

SUN

continued from page 1

activity. In 2013 it's set for another solar maximum. This one, Gary suggested, is likely to be different than most cycles. "We've seen fewer sunspots in the past five years, and the intervals between them have been getting longer," he said. Gary expects this next maximum to be weak, and perhaps longer lasting.

Space "weather," which can be followed on the SpaceWeather.com site edited by Bishop astronomer Dr. Tony Phillips, has an impact on the Earth, he said, affecting everything from spacecraft, solar cells and radio signals to cell phone towers and power grids, and thus, the importance of radio telescopes.

Radio imaging helps filter out so much of the vast amount of energy given off across a broad spectrum of wavelengths, especially the visible spectrum. "It allows us to separate the magnetic signals from the non-magnetic ones and look at the solar cycle and what it does to our atmosphere and ionosphere," Gary said, adding that includes visually stunning phenomena such as auroras, which are formed in part from plasma eruptions from the Sun, carried past the Earth on what's known as the solar wind.

Other telescopes conduct similar studies, including the Nobeyama Array in Japan, the Siberian Array in Russia,

the National Radio Astronomy Observatory's "Very Large Array" in New Mexico (which has been seen in many movies) and another under construction in China. The EOVSAs will be able to make observations on much lower frequencies, see higher into the Sun's atmosphere and yield more surface detail than ever before.

Where previous arrays were capable of one image on one frequency, or at most a handful, the EOVSAs technology will allow images on 500 frequencies ... simultaneously! EOVSAs is expected to be online in October 2013, just in time for the solar maximum. Data from the first 3 antennas is expected in January.

Global warming?

The sun gives off a lot of heat, but does it contribute to the much-debated concept of climate change? Gary stopped short of entering into that discussion. "The Sun might be associated with our climate, but we're not really sure exactly how," he acknowledged. He did cite one period, similar to the current low solar activity cycle, which might have been one of the causes of the "Little Ice Age" between the 16th and 19th centuries. Think the freezing in the hit disaster movie "The Day After Tomorrow" was simply the result



PHOTO: GISEL

Sun worshiper: Dr. Dale Gary at Cerro Coso College this week. of overactive Hollywood imaginations? Perhaps it wasn't.

During one of the LIA's lowest solar minimums, winters were particularly harsh. Between 1794-1795, the French army marched on the frozen rivers of the Netherlands, while the Dutch fleet was stuck in the ice in Den Helder Harbor. In the winter of 1780, New York Harbor froze, allowing people to walk from Manhattan to Staten Island. That same year, the ice surrounding Iceland extended for miles in every direction, closing harbors to shipping. And off and on between 1607 and 1814, folks could skate on the frozen River Thames in London, an event that hasn't happened

since.

"The EOVSAs gives us an opportunity to observe what could be major changes in the Sun, and upgrade our knowledge of flares, solar activity and how these might impact our climate," he summarized.

OVRO lectures feature talks by prominent astronomers from OVRO and partner institutions, start at 7 p.m. and are free. The next lecture is on "Super Massive Black Holes," with Tony Readhead from CalTech, scheduled for Nov. 9 at Bishop Union High School. For info and the complete schedule, call OVRO at 760.938.6015 or visit www.ovro.caltech.edu.

2012 MAMMOTH LAKES TRAIL SYSTEM
SUMMER OF STEWARDSHIP
TRAIL DAYS

MLTS Grand Opening Trail Stewardship Day!
...celebrate by getting your hands dirty!

WHAT: Spend the morning doing trail work and updating MLTS bollard logos. Lunch provided. After trail work, join us for the Grand Opening of the MLTS at the Forest Service Visitor Center.

WHEN: SATURDAY, October 20, 8:00 a.m. to 12:30 p.m.

WHERE: Meet at the Twin Lakes Vista parking lot. We'll give you directions to your bagel breakfast, safety talk and work assignments. Parking is limited, so please carpool.

WHO: Volunteers of all ages and abilities are welcome! Please dress for trail work: sturdy close-toed shoes, and a long-sleeve shirt. Gloves and tools provided.

Visit www.mltpa.org or call (760) 934-3154 for the latest info.

U.S. MAMMOTH LAKES TRAILS A Partnership in Action FRIENDS OF THE INYO MLIPA Breakfast donated by:

You Are Invited!
GRAND OPENING
Please join us after trail work for a Ribbon Cutting and Celebration of Recovery Act Projects
Saturday, October 20, 2012
2:00PM - 4:00PM
Remarks at 2:15 • Mammoth Lakes Visitor Center • Light Refreshments
For details visit www.mltpa.org
Email: info@mltpa.org • Tel: 760-934-3154

MAMMOTH LAKES REPERTORY THEATRE
in cooperation with
MAMMOTH LAKES FOUNDATION
presents

The Marvelous Wonderettes
written & created by Roger Bean

Oct 4-21, 2012
Thurs. - Sat. 7pm / Sun. 4pm

General Admission: \$20.00
Seniors & Students \$18.00
Group Rates Available

Show tickets 760-934-6592

Edison Theatre
100 College Parkway
(across from Cerro Coso College)
Mammoth Lakes, CA 93546

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