TO THE NORTH STAR THAN MEETS THE EYE: The North Star is a triple star system. While one companion can be seen easily through small telescopes, the other hugs Polaris so tightly that it has never been seen - until now by the HST. <http://spaceflightnow.com/news/n0601/09northstar/>

SPACE ENGINEERING & MISSION STATUS: (Note: It is on its way)

NEW HORIZON'S PLUTO PROBE NEARS LAUNCHING: Launch of New Horizons from Cape Canaveral, dispatches the diminutive probe on a course to sail past Jupiter in 2007, receiving a sling-shot boost from the king planet's gravity. Encountering Pluto, however, won't happen until the summer of 2015, given the vast expanse of empty space the craft must traverse. Leaving Earth in early 2006 is the last chance this decade at using Jupiter to speed the travel. A direct route would add years to the trip, something that scientists fear because Pluto's tenuous atmosphere is predicted to soon freeze away as its orbit loops farther from the sun. <http://spaceflightnow.com/atlas/av010/060108overview.html>

New Horizons could reach Pluto as early as 2015, depending on the exact launch date. Credit: Johns Hopkins University Applied Physics Laboratory/Southwest Research Institute.

AN INTERESTING BOOK: <http://www.universetoday.com/whatsup/> What's Up 2006 - 365 Days of Skywatching: This is a FREE 407-page downloadable book containing What's Up material for every day in 2006. You can download the book to your local computer, go to the day you like and print off the page to take outside with you - it's nicely formatted. It's also has other materials including general skywatching advice, equipment selection, and hundreds of beautiful photographs. The book is absolutely free. Download it at <http://www.universetoday.com/whatsup/>, you can send it to your friends, print it off. The publishers would appreciate it if you could tell everyone you know. Fraser Cain; Publisher of Universe Today.

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	\$51.00 per year
Membership with Sky and Telescope magazine	\$53.00 per year
Membership with both S & T and Astronomy	\$84.00 per year

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

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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
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FIRST CLASS

NOTICE! CANADIAN OBSERVER'S HANDBOOKS ARE STILL AVAILABLE

NEXT MEETING: 7:30 p.m., MONDAY, FEBRUARY 6, 2006: "NEPTUNE"
AT THE MATURANGO MUSEUM, 100 EAST LAS FLORES AVE.

CLAS WEB PAGE <http://www1.iwvisp.com/brower/clas.html>

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