

Sonoma Skies



The Newsletter of the Sonoma County Astronomical Society
a non-profit scientific and educational organization

February 2004

Volume XXVIII No. 2

AANC Announces Messier Marathon

For 2004, the best weekend for the Messier Marathon will be March 20-21, 2004. New Moon occurs March 21. Members planning a Messier Marathon should contact the AANC Messier Coordinator, Michael Portuesi (president@sfaa-astronomy.org), with the following:

Name of Organization, Date/Time of Event, Place of Event (directions to site also welcome), Special instructions (permits, registration necessary, open to members only, arrive before sunset, etc.), Contact person, with phone and/or email.

Visit the SEDS (Students for the Exploration and Development of Space) web page <http://www.seds.org/> for a guide and links to several online resources.

Messier Marathon General Information

<http://seds.lpl.arizona.edu/messier/xtra/marathon/marathon.html>

2004 Messier Marathon Detailed Info

<http://seds.lpl.arizona.edu/messier/xtra/marathon/mm2004.html>

Messier Marathon Search Sequence List

<http://seds.lpl.arizona.edu/messier/xtra/marathon/marath3.html> (icons)

<http://seds.lpl.arizona.edu/messier/xtra/marathon/marath1.html> (text)

Messier Marathon Observer's Forms & Log Sheets

<http://seds.lpl.arizona.edu/messier/xtra/marathon/marath1.txt>

Also:

<http://www.geocities.com/sftonkin/messier/messlog.htm>

YOUNG ASTRONOMERS, turn to back page for the *Young Astronomers Newsletter*.



TEKTITES. What are They? Where Can You Find Them?

Dr. Rolfe Erickson will answer these questions and show samples of tektites at the SCAS meeting February 11 at 7:30 PM. Meeting place details are on Page 2. A map can be found at www.sonomaskies.org

Dr. Erickson is a professor at Sonoma State University (SSU) specializing in volcanology, computer applications and field studies. He has a Ph.D. in Geochemistry from the University of Arizona, enjoys talking about tektites and playing the banjo in his spare time.



SCAS MEMBERSHIP

MEETINGS AND STAR PARTIES

Membership Meetings take place at 7:30 PM on the second Wednesday of each month, in the Multipurpose Room of Proctor Terrace Elementary School on Bryden Lane near Fourth Street in Santa Rosa, unless otherwise announced in this publication. The public is invited.

Star Parties are held monthly on the Saturday nearest the 1st quarter moon at Youth Community Park in Santa Rosa.

Access to Geysers Observing Site: The site is locked to public access. For use during monthly star parties, SCAS members can obtain the combination to the gate lock to the site by contacting any board member listed to the right.

DUES

Membership dues are \$25, renewable June 1 of each year. New members joining between December 1 and May 31 may pay partial-year dues of \$12.50.

DISCOUNT SUBSCRIPTIONS

SCAS offers discount subscriptions to *Sky & Telescope Magazine*. New subscribers, send a check for \$32.95 payable to "SCAS", along with your complete mailing address, directly to: Larry McCune, 544 Thyme Place, San Rafael, CA 94903. For renewals, send him your check with the completed renewal card and return envelope.

Subscriptions to *Astronomy Magazine* through SCAS occur yearly in October. Check *Sonoma Skies* for details.

RENTAL TELESCOPES

SCAS members are eligible to borrow telescopes for a \$5 per week donation. Five telescopes are available: 8" and 5" Celestron SCTs, each complete with clock drive and inverter; 8" and 12.5" Newtonians on Dobsonian mounts; an 80mm refractor on motorized equatorial mount. Contact Joan Thornton at 707-762-0594.

NEWSLETTER

Sonoma Skies is the newsletter of the **Sonoma County Astronomical Society (SCAS)** and is published each month. Subscription is included as part of membership to the Society.

Articles, news items and member announcements for *Sonoma Skies* are welcome. Submissions must be typed or, if on computer media, in a commonly used word processing and/or graphics format, and may include graphics (pictures, drawings, etc.) They are published on a FCFS basis, space permitting, and may be edited. **The deadline for articles for the March 2004 issue is February 24.**

Mail To: SCAS, P.O. Box 183, Santa Rosa, CA 95402

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www.sonomaskies.org

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SCAS Library

Joan Thornton 762-0594

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SCAS has a library of astronomy books that may be checked out by members at SCAS meetings. Requirements are that you be a SCAS member and provide Joan with your name and phone number.

Books may be borrowed for a period of one month and returned at the next meeting. Videotaped lectures on astronomy are available for rent at \$3 per month.

New to the Library: Professor Joe Tenn of Sonoma State University has donated several astronomy textbooks.

The Semi-Sirius Astronomer

by Herb Larsen



Daytime fun in the snow on the Keck I 20-meter Telescope on Mauna Kea, Hawaii.

SCAS Egroup URL

<http://groups.yahoo.com/group/scas>

Robert Leyland r.leyland@verizon.net

Any SCAS member is welcome to join. The majority of traffic is about going observing, observing reports and astronomy related news. We get news items from AANC and Sky & Telescope and chat about astronomy. To join either visit <http://groups.yahoo.com/group/scas> and click the Join button or send an e-mail to scas-subscribe@yahogroups.com

Editor's Note: Many people have brought to my attention that a timely newsletter is the most useful.

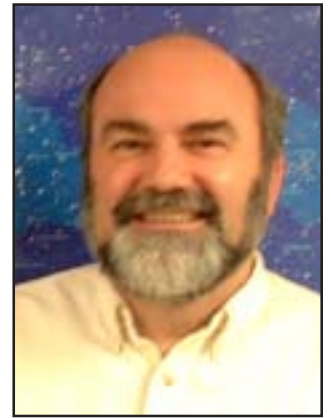
In order to accomplish this goal, I do request that all articles for the March issue be in my hands no later than February 24th. Thank You!

President's Column

Welcome to the Web!

By Keith Payea

Well, the Sonoma County Astronomical Society finally has a presence on the Web! We now have a web page at www.sonomaskies.org. We chose "sonomaskies" because "scas" was taken - by another astronomy club. But don't worry, if anyone does a search for anything like Sonoma County Astronomical Society, they'll find us. It's just a simple page, but at least people will be able to find out about us by searching the web. Throughout the year, I'll be adding to the site so that anyone can find everything they need to know about the SCAS and our programs and our events. If you have any suggestions, let me know.



Keith Payea

Speaking of the World Wide Web, I ran across a great article on Yahoo today. A gentleman by the name of Stu Megan discovered a new asteroid by looking through thousands of photographs which are publicly available on the web. He is a volunteer with a program called Spacewatch, associated with the University of Arizona. The photos come from the Kitt Peak National Observatory. The University and the Observatory have automated programs to find and track large objects, but they rely on volunteers to look for smaller asteroids.

This program highlights a problem that many scientific programs have. There is far more data available than the researchers can review on their own. This is why the [Seti@Home](http://www.setihome.org) project was started to harness the power of idle computers for crunching data. I suspect we will see more programs like these, using volunteers to dig through mountains of untapped information. Of course, there are also real research opportunities for anyone willing to spend the time mining the data.

By the way, the object missed us by over a million miles, and was small enough (about 60 by 120 feet) to have burned up in the atmosphere. For the full story, go to the Spacewatch web site at: <http://spacewatch.lpl.arizona.edu/>

To make suggestions or ask me questions, please send me an email at kpayea@bryantlabs.net

Morrison Planetarium Dean Lecture Series

<http://www.calacademy.org/planetarium/>

(415) 750-7141

*Tickets are now on sale for the Spring 2004 Series:
"Astrobiology And The Search For Life"*

March 1 Topic:

"Where Do We Go From Here? A Search for Other Earths"

Dr. Debra Fischer, University of California at Berkeley

Since the mid-1990's, astronomers have detected more than 100 planets orbiting nearby stars. How do these planets form? Is our solar system unusual? Why didn't the first stars in our Galaxy have any planets? What are NASA's plans for the next generation of planet searches?

See the CAS website for future Dean Lectures.

New Lecture Location: During the reconstruction of the Academy, the Dean Lectures have temporarily moved to the San Francisco Jewish Community Center at 3200 California Street (at Presidio Avenue). Parking is available across the street in the UCSF Laurel Heights campus parking lot for \$1.25 per night. Parking in the JCC garage is \$1.25 per half-hour.

Chabot Space and Science Center

<http://www.chabot.space.org>

(510) 336-7373

Saturday, March 6, 6:30 PM

Biocosm — The New Scientific Theory of Evolution: Intelligent Life Is the Architect of the Universe

Complexity theorist James N. Gardner will speak about his groundbreaking theory that life and intelligence have not emerged in a series of random Darwinian accidents, but are hardwired into the cycle of cosmic creation, evolution, death, and rebirth. Gardner proposes that our universe has been deliberately engineered to promote life and intelligence and, in fact, requires life and intelligence in order to mediate the reproduction of the cosmos after the Big Crunch. Book signing will follow lecture.

SCAS Public Star Party

Bruce Lotz, Coordinator

ablutz@sonic.net (707) 576-7833

These are public events; all are invited. Members with scopes are encouraged to attend. It is an opportunity to do some planetary astronomy with fellow observers at an easy-to-get-to site.

Location: Youth Community Park, located in Santa Rosa on the west side of Fulton Road, between Guerneville Road and Piner Road, just opposite Piner High School.

SATURDAY, FEBRUARY 28

Sunset: 6:02 PM PST

End Astronomical Twilight: 7:30 PM PST

Moonset: 2:44 AM PST

Robert H. Ferguson Observatory Public Observing

<http://www.rfo.org> (707) 833-6979

Upcoming Events

Feb 10: Night Sky Winter Series, 7:00 PM

Feb 17: Night Sky Winter Series, 7:00 PM

Feb 14: Observing Lab "Star Death", 7:00 PM

Mar 15: Intro. to Astronomy and Observing, 7:00 PM

May 6: How to Use Your Scope, 7:30 PM

May 11: Spring/Summer Night Sky Series begins

Registration is required for these classes

Public Viewing: Three scopes are operating: the 14-inch SCT with a CCD camera in the east wing, the 8-inch refractor under the dome, and the 24-inch Dobsonian in the west wing. The next public observing opportunities:

February 21

Solar Viewing 11:00 AM - 3:00 PM

Night viewing 7:00 PM - Midnight

There is no admission fee for the solar viewing, but donations are appreciated. The Park charges \$4 per vehicle for entry. A \$2 donation is requested for admission to the observatory during the night viewing sessions. SCAS members are welcome to set up telescopes in the observatory parking lot to assist with the public viewing. However, automobile access is closed at dusk, so arrivals after dusk will need to carry their equipment in from the parking area by the horse stables.

SRJC Planetarium

<http://www.santarosa.edu/planetarium/>

(707) 527-4465 or 527-4371

Santa Rosa Campus, Lark Hall, Room 2001

Shows are on Fridays and Saturdays at 7:00 PM and 8:30 PM and Sundays at 1:30 PM and 3:00 PM during the regular Fall and Spring semesters. Admission is \$4 General; \$2 Students and Seniors. Tickets are sold at the door only, beginning 30 minutes before show time. No children under five, please.

A parking permit is now required at SRJC and is included in the Planetarium show admission price. Pick up a parking permit at the planetarium when you pay admission. Please arrive early enough to place your permit on your vehicle's dashboard before the show starts.

Black Holes to Galaxies—ends February 22

New Show: Discovering Planets

February 27 - April 4

Astronomers have now discovered many planets beyond Pluto, over 100 of them around distant stars. In this program we'll look at the world of planets. Starting with our own solar system we'll learn why planets orbit stars and what types of planets exist. Then, out into interstellar space as we learn how astronomers find extrasolar planets and compare those distant kin to planets found in our solar system.

SSU Lecture Series

"What Physicists Do"

<http://www.phys-astro.sonoma.edu/wpd/>

(707) 664-2267

Mondays at 4:00 PM, Darwin Hall Room 108

Feb. 23—First results from the Spitzer Space Telescope

Dr. Luisa Rebull of the Spitzer Science Center, Caltech will discuss the very first results from the Spitzer Space Telescope, NASA's fourth and final great observatory.

Mar. 1—Recent Advances in Solar Electric Power

Dr. Charlie Gay of SunPower will discuss the latest advances in solar cell manufacturing and the exciting range of uses seeing commercial success worldwide.

Striking Sparks

By Len Nelson, 2004 Sparks Co-coordinator
lennelsn@comcast.net (707) 763-8007

Over the past 18 years, the SCAS has produced and awarded 182 Striking Sparks Telescopes to Sonoma County students. We are making good progress on the telescopes to be awarded at our March 27th Celebration. Here is a brief recap:

Sponsors: Thus far, we have nine of the ten telescopes sponsored. Will you be the one to sponsor the tenth? Please contact me if you are interested.

Mirrors: Steve Follett reports that we are well ahead of schedule. 7 out of 10 are finished and 3 are nearly so.

Workshop: It will be held Saturday, 2/7, in Cloverdale under the able supervision of Lynn Anderson. Those who expressed an interest in helping have been contacted and we'll have a progress report in the March issue.

Applications: They were mailed to schools in Sonoma County on Thursday, 1/22. No more than 3 students in any one class can submit applications. They are asked to answer, in a short essay format, "*Why I Would Like to Have a Telescope.*" We generally receive about 200 applications. The first Saturday of March, the SCAS Board reviews each letter and by the end of a long day selects the 10 winning essays. The winners and their teachers are telephoned the same day with the good news.

Final Assembly: The big day for assembling the Striking Sparks telescopes is scheduled for March 13th. If you are interested in helping, please contact me.

Striking Sparks Day: March 27th. This event requires a large group effort. We need volunteers to step forward to coordinate the following areas of responsibility:

1. Welcome table/raffle ticket sales.
2. Set up tables for approximately 120 people including the pot luck table and coffee/soft drink table.
3. Kitchen coordination.
4. Photography (Merlin Combs and I generally take care of this but if you are interested please let me know).
5. Stage Setting (Larry McCune and Steve Follett generally coordinate this area but help is always needed).
6. Assemble poster boards with winning essays & photos.
7. Coordinate the evening's raffle and set up the prize table.
8. Other: To be determined! Watch this space in next month's of *Sonoma Skies*.

Public Astronomy

by Len Nelson
 SCAS Community Activities Director
lenneln@comcast.net (707) 763-8007

We had three successful school star parties in January at Grant Elementary, Austin Creek Elementary and Dunham Elementary. Thanks go to the following individuals that gave of their time and enthusiasm to spark the minds of students (and parents): Merlin Combs, Robert Johnston, Eric Chazankin, Dave Smith, Robert Leyland, Loren Cooper, Emilio Ricci and John Whitehouse.

At the Grant Elementary Star Party, two prior Striking Sparks winners joined us to show the wonders of the heavens: Laura Campbell & Nikole Teagarden.

Following are some testimonials received from Grant Elementary 5th graders:

“Dear Astronomers: Your party was Out Of This World! It was amazing. I was amazed at the Orion Nebula and the Andromeda Galaxy was beautiful! Saturn was so cool. I could even see Titan! I just wanted to say thank you.”
 —*Morrea Henderson*

“Thank you for teaching me so much about the stars. I never knew stars and planets could be so cool. That was the best star party ever. Thank You.” —*Trevor*

“Thanks for showing me all those cool stars!! Saturn looked awesome!” —*Adam Nizibian*

“Thank you astronomers! You guys ROCK!” —*Thomas*

School Star Parties - February:

Loren Cooper will be coordinating for February.

Feb. 18 (Wed.) 7:00 PM (or alternate night of Friday, 2/20)—Strawberry Elementary School in Santa Rosa

Feb. 26 (Thurs.) 7:00 PM—Windsor Creek Elementary in Windsor - Science Night

School Star Parties - March:

Mar. 8 (Mon.) 7:30 PM (or alternate date of Tuesday, 3/9)—Meadows Elementary School in Petaluma

Mar. 11 (Thurs.) 7:30 PM (or alternate night of Friday, 3/12)—Miwok Elementary School in Petaluma

Mar. 19 (Fri.) 7:30 PM—Evergreen Elementary in Rohnert Park

Mar. 26 (Fri.) 7:30 PM—Hidden Valley Elementary in Santa Rosa

Mar. 29 (Mon.) 7:30 PM (or alternate date of Tuesday, 3/30)—St. Vincent, De Paul Elementary in Petaluma



Photo courtesy Len Nelson

SPOTLIGHT ON THE RENTAL FLEET No. 4: SCHMITT-CASSEGRAIN

This month we continue featuring the selection of telescope types available for rent from the SCAS. In previous issues we showed an 8-inch Celestron SCT, an 80mm equatorially-mounted refractor and an 8-inch Newtonian reflector on a Dobsonian alt-azimuth mount.

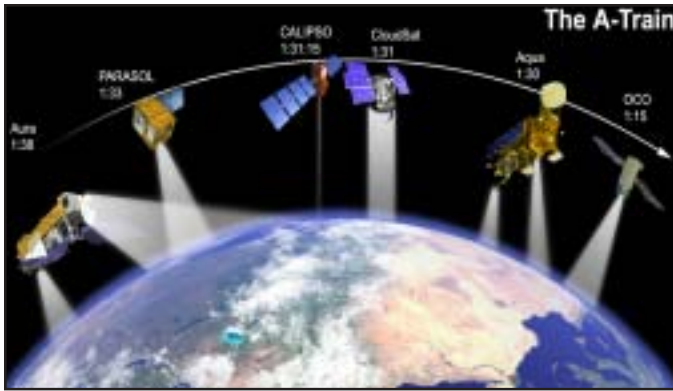
The picture shows a 5-inch Celestron SCT, sophisticated enough for astrophotography. It comes complete with two oculars: 24mm and 12mm Celestron plus 2x Barlow Diagonal. It has a 12v Battery clock drive and inverter to run the motorized equatorial mount. For astrophotography, it includes a T-adaptor, extender and counterweights.

Silicon Valley Astronomy Lecture Series

<http://www.foothill.edu/ast/>

(650) 949-7888

See their website for current topics. No new information was published at the time of this writing.



CloudSat, to be launched November 2004, will take its place as part of the "A-Train" of satellites flying in formation to take closely timed snapshots using 14 different measuring instruments

NASA SPACE PLACE

Flying in Formation

By Patrick L. Barry

You can almost see the tabloid headlines now: "Midwest farmer spies UFO squadron flying in formation!" "First signs of imminent alien invasion," the subtitle will read.

Beginning next year, a series of challenging, high-precision launches will insert four satellites into orbits with just the right altitude, position, and orbital inclination to follow in lock-step behind NASA's Aqua satellite (launched in May 2002). Scientists have dubbed this squadron of satellites the "A-Train." Besides Aqua, the celestial parade will include Cloudsat, CALIPSO, PARASOL, and Aura.

In April 2004, NASA will launch CloudSat, an Earth-observing satellite with unique cloud-measurement abilities. These measurements will fill an important role in our understanding of global climate change, making long-term climate change scenarios more accurate and dependable.

By passing in formation over the same swath of land within seconds or minutes of each other, the satellites will give scientists snapshots of essentially the same scene using a total of 14 different measuring instruments. CloudSat alone carries one: a millimeter-wavelength radar sounder.

This sounder—the first of its kind put into orbit—lets scientists see a vertical "slice" of the atmosphere that shows clouds, water, and ice between the ground and 30 km altitude, with a vertical resolution of 0.5 km. Even by itself, this instrument would provide an important and unique view of Earth's atmosphere, since the accurate portrayal of clouds is one of the glaring weaknesses with current simulations of climate change.

But this cloud data is even more valuable when combined with measurements from the other satellites in the A-Train—for example, air temperature, trace gases, and

SCAS Membership

by Harry Linder, Membership Director
(707) 542-9167 harry@sonic.net

Please help us keep costs down. Consider receiving our newsletter *Sonoma Skies* in electronic (.pdf) format. It's easy. An email with a link to the current file is sent to all members each month. You can choose the low-resolution version for online viewing and faster download. The high-resolution version takes longer but prints nicely.

Your participation will save the club money in postage and help us in trying to forestall an increase in dues. If you agree to receive only the electronic version, please email Harry Linder (harry@sonic.net). Thanks.

SCAS "Geysers" Star Party

Mario Zelaya

zelayadesigns@sbcglobal.net (707) 539-6423

Location: Palmieri Observatory, Mercuryville, CA
(on the slopes of Geyser Peak near The Geysers)

Altitude: ~2700 feet

Longitude: 122deg 49min

Latitude: 38deg 46min

The next scheduled star party night will be February 21, the day after the new moon. Dress warmly, and take your Thermos bottles! Please call Mario Zelaya if you plan to attend, especially if you are going for the first time. The almanac data for February 20-21:

Sunset - 5:55 PM PST

Moonset - 7:35 PM PST

End of twilight - 7:23 PM PST

Begin twilight - 5:26 AM PST

radiation into and out of the atmosphere. Scientists can then see connections between, say, temperature and the resulting behavior of clouds. A better understanding of these connections is one of the most sought-after goals of climate research, because changes to global cloud cover would, in turn, have a feedback effect on global temperatures.

The real story of this satellite squadron may not make the tabloid headlines, but at least there's evidence that the imminent threat of climate change is real.

Learn more about CloudSat and the A-Train at cloudsat.atmos.colostate.edu

Young Astronomers



Newsletter of the Young Astronomers of the
Sonoma County Astronomical Society

February 2004

Volume XII No. 2

Mars

by Gary Jordan

For as long as humans have observed the night sky, the planet Mars has fascinated and intrigued us. Scientists are now in the midst of their most ambitious missions ever to study the Red Planet, and unlock its secrets.

As the rovers Spirit and Opportunity embark upon their missions of discovery, the topic of our Young Astronomers meeting on February 13th is Mars. Join us for a presentation that will



Rover

provide a general background of Mars, from the way ancient civilizations thought of the planet, to humankind's many attempts in recent decades to robotically explore this forbidding world.

See below for meeting time and place. Weather permitting, there will be an observing session after the presentation, so bring your telescope!

Young Astronomers Calendar

February 13: General Meeting
Topic: **Mars**
Presenter Gary Jordan

March 12: General Meeting
Topic: **Radio Astronomy**
Presenter: Keith Payea

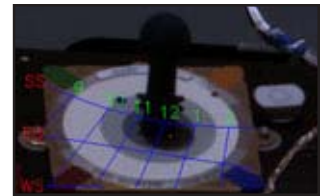
Meetings start at 7:30PM. at Apple Blossom School, 700 Water Trough Road, Sebastopol. The multi-purpose hall is the 'large' building on the right side of the school that one sees from the main parking lot.

A GREAT SOURCE FOR MARS ROVER INFORMATION!

The Planetary Society in Pasadena has a website www.planetary.org with a wealth of information for students about the current Mars missions. On their site:

Do you know the local time on Mars? Ask one of The Planetary Society's Student Astronauts.

The MarsDial resulted from a brainstorm of Bill Nye the Science Guy, a Planetary Society board member.



The Student Astronauts—16 young people from 12 different countries—will work at JPL in teams of two, each pair remaining one week. They will process new MarsDial images every one to two days through the end of February 2004. You can log on and ask them questions. Check it out!

YA JANUARY MEETING

Gary Jordan & Len Nelson gave an interesting and informative presentation of planispheres. We learned that a planisphere is a great tool for helping us quickly determine what areas of the sky are visible to us at any time of the year. How this is possible was clearly demonstrated.

Once the presentation was completed, we were each given materials & scissors so we could make our own planispheres right there.

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