

# Sonoma Skies

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

May 2003

Volume XXVII No. 5

## SCAS Monthly General Meeting 7:30 pm Wednesday May 14, 2003

Proctor Terrace Elementary School, 4th Street and  
Bryden Lane, Santa Rosa. Our guest speaker is:  
Dr. Marc Raymond, Jet Propulsion Laboratory

### Deep Space 1: Rocketing to the Future

Have you ever met a *real* 'Rocket Scientist'? Here's your chance! Dr. Raymond's presentation promises to be technically interesting & entertaining. I met Marc while in the Galapagos Inlands last year at this time. He is a unique individual in the most positive ways. I am just delighted that he accepted my offer to be our May speaker. He and his wife, Jan, are driving up from the Los Angeles area to be with us on May 14th. Don't miss this meeting! It is sure to be highly rewarding.

-Len Nelson

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### SCAS Membership

by Harry Linder, Membership Director

[harry@sonic.net](mailto:harry@sonic.net)

It's membership renewal time again. Look for the card and self-addressed envelope mailed with this issue. We're trying to stamp out mailing errors ;-), so help us out by sending in the card with corrections if they're needed, or with the confirmation checked if everything is OK. The next membership year starts June 1, so please mail your card and check in by that date or, better yet, save a stamp, hear a great talk and hand it to me at the May 14 meeting.

## Project 40 Underway - BIG Glass Returning to the RFO

*By: George Loyer, VMOA President*

The Valley of the Moon Observatory Association (VMOA) is set to begin mirror grinding on a new 40-inch telescope this month. The project to build a completely new 40-inch telescope for the west wing of the Robert Ferguson Observatory (RFO) is expected to be complete by the end of 2005, and will include the 40-inch mirror mounted in a tracking alt-azimuth mount, with an eyepiece less than five feet off the ground and equipped with both visual and video observing ports. But how did the VMOA decide to replace the 40-inch telescope that originally inhabited the observatory from its dedication?

The first generation 40-inch mirror was ground and polished by Harold Moore in his Santa Rosa garage over a period of almost two years. After traveling around the state in its own trailer, it finally settled into a permanent location at RFO when the observatory opened in 1997.

From the beginning, there were reports of difficulty with images using this telescope. Telescope makers associated with VMOA speculated that the mirror was not held solidly enough by the mirror cell (108-points), that it occasionally moved out of its cell when tipped over in resting position, that the secondary was badly held by its mounting, that the eyepieces were not lined up or that it was just in need of collimation. Over the years, docents at RFO learned its eccentricities and seemed to be able to coax a reasonable image from the telescope.

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## SCAS Membership, Renewals and Subscription Information

SCAS new membership dues are \$25 from June 1st through November 30th; and \$12.50 from December 1st through May 31st. SCAS annual renewal membership dues are \$25 per year; due and payable on June 1st each year. Membership is dropped if dues become delinquent.

### SCAS Membership and Meetings

As a benefit of membership, discount subscriptions to *Sky & Telescope* and *Astronomy* magazines are available. Membership meetings take place on the second Wednesday of each month at 7:30 pm in the Multipurpose Room of Proctor Terrace Elementary School on Bryden Lane near Fourth Street in Santa Rosa unless otherwise announced in this publication. Star Parties are meetings held each month at our viewing site on the Saturday evening nearest to the new moon. The Public is invited to both.

**New or renewal subscriptions for *Sky & Telescope*** through SCAS: send your \$29.95 subscription check (**payable to SCAS**) along with your complete mailing address (for new subscriptions) or the *Sky & Telescope* **renewal card** and **return envelope** provided by *Sky & Telescope* (for renewals) directly to **Larry McCune, 544 Thyme Place, San Rafael, CA 94903**.

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

### Telescopes Available

As a benefit of membership, SCAS members are eligible to borrow telescopes for a \$5 a week donation. Four telescopes are available: a Celestron 8" SCT and a 5" Celestron SCT, complete with clock drive and inverter; an 8-inch Newtonian on Dobsonian mount; and a 80 mm refractor on a motorized equatorial mount. Contact Joan Thornton at 707-762-0594

### Access To Palmieri Observing Site

The Palmieri Observing 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.

### Publication

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

**Articles, news items and member announcements for *Sonoma Skies* are welcome.** The deadline for articles for next month is the 28th of this month. Submissions must be typed or, if on computer media, in a commonly used word processing and/or graphics format, and may have graphics (pictures, drawings, etc.) They are published on a FCFS basis, space permitting, and may be edited.

Editor: Ben Barker and Leah Barker

[benbarker@earthlink.net](mailto:benbarker@earthlink.net)

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

## SCAS Elected Board

### President

Steven Alvernaz 762-2377

[jaas1@attbi.com](mailto:jaas1@attbi.com)

### Vice-President & Program Director

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### Membership Director

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### Community Activities Director

Len Nelson 763-8007 [lennelsn@attbi.com](mailto:lennelsn@attbi.com)

### Publications Director

Ben Barker 838-0238 [benbarker@earthlink.net](mailto:benbarker@earthlink.net)

## SCAS Appointed Positions

### Amateur Telescope Making

Steve Follett 542-1561 [sfollett@sonic.net](mailto:sfollett@sonic.net)

### Young Astronomers Advisor - Vacant

### Striking Sparks Program & Sparks Day Coordinators

Vicki Tandecke 528-8925 [vtandecke@webtv.net](mailto:vtandecke@webtv.net)

Victoria Vertrees 544-4409 [vrvertre@juno.net](mailto:vrvertre@juno.net)

### Librarian

Joan Thornton 762-0594 [phonyjoanie@juno.com](mailto:phonyjoanie@juno.com)

### SCAS "Public" Star party Coordinator

Loren Cooper 525-8737 [lorenco@sonic.net](mailto:lorenco@sonic.net)

## SCAS Library

Joan Thornton 762-0594

[phonyjoanie@juno.com](mailto:phonyjoanie@juno.com)

SCAS has a library of over 70 books that may be checked out by SCAS members. A book may be checked out until the next meeting or for one month. Requirements to check out a book:

1. Be a SCAS member.
2. Give me (Joan Thornton) your name and phone number.

## The Semi-Sirius Astronomer

by Herb Larsen



*“No, he is not really doing any Astronomy, he’s just checking the Acorn growth.”*

## SCAS “Geysers” Star Party

**The next SCAS Star Party is Saturday evening,  
June 28, 2003 (one day before new moon).**

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

Altitude: ~2700 feet

Longitude: 122deg 49min

Latitude: 38deg 46min

Sun set: 8:39 p.m. PDT, rise: 5:50 a.m. PDT (6/29/03)

Moon set: 8:13 p.m. PDT, rise: 5:30 a.m. PDT (6/29/03)

Astronomical Twilight Ends : 10:36 p.m. PDT

Begins: 3:53 a.m. PDT (6/29/03)

## Public Astronomy

by Len Nelson

SCAS Community Activities Director

[lennelsn@attbi.com](mailto:lennelsn@attbi.com) (707)763-8007

**School Star Parties, Young Astronomers and other astronomy programs are conducted by SCAS as a public service. Please join us.**

**School Star Parties-** The last party for this school year was scheduled at Wilson Elementary on May 9. Thank you to all of you who helped put this fun program on.

**Young Astronomers-** The YA meets the first Friday of each month at Apple Blossom school located SW of Sebastopol. The YA gets its own newsletter and if you would like to receive it please send me a note at the email address listed above.

**Yosemite Trip-** if you are interested in going to Yosemite National Park on July 18-20 to provide public astronomy at Glacier Point for 2 nights, please contact me soon. In return for this public service, the National Park Service allows us to camp free for 2 nights in the group campsite at Bridalveil Creek Campground which is about 9 miles from Glacier Point. Thus far, twelve of you have expressed an interest in going. I need more of you to come though because the SCAS has an obligation to provide a greater number of telescopes than twelve of us can bring. Should I not hear from more SCAS (or VMOA) members soon, I will open up this offer to other (non-club) individuals who might be interested in coming.

Note, on the nights that we will be there, the Moon rises at about 10:00 on the eastern horizon right in front of our position on Glacier Point. It is a beautiful spectacle in itself. I'll show a few of the pictures from our trip to Yosemite from last year at the May 14th meeting. If you have never been to Glacier Point to do public astronomy, I want to tell you that it is fun, thrilling and overall a rewarding experience that you should not miss. If you have any questions, contact me to discuss them.

## SRJC PLANETARIUM SHOWS

Ed Megill, Planetarium Director

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

*Santa Rosa Campus, Lark Hall, Room 2001*

### **Program Times**

7:00 pm & 8:30 pm - Fridays & Saturdays

1:30 pm & 3:00 pm Sundays

*General Admission \$4 - Students & Seniors \$2*

*Tickets available at door 30 minutes before show*

*No Children under 5*

*Parking Permits Required at \$2*

For more information, call 527-4465 or 527-4371

**SCAS members provide telescope viewing whenever weather and light conditions permit.**

### **Stars of the Summer Sky**

**Hurry- Only Through May 18!**

Warm summer nights, vacation time, and camping trips lure us outside to view the night sky. In this show we will take a detailed look at this summer's night sky and discover why the glow of the summer Milky Way is so bright. Come aboard our guided tour of the brightest stars, constellations and visible planets. View and learn about star forming regions, Messier object M13 (a globular cluster), and the interesting stars and deep space objects found in the summer triangle.

## 2003 SCAS Calendar

**Wed. May 14** 7:30 pm General Meeting at Proctor Terrace Elementary, 4th Street and Bryden Lane, Santa Rosa

**Thu. May 22** SCAS Board meeting

**Sat. June 7** Public Star Party, 7 p.m. Youth Community Park, Fulton Rd., Santa Rosa

**Wed. June 11** 7:30 pm General Meeting at Proctor Terrace Elementary, 4th Street and Bryden Lane, Santa Rosa.

**Thu. June 19** SCAS Board Meeting at Larry McCune's house

**Sat. June 28** SCAS "Geysers" Star Party

## SCAS "Public" Star Party

Loren Cooper, Coordinator (707) 525-8737

[lorenco@sonic.net](mailto:lorenco@sonic.net)

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.

**The next SCAS "Public" Star Party is Saturday evening, May 10, 2003 - ASTRONOMY DAY!**

**Sunset:** 8:11 p.m. PDT

**Moonset:** 3:11 p.m. PDT (5/11/03)

**End Astronomical Twilight:** 9:55 p.m. PDT

**The June SCAS "Public" Star Party is Saturday evening, June 7, 2003**

**Sunset:** 8:33 p.m. PDT

**Moonset:** 2:12 p.m. PDT (6/8/03)

**End Astronomical Twilight:** 10:28 p.m. PDT

## Robert H. Ferguson Observatory

### Public Observing

Phone: (707) 833-6979

<http://www.rfo.org>

The 40-inch Moore Dobsonian in the west wing has been removed for reconstruction (see story, page 1). Bill Russell has graciously agreed to allow his 24-inch Dobsonian to be installed in its place. The 8-inch refractor donated by Dominican College has been refurbished and is now in service on public nights.

**May 15 Total Lunar Eclipse** 6:00 pm opening time

Night viewing 8:30 pm - midnight

**May 31 Solar Viewing** 12:00 noon - 4:00 pm

Night viewing 9:00 pm - midnight

While there is no set admission fee for the solar viewing, donations to help defray the costs of operating the observatory are appreciated. There is, however, a \$2 fee for admission to the night viewing sessions.

SCAS members are welcome to set up telescopes to assist with the public viewing. However, automobile access is closed at dusk, so arrivals after dusk will need to be able to carry their equipment in from the parking area by the horse stables.

## Silicon Valley Astronomy Lecture Series

(650) 949-7888

**Wednesday, May 21, 2003, 7 pm**

Timothy Ferris will give a non-technical illustrated talk on: "Seeing in the Dark: How Backyard Astronomers are Probing Deep Space and Guarding Earth from Interplanetary Peril". in the Smithwick Theater, Foothill College, El Monte Road and Freeway 280, in Los Altos Hills, California. His talk will be followed by a star party at the Foothill College Observatory, with telescopes and guidance provided by the Peninsula Astronomical Society. Free and open to the public. Parking is \$2.00.

Ferris will discuss the contributions amateur astronomers are making to the field of astronomy — from the discovery of new comets and exploding stars to the search for old asteroids that might collide with our planet. New technologies, within the reach of even modest budgets, have transformed the hobby of astronomy in recent years, and Tim Ferris has chronicled these developments for the New Yorker and for his widely-praised new book "Seeing in the Dark" (which he will be signing after the lecture.)

## Chabot Space and Science Center

<http://www.chabot.space.org/visit/programs/lecture.asp>

**May 15, 2003** lecture time 6:30 pm

The History & Lore of Lunar Eclipses

Dr. Mike Reynolds, Chabot Space & Science Center

Join Chabot's resident eclipse expert to learn about the history of lunar eclipse lore and culture, and hear tales of modern-day eclipse observing. Afterward, come outside with staff astronomers to view a beautiful total eclipse of the full moon as it rises over the eastern tree line at Chabot. Telescopes will be at hand for additional observing.

**June 19, 2003** lecture time 7:30 pm

The History and Future of Mars Exploration

Erik S. Bailey, Jet Propulsion Laboratory

Mars, the red planet, has fascinated us for a long time. We've imagined invaders from Mars, little green men with antennas inhabiting the planet. We know better now, but we expect to send explorers to Mars in the next two decades. With Mars approaching its best view from Earth in over 10,000 years, Erik Bailey, an aerospace systems engineer at the Jet Propulsion Laboratory in Pasadena, will take us on a journey from the very first American probes to Mars to the bold plans for future vehicles of exploration.

## SSU Dept. of Physics & Astronomy

### Observatory - Public Viewing

2003 Friday evenings:

**May 9** 9:00 - 11:00 The Moon, Galaxy Clusters

**August 29** 9:00 - 11:00 Star Clusters, Swan Nebula

The observatory is inside the football field at the SE corner of the campus, East Cotati Avenue and Petaluma Hill Road, 2 miles east of U.S. 101 at Cotati.

**Observatory Phone No. (707) 664-2267**

## Benjamin Dean Lecture Series

### Morrison Planetarium

**Winter 2003 Lecture Theme:**

**Galaxy Formation and Supermassive Black Holes**

Tickets are \$3.00 per person per lecture. All lectures begin at 7:30 p.m. Purchase in advance of lecture date recommended. Make checks payable to Morrison Planetarium. Send self addressed stamped envelope and check to:

Dean Lecture Series, Morrison Planetarium  
California Academy of Sciences  
Golden Gate Park  
San Francisco, CA 94118

**May 27 The Farthest Stars**

Dr. Charles Liu, American Museum of Natural History

How did the first galaxies form? That depends on the stars in those galaxies. All right, then: how did the first stars form?

The answer to that question can be found only when we find the farthest stars, whose light first shone nearly 13 billion years ago. In our quest to find those first points of light in the cosmos, we are learning not only about stars and galaxies, but also the universe itself — how it began, how it has aged, and how it will most likely end.

**June 10 Black Holes, Jets, and Einstein's Dream**

Dr. Meg Urry, Yale University

Galaxies harbor hidden black holes at their centers, weighing millions or billions as much as our Sun. Some create bright sources of light, vastly outshining the galaxy; in rare cases, the black holes also cause jets to stream outward at nearly the speed of light. Einstein's Special Theory of Relativity — a theory he dreamed up through thought experiments — helps explain the very modern phenomenon of jets and over-luminous galaxy centers.

**Fall 2003** - Series Planning is underway for the Fall 2003 Dean Lecture Series. The planned theme is cosmology. Tickets should be available in June.

## Project 40 Underway

*continued from page 1*

In the winter of 2000-2001, Ron Wickersham, then VP of VMOA, arranged to have the mirror transported and tested at Lawrence Livermore Labs as part of a large mirror testing facility start up program. It turned out that the mirror was so astigmatic that it was not useful for the testing team. The VMOA recruited optical experts and optometrists from the local area to insert lenses and other remedies but none succeeded.

Bill Russell of the Valley of the Moon Astronomical Society (VMAS) offered to loan his 24-inch reflector as a temporary replacement for the 40-inch. In the Spring of 2002, after trying the two telescopes side-by-side, in part to convince docents and board members alike that removing the 40-inch was a necessity, the 40-inch was moved to Al Heppé's workshop and the 24-inch was installed as the west wing telescope at RFO.

Al Heppé, then Treasurer of the VMOA, took on the task of rebuilding the mirror cell, in the hope that it would correct the problem. He completed the cell and did some star tests and found that the astigmatism was unaffected. The next step would have been to re-figure the 40-inch mirror.

At that moment, an amateur in Stockton got word that his new job would be taking him to Arizona, and he decided that it was time to give up his latest telescope-making project, a 40-inch mirror. He put the mirror up for sale, and RFO docent and SCAS member, Steve Follett, immediately noticed it and brought it to the board's attention. The board analyzed its options and the expense and work that it would take to build a new 40-inch telescope. In August 2002, the group decided that the RFO must have a replacement meter-sized instrument, and approved the purchase of the 40-inch mirror and additional materials, as well as starting Project 40.

Steve Follett has taken the role of optical designer and fabricator for the project, and is working with project manager Bill Russell. During May, Steve will welcome the 40-inch mirror into his garage workshop. There he is putting the finishing touches on a grinding machine to complete the grinding and polishing of the Second Generation 40-inch Telescope mirror of the VMOA.

## SCAS Egroup URL

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

## What's This Little Box About?

SCAS has a nifty little mailing list, hosted by Yahoo, that is for the use of SCAS members. Currently we have around 40 members signed up. It is a low volume mail list that any SCAS member is welcome to join. The majority of traffic is about going observing, some observing reports and astronomy related news. We get postings from Jane Houston Jones and Mojo from their travels around the US and world; news items from AANC and Sky & Telescope; as well as a little chatter about our favorite topic: astronomy. To join please either send an e-mail to [scas-subscribe@yahoogroups.com](mailto:scas-subscribe@yahoogroups.com), or visit <http://groups.yahoo.com/group/scas> and click the Join button. Hope to hear from you on-line.

-Cheers, Robert Leyland ([r.leyland@verizon.net](mailto:r.leyland@verizon.net))

## May 14 lecture-

## Rocketing To The Future

*continued from page 1*

Deep Space 1 was launched in October 1998 as the first mission of NASA's New Millennium program. It was designed as a flying technology laboratory to test such things as ion propulsion and artificial intelligence. At the successful end of its 11-month mission, the spacecraft was still working so well that NASA sent it on a new mission to reach a comet. Along the way it suffered a critical system failure, was the object of a dramatic robotic rescue, and finally executed a spectacular and flawless encounter with comet Borrelly. In September 2001, at more than three times its planned lifetime, Deep Space 1 returned a rich harvest of scientific data, including the best images ever acquired of the nucleus of a comet.

Marc Rayman will describe Deep Space 1's adventures and discoveries in space and share some of the excitement of flying a spacecraft through the solar system. He is now working on a 9-year mission to the two most massive asteroids, Ceres and Vesta. For more information visit:

<http://nmp.jpl.nasa.gov/ds1>

(please see the April *Sonoma Skies* for more details)