

Sonoma Skies

Newsletter of the Sonoma County Astronomical Society
A nonprofit scientific and educational organization
www.sonomaskies.org



September 2004

Volume XXVII No. 9



Photo: Len Nelson

The Star-B-Que Revue

—as recalled by Keith Payea...

It was a very warm afternoon when I arrived at about 4:00 PM on the day of our annual picnic and star party. A few hardy souls were attending the solar viewing in the RFO east wing, where rumor has it the temperature was in the upper 90's. The rest of us took refuge under the wonderful old oak trees in the picnic area and made occasional forays into the building to check for new sunspot development.

Most of the crowd arrived between 5:00 and 6:00. Larry McCune had the fire lit and ready when the appointed hour arrived. There was quite a rush for the barbecue pit, but we managed to get everyone's food on the grill without any incidents. Everyone brought a wonderful array of potluck items from salads and appetizers to some great pies for dessert.

There were also more telescopes in one line than I had ever seen this group gather together. Every style and type, from slick new Schmidt-Cassegrains to Steve Follett's homemade Newtonian with spotted accents. A couple of Striking Sparks winners were there who benefited from Steve's help in collimating their scopes. The parking lot was completely full of telescopes.



Steve Follett tunes up a Sparks scope

Photo: Len Nelson

continued page 4

Young Astronomers: See pages 6 & 7

Neutrinos and Nobels

with Dr. Joe Tenn

SCAS September 8 Meeting, Proctor Terrace School



Dr. Joe Tenn, Professor of Physics and Astronomy, has taught at Sonoma State University (SSU) since 1970. He grew up in southern California, attended Stanford University and the University of Washington, and was a member of the first group of Peace Corps Volunteers in Ethiopia.

In 1971 he founded and has been directing the public lectures series

"What Physicists Do" held on Mondays at 4:00 PM, Darwin Hall, Sonoma State University. The *Sonoma Skies* newsletter carries notice of topics related to astronomy and space.

The ASP (Astronomical Society of the Pacific) has benefited from his many writings and his chairmanship of the history committee. In addition, he has been a leader in AAS (American Astronomical Society) and its historical division.

He enjoys teaching mechanics, physics, and astronomy, and truly cares about the students and the careers they pursue after graduation.

Neutrinos, subatomic particles, are believed to have been created instantly after the Big Bang. Mighty and tiny, they have enough energy to penetrate any substance. Most of the neutrinos that reach us are from the sun. Solar neutrinos are of lower energy and not considered harmful. Learn about these curious little neutral particles at our September 8 meeting.

IT'S TIME TO ORDER 2005 MATERIALS!

Are you interested in getting 2005 calendars & guides at a discounted price? If so, put your reservation in now or later you'll wish you had! Len Nelson will be taking names at the September meeting. The items we'll be ordering are:

Observer's Handbook 2005 - \$15.20 (new price)

2005 Observer's Calendar - \$7.70 (new price)

2005 Desk Calendar - was \$8.95 - new price TBD

Astronomical Calendar - was \$22.85 - new price TBD

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.

Discount subscriptions to *Astronomy Magazine* occur yearly in October. Check *Sonoma Skies* for details.

RENTAL TELESCOPES

NEW! SCAS members are eligible to borrow telescopes for a **\$10 per month** donation—or **FREE** each month you participate in a SCAS-related Public Star Party. 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 first come, first served basis, space permitting, and may be edited.

The deadline for submissions is the last Wednesday of each month.

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PUBLIC STAR PARTY COORDINATOR

Bruce Lotz 576-7833 ablotz@sonic.net

LIBRARY

SCAS has a library of astronomy books that may be checked out by members at SCAS meetings. College textbooks donated by Joe Tenn of SSU are available. 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. Requirements: SCAS membership and your name and phone number.

For more information, contact Joan Thornton at 762-0594, phonyjoanie@earthlink.net

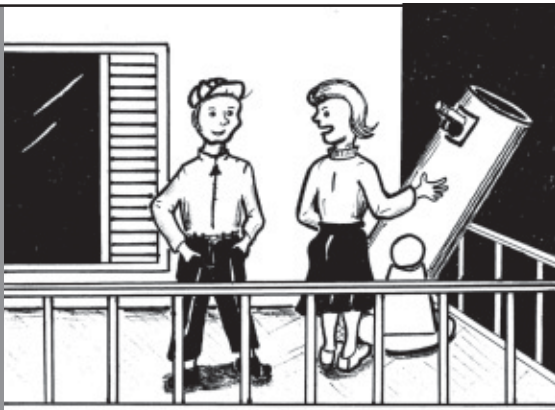
SCAS EGROUP URL

Any SCAS member is welcome to join. Hosted by Robert Leyland at r.leyland@verizon.net 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 email to scas-subscribe@yahoogroups.com

The Striking Sparks Seminar

by Herb Larsen



Oh, I'd say M13 is at least a 9.985!

President's Column

Help Keep Striking Sparks Alive!

by Keith Payea

We are facing a crisis in our nationally acclaimed Striking Sparks program. We need some new volunteers who are willing to work on all aspects of the program, especially on the telescope construction. Over the years, the volunteers have dwindled down to just a few key individuals who keep it all going. Steve Follett makes the mirrors, Larry McCune does most of the construction of the external parts of the scopes, and Len Nelson drives the event planning. Each of these people needs an apprentice, someone who can provide some backup for them, and learn how the whole thing works. On top of that, we need several people to work on the mirrors and the telescope construction right away, and before long, we will need people to help with the big event.



If we don't spread out the work, these people will burn out and Striking Sparks will be no more.



Steve & Larry install a mirror

Photo: Meritt Combs

If you have ever been interested in making a telescope, this would be a great opportunity to learn from some experts. In addition to hundreds of Sparks scope mirrors, Steve has made some much larger mirrors, and is in

charge of the 40-inch mirror for the new telescope at RFO. Working with Steve to help make a Sparks mirror or two would be an excellent starting point to making your own telescope mirror.

Larry is a very experienced engineer, and he's been building the Sparks Scopes since day one. The design is solid, elegant, and easily built by amateurs. There isn't a better compliment I can give Larry beyond the fact that only a few Striking Sparks Winners have been willing to give up their scopes to recycle them back to us.

Finally, everyone can learn some organizational skills from Len. Every event he runs goes off like clockwork, he makes it look very easy, and we all have a great time.

At the end of our next meeting, on September 8, plan to stay a few minutes to meet with the other Striking Sparks volunteers and tell us how you can help.

So here's your chance. Sign up now to help keep Striking Sparks alive for years to come, and someday another SCAS president will write glowing reviews of your contributions to our club.

MEMBERSHIP NEWS

We now are down to 140 dues-paying members. The possibility remains that a few who have let their membership lapse inadvertently may still renew.

If you have address or email changes, contact our Membership Director, Harry Linder, at 542-9167 or via email at harry@sonic.net

SCOPE CITY New Member Bonus!

Scope City at 350 Bay Street, San Francisco, is offering a **\$25 merchandise discount to new members** when joining SCAS. Sam Sweiss, Manager of Scope City, has been a supporter of SCAS and the Striking Sparks project by donating merchandise for the awards. Scope City offers a huge selection of telescopes, binoculars, microscopes and accessories.

Obtain a receipt from Harry Linder, Membership Director, to show that you have paid the \$25 SCAS membership dues. To arrange for your merchandise discount at the store, contact Sam at 415/421-8800, or email sanfrancisco@scopecity.com

Star-B-Que Revue *continued from page 1*

As darkness neared, a few people moved the telescopes to catch a glimpse of Jupiter before it set. Once that was over, the observing began in earnest. Everyone was chasing their favorite objects, and sharing tips on how to find them. It was a beautiful evening, and some folks stayed very late.

Let's hope we have as nice an event next year.

...and by June Ferguson:

On August 7, 2004, the sun shone brightly in Petaluma. This was a welcome change from the frequent summer marine layer. The weather promised great conditions for the annual Star-B-Que and pleasant experiences and take-home memories for family visiting from Massachusetts and Oregon. After visiting and touring in Sonoma, the Dodge Caravan with seven people aboard navigated up the hill to the entrance to Sugarloaf Ridge State Park where the Ranger recorded 2 docents, 5 visitors.



Photo: Len Nelson

YA President Melissa Downey checks out some big bins

At 5:00 PM SCAS members were enjoying the refreshing air, amazing scenery, and getting to know one another and learning the latest news. Vehicles backed in side by side, people found a table, and put out provisions they had brought. In the East wing of RFO, Merlin Combs educated onlookers about Ole Sol, before they looked through the telescope. Ambitious people hiked as far as Neptune.

Larry emptied bags of briquets and made a mighty fire—not a minute too soon. Whether it was the open air or the putting off eating during the day, appetites peaked. When the coals were near ready there was a traffic jam of 'chefs' placing steaks, chicken, hamburg, hot dogs on the grill. Close by two camp tables held the edibles brought by members.

School age children had fun looking through the Bushnell telescope which Harry Linder set up for all to see. June Ferguson and Evelyn Mattox sold tickets for a chance to win the telescope. (The winning ticket will be pulled at the September 8 meeting). Youngsters and young-at-heart toasted marshmallows. Under darkened skies, an iridium flare winked. With long range pointer, enthusiastic Ed Megill led the popular sky tour. George Loyer ran the robotic and Merlin Combs and Derek Braud took charge of the 24-inch.

Oh joy, if every Star-B-Que could be under such ideal weather!

SUBSCRIBE TO ASTRONOMY MAGAZINE

Astronomy Magazine is offering SCAS Members new or renewed subscriptions at \$29 for one year, \$55 for two years. If interested, mail a check before September 15 payable to: Larry McCune, SCAS Treasurer, 544 Thyme Place, San Rafael, CA 94903.

Events

SONOMA STATE UNIVERSITY SERIES “WHAT PHYSICISTS DO”

Mondays at 4:00 PM

Darwin Hall Room 108

Sept. 13—Magnetic Recording

Dr. Hongtao Shi of Sonoma State University will discuss the history of magnetic recording and the novel materials which promise to dramatically increase the density of magnetic data storage in the near future.

Sept. 20—SETI: Pulling Signals Out of Cosmic Noise

Dr. Jill Tarter of the SETI Institute will describe the status of the Search for ExtraTerrestrial Intelligence with telescopes today and with the new Allen Telescope Array being built in partnership with UC Berkeley to do SETI and radio astronomy 24×7 .

Sept. 27—First Results from Cassini-Huygens

Dr. Linda Spilker of the Jet Propulsion Laboratory, Cal Tech, will discuss the first results from the Cassini-Huygens mission, a joint undertaking by NASA and the European Space Agency (ESA) to study the Saturn system.

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

SSU OBSERVATORY PUBLIC VIEWING

Sept. 10, 8PM-10PM: Lagoon Nebula, Dumbbell Nebula

Observatory located inside the football field at the SE corner of the campus (E. Cotati Ave. and Petaluma Hill Rd., two miles east of US 101 at Cotati). Follow signs from freeway to campus. Call 707/664-2267 before coming if it appears that clouds may force cancellation.

<http://www.phys-astro.sonoma.edu/observatory/pvn.html>

MORRISON PLANETARIUM DEAN LECTURE SERIES

Fall/Winter 2004-2005: NASA's Great Observatories

September 27—The Hubble Space Telescope, Dr. John Trauger, NASA Jet Propulsion Laboratory

New Location: During reconstruction of the Academy, the Dean Lectures have 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.

All programs begin at 7:30 PM in Kanbar Hall at the Jewish Community Center.

Contact: (415) 750-7141

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

Events

SCAS PUBLIC STAR PARTY

Saturday, September 18

These are public events—all are invited. Members with scopes are encouraged to attend.* Great for planetary astronomy with fellow observers at an easily accessible site.

Sunset: 7:13 PM PDT

End Astronomical Twilight: 8:42 PM PDT

Moonset: 9:32 PM PDT

Youth Community Park in Santa Rosa, on the west side of Fulton Road, between Guerneville Road and Piner Road, just opposite Piner High School. Contact: Bruce Lotz, Coordinator (707) 576-7833, ablotz@sonic.net

***NEW!** Rental telescopes listed on Page 2 are *free* each month you participate in a SCAS-related Public Star Party. Join us in introducing the night sky to eager participants.

THE GEYSERS STAR PARTY

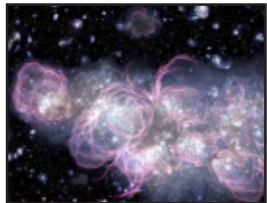
The Palmieri family has asked that the observing site not be used during deer hunting season. The site will be closed from Saturday, August 14 through Sunday, September 26, 2004. The next observing session will be announced in *Sonoma Skies*.

SRJC PLANETARIUM “THE LIVES OF STARS”

September 10 - October 10

Santa Rosa Campus, Lark Hall, Room 2001

The Sun is just one of possibly 200 billion stars in the Milky Way galaxy. In this show we will learn about the birth, life, and death of stars. Discover how a beam of starlight can reveal detailed information about a star's nature and how astronomers measure



the distances to stars. Find out what makes stars shine. Learn about the many different types of stars and how diverse their lives can be. You will also discover some bizarre types of stellar objects.

Shows are Fridays and Saturdays at 7:00 PM and 8:30 PM, Sundays at 1:30 PM and 3:00 PM during the 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 required and is included in the Planetarium admission price. Pick it up at the planetarium when you pay admission. Please arrive early enough to place your permit on your vehicle's dashboard before the show. Contact: (707) 527-4465 or 527-437 <http://www.santarosa.edu/planetarium/>

ROBERT H. FERGUSON OBSERVATORY

Public Viewing: September 11

Solar Viewing: Noon - 4:00 PM

Night viewing: Begins 8:00 PM

Three scopes are operating: The 14-inch SCT with CCD camera in the east wing, the 8-inch refractor under the dome and the 24-inch Dobsonian in the west wing.

There is no admission fee for the solar viewing, but donations are appreciated. The Park charges \$6 per vehicle for entry. A \$2 donation is requested from adults 18 and over 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 public viewing. Automobile access closes at dusk, so arrivals after dusk need to carry their equipment in from the parking area by the horse stables.

Classes

- Sept. 9 Introduction to Astronomy & Observing, 7:00 PM
- Sept. 13 Introduction to Astronomy & Observing, 7:00 PM
- Sept. 14 Night Sky Fall Series, 7:00 PM
- Sept. 21 Night Sky Fall Series, 7:00 PM
- Oct. 4 Introduction to Astronomy & Observing, 7:00 PM
- Oct. 5 Night Sky Fall Series, 7:00 PM
- Oct. 7 Introduction to Astronomy & Observing, 7:00 PM
- Oct. 12 Night Sky Fall Series, 7:00 PM

Classes are held at the Observatory. Reservations required for classes. Contact: (707) 833-6979, or visit <http://www.rfo.org>

SILICON VALLEY ASTRONOMY LECTURE SERIES

Wednesday, October 6, 2004, 7:00 PM
“Asteroid Deflection: Hopes and Fears”

Apollo 9 Astronaut Russell Schweickart (the first person to step outside a spacecraft without an umbilical cord) will discuss what we know about the threat of cosmic rocks and the various ways that have been suggested for saving the Earth from large asteroid impacts, including both nuclear and non-nuclear alternatives.

Schweickart is currently Chairman of the Board of the B612 Foundation, dedicated to protecting the future of humanity by developing and demonstrating ways to deflect asteroids that are heading our way.

Please come early as we expect a full house for this very special program. Held in the Smithwick Theater, Foothill College, Los Altos Hills. Free and open to the public. Parking on campus costs \$2. Call the series hot-line at 650/949-7888 for more information.

Young Astronomers



Saturn!

with Len Nelson

YA September 10 Meeting, Apple Blossom School

It cost 3.3 billion dollars and took 7 years but after a looping 2.2 billion mile trip from the inner solar system—the Cassini Huygens Mission is now at Saturn! Len Nelson, SCAS



Montage of Saturn and several of its satellites—Dione, Tethys, Mimas, Enceladus, Rhea, and Titan.

Art: NASA/JPL

Community Activities Director, will give a Power Point presentation geared toward examining this historic space mission. He'll bring with him handouts that he received from Jane Houston-Jones who is now the Senior Outreach Specialist for the Cassini mission at NASA's Jet Propulsion Laboratory.

Would you like to have a NASA decal for a notebook? Would you like some postcards of Saturn taken by Cassini on its way to Saturn? Would you like to find out how to build a 1/40th scale paper model of the Cassini/Huygens spacecraft? If so, come to this meeting. It'll be very interesting and you'll learn a lot too!

Meetings are open to all students in Sonoma County. Join us at 7:30 PM in the multipurpose hall at Apple Blossom School, 700 Water Trough Road, Sebastopol.

Free to Attendees:

Sky & Telescope Magazine's Sept./Oct. issue of *Night Sky*. Written for Young Astronomers, this magazine is a new product from *Sky & Telescope*. I think you'll really like this magazine. It comes out every 2 months and an annual subscription costs only \$17.99 and—surprise!—there is a subscription card in each and every issue of the magazine!

Each issue deals with current celestial objects and events that you'll want to plan to see. For example, one of the things that the Sept. /Oct. issue deals with is the upcoming Lunar Eclipse of October 27. I don't want you to think that I am being paid by S&T to promote their magazine but I do want you to know that, in my estimation, it is really worth your time to read. You might like it so much you'll ask your parents to get you a subscription for Christmas!

Welcome Back Young Astronomers!

Now that the new school year has begun, it's time to plan for our monthly Young Astronomers meetings. Meetings are open to all students in Sonoma County.

Our first meeting will be held Friday, September 10. Len Nelson will be giving a fascinating presentation about Saturn.

We will also be holding elections for this year's Young Astronomers board. Telescope viewing will be held in the upper parking lot after the general meeting, so please *bring your telescope!* We hope to see you there, and please feel free to bring a friend!

Be a YA Officer!

The Young Astronomers has a board of officers who manage and direct the activities for YA. Elections will be held at the September 10 meeting, so now is the time to consider whether you would like to serve as a YA officer during the next school year. Remember that college applications are strengthened by service in organizations like ours. It's fun to know what's going on and to have some influence.

Here is a description of the **Young Astronomers** Officer Positions and responsibilities:

PRESIDENT

Responsible for planning and running YA board meetings, conducting the general YA business section of our monthly public meetings, and representing YA in interactions with SCAS board members and the general public.

VICE-PRESIDENT/PROGRAM DIRECTOR

The vice-president acts as program director, helping plan and arrange our monthly topic presentations and activities for our public meetings. Also assists in the president's responsibilities, and performs them in the president's absence.

RECORDER

Responsible for taking notes at the monthly YA meetings, and issues minutes to serve as an official record of the meetings.

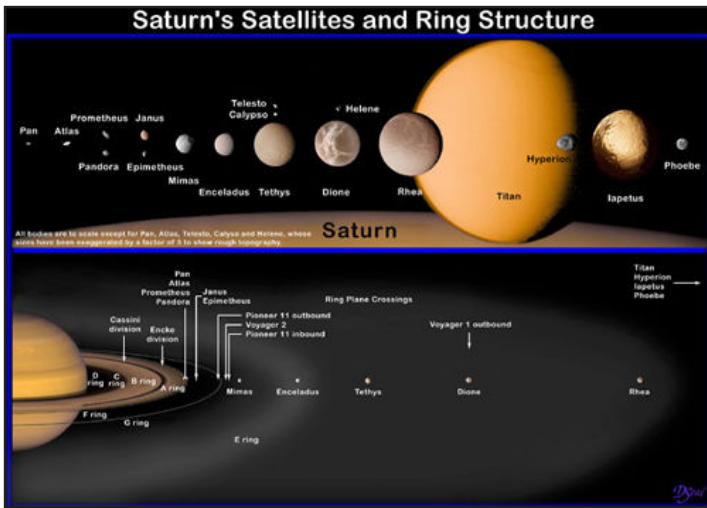
NEWSLETTER EDITOR

Receives and reviews articles submitted by YA members, and submits them for publication in the YA section of *Sonoma Skies*.

LIBRARIAN

Maintains a record of library materials (books, videos, etc.) that are available for checkout, and coordinates getting these items to the requesting YA members.

So far, the following people have volunteered: For President, Melissa Downey; for Vice President, Olivia Turnross. If you are interested in being an officer, or would like more information, please contact Gary Jordan at 829-5288.



This image shows Saturn, its ring structure and satellites to relative scale unless otherwise noted. Art by David Seal.

Saturn's New Moons

(Adapted from an article by Erica Sohn in Science News)

Saturn is proving to be full of surprises. The Cassini spacecraft, now at just the beginning of its 4-year mission to the planet, has already discovered two new moons and a slew of lightning storms on the ringed planet. Astronomers from the Space Science Institute in Boulder, Colo., discovered the moons in pictures that Cassini took in early June. The moons are tiny, and appear to be the smallest ones ever discovered around Saturn. Both take about a day to orbit the planet. They lie between the paths of two larger moons, Mimas and Enceladus.

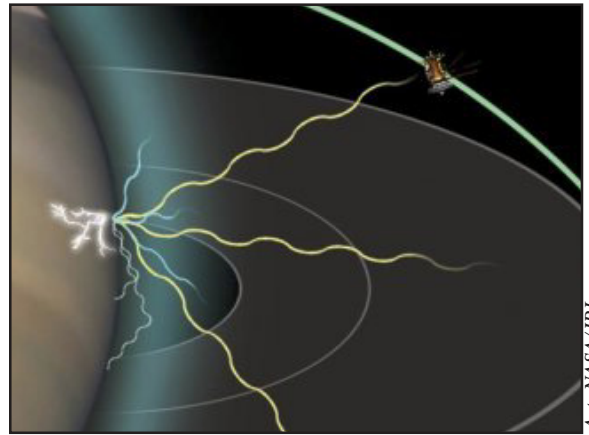
One of the new moons is called S/2004 S1. It's 194,000 kilometers from Saturn's center and measures about 3 kilometers across. The other moon, called S/2004 S2, is 211,000 kilometers from Saturn's center and measures about 4 kilometers across.

The new discoveries could make scientists rethink their ideas about other parts of the solar system, especially about the Kuiper Belt—a stash of icy bodies that lies way out at the edge of the solar system. Astronomers have long assumed that the Kuiper Belt is full of small comets, each about the size of a house. These comets would zoom past Saturn at high speeds. If such comets were common out there, though, they would probably ram into Saturn's small moons, smashing them to bits. Because this apparently hasn't happened, the Kuiper Belt's supply of small comets might be smaller than expected.

Cassini has also detected bursts of lightning on Saturn. The storms seem to form at fairly high latitudes, and they don't last very long. However, in the early 1980s, the Voyager spacecraft found a different storm pattern. Voyager recorded long-lasting storms located close to the planet's equator. Astronomers suspect the difference has to do with a change in season. Two decades ago, Saturn's rings cast a shadow near the planet's equator. This put the cold, shaded part of Saturn's atmosphere next to the hottest part. The result would be turbulent conditions that could produce large storms. Now, it's summer in Saturn's

southern hemisphere, and the rings cast a broad shadow over the northern hemisphere. Under these conditions, long-lived storms appear to occur less often.

What will Cassini find next? Stay tuned. There's much more to come. Come to our September Young Astronomers Meeting and learn more about Saturn from our presenter, Len Nelson. We hope to see you there!



This illustration shows how lightning above Saturn would generate high-frequency radio waves that could be detected by the Cassini spacecraft.

YA CALENDAR

September 10 — Saturn, Len Nelson, SCAS

October 8 — Comets, Gary Jordan, YA

Meetings start at 7:30 PM at Apple Blossom School, 700 Water Trough Road, Sebastopol in the multipurpose hall, which is the large building on the right side of the school seen from the main parking lot.

Meetings are open to all students in Sonoma County, and are held the second Friday of each month. **Telescope viewing** is held in the upper parking lot after the meeting.

Directions: From the south, take Hwy. 101 to Hwy. 116 West. Follow Hwy. 116 (Gravenstein Hwy.) about 8 miles to downtown Sebastopol. Turn left at the stop light onto Bodega Ave. and immediately get into the right lane (the left lane forces a left turn onto Main St.). Continue on Bodega Ave. almost two miles to Water Trough Rd. Turn left and go about 1/3 mile to the school, on your right. From Hwy. 12, go straight through Sebastopol, past Main St., and continue as above.

YA ELECTED OFFICERS

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VICE-PRESIDENT/PROGRAM DIRECTOR: Open

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NEWSLETTER EDITOR: Mark Bellinger 763-7554

LIBRARIAN: Clayton Alderson 833-6423

ADULT ADVISER: Gary Jordan 829-5288

**Sonoma County
Astronomical Society**

P.O. Box 183
Santa Rosa, CA 95402



September 2004 *Sonoma Skies*

SEPTEMBER 8

**Dr. Joe Tenn
Neutrinos
and Nobels**

September Observing Notes

Sept. 9: Delta Aurigid meteors

Sept. 9: 6:00 AM—A lovely chain of planets visible before dawn, with Mercury just above the horizon, Venus at 32°, Saturn at 40° and the waning crescent Moon at 46°

Sept. 13-27: Zodiacal Light visible in East a half hour before morning twilight. Look for a faint band of light stretching upward along the ecliptic from the point where the Sun will rise. It's subtle, but you'll be seeing the reflection of light off the dust particles left over from the formation of our solar system.

Sept. 14: New Moon 7:29 AM

Sept. 19: Piscid meteors. See <http://comets.amsmeteors.org/meteors/showers/piscids.html> for background on this event.

Sept. 22: Equinox

Sept. 28: Full Moon 6:09 AM

Links featured this month:

<http://www.calsky.com/cs.cgi/> Everything you could want for setting up observing sessions and getting detailed astronomical information. Update your browser and plug-ins first.

<http://aa.usno.navy.mil/data/> Similar info as above, without the heavy graphic interface. Straightforward and easy to use.

<http://www.lpl.arizona.edu/~rhill/alpo/minplan.html>
Tips for observing "minor planets," or asteroids.



YA's check out the raffle scope at the August Star-B-Que

Photo: Len Nelson

Telescope Raffle

A Bushnell Sky Chief Jr. telescope, which has been donated to SCAS by Fred and Vivian Bernhart, will be raffled at the SEPTEMBER 8 meeting of the SCAS. It's a 60mm refractor (700mm focal length), on an alt-azimuth mount, with tripod and carrying case. It has two eyepieces (20mm and 5mm), a 2x Barlow lens, a star diagonal and an erecting prism.

The raffle tickets will be offered at the September meeting for \$1.00 each or 6 for \$5.00.

