

July, 2010 575th General Meeting Notice



# EVENT HORIZON

Founded in 1960, the San Mateo County Astronomical Society is a non-profit organization for amateur astronomers. Family memberships are open to the public, and visitors are cordially invited to the Society's meetings, which are held on the first Friday of the month, September through June. Detailed information about our events and membership can be found at [www.smcas.com](http://www.smcas.com)

Membership includes a monthly bulletin, discounted subscriptions to calendars and magazines, monthly star parties, use of our loaner telescopes, tours, field trips and guest speakers, plus an invitation to join our online discussion group. To receive additional information, send a note to [SMCAS@live.com](mailto:SMCAS@live.com) or call (650) 862-9602.

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## STAR-B-QUE AMAZES ASTRONOMERS !!

*(Vega, Deneb and Altair skewered with onions, green peppers and cherry tomatoes. Delicious.)*

Instead of our usual monthly meeting, our August event is the annual Star-B-Que, which we co-host with the Peninsula Astronomical Society. The event is scheduled for August 7. In addition to all the food and fun, our guest speaker will be Dave Rodrigues, also known as the Astro Wizard--a great favorite with the kids. For a fascinating and fun event, come to the Star-B-Q.  
(For more detailed information, see our flyer on page 2)



**MONTHLY STAR PARTIES**  
Crestview Park in San Carlos  
Saturday August 7 and 14  
See page 9 for directions

# Annual Hidden Villa Star-B-Que

The big event for the club during August will be the joint **Star-B-Que** with the Peninsula Astronomical Society. This will be held on August 7, 2010. The event starts with a scrumptious Bar-B-Que for members at 6:00 pm followed by a show at 8:00 pm and a Star Party after the show.

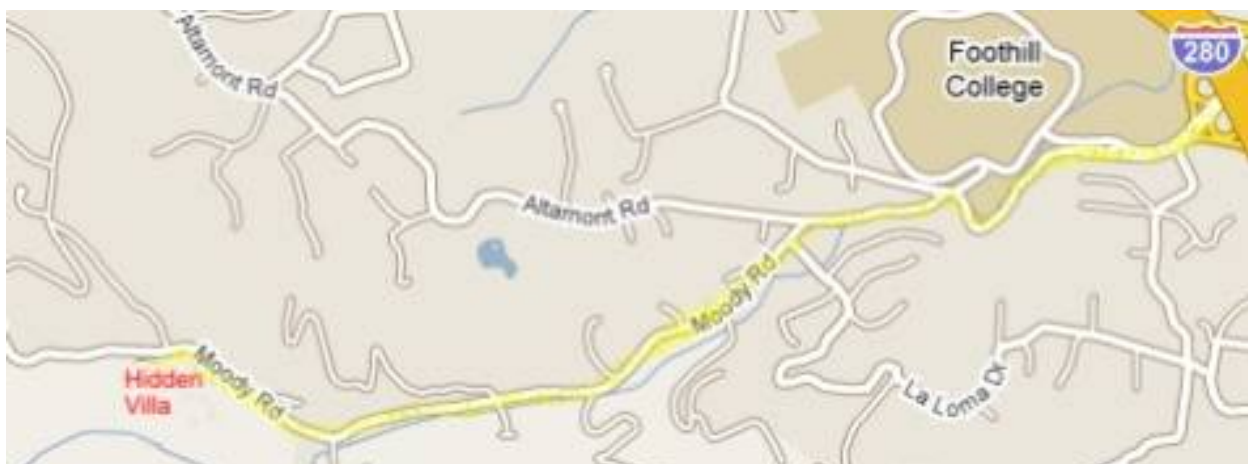
As before, it will be a pot luck picnic with members bringing a sample of their favorite appetizer, salad, side dish or desert to share. The clubs will supply hamburgers, sausages, etc. Please bring your own non-alcoholic drinks.

Club Members will have free admission to the famous Dave Rodrigues AstroWizard show. This show uses magic, explosions and other dramatic effects to introduce astronomy concepts. It is a favorite of kids. Dave's show will be followed by a public star party, so bring your telescopes.

This is a great chance for you to get to know club members, meet the astronomers from PAS and have some great entertainment. If you have any kids in your family bring them, they will love the show.

**If you are coming, please let Ken Lum know at [lum40@comcast.net](mailto:lum40@comcast.net) so that we have enough Bar-B- Que meat for everyone.**

**Directions:** Hidden Villa is at 26870 Moody Road in Los Altos Hills and may be reached by getting off the El Monte Rd. exit from Hwy 280 and driving west on El Monte Road past Foothill College. At the intersection with Moody Road, take the left fork. Follow Moody Road about 2 miles until you see the Hidden Villa sign on the left side of the road. Turn into the entrance, over a wood bridge and past the Visitor Center to the right. The Star-B-Que will be at the picnic area across a clearing to the west of the visitor's center and near the main buildings.



# ***ANNOUNCEMENTS***

## Astro Wizard Mesmerizes Kids



Our guest speaker at this year's Star-B-Que is Dave Rodrigues (a.k.a. the AstroWizard.) Dave is a lecturer at Morrison Planetarium and at the California Academy of Sciences in San Francisco. He is also the program director of the East Bay Astronomical Society at Chabot Space and Science Center in Oakland. Often interviewed on astronomical topics in the Oakland Tribune, San Francisco Chronicle, KCBS news radio, and local TV, he has also been featured on the "KidTalk with Dr. Mary" show on Radio Disney. On a more serious note, he assisted in the rescue of Apollo 13 at Chabot Observatory in 1970. Asteroid 24626 "Astrowizard" was named after him for his contributions to Astronomy education.

Website: <http://astrowizard.org/index.html>

## **From the Prez:**

I hope all of you are enjoying the summer. There will be no August meeting but in September everyone will be back from vacation and we will start having meetings again.

I encourage you to go out and look at the sky in August. In early August Saturn, Mars, Venus and Mercury can all be seen lined up in the western sky after sunset.

Our star parties at Crestview are a great way to see the glories of the August sky. The active astronomers among our membership will be happy to point out the Milky Way and summer constellations like Scorpius and Sagittarius which are visible from the park. You will also have an opportunity to see planets and other fascinating objects through members' telescopes.

On August 7th we will have our annual Star-B-Que at Hidden Villa. Look elsewhere in this newsletter and on our website for information about this event.

You really should consider attending the Star-B-Que, especially if you have young kids. The talk will be by Dave Rodrigues, the AstroWizard. I have personally attended a number of Dave's presentations and he enthralles children while teaching basic astronomy. Adults also find Dave's act fun and informative.

The club, along with the PAS, takes care of any fees and buys the meat for the Star-B-Que. Following dinner, admission to the AstroWizard show and star party are free for our members - the public is charged \$12 each for attending.

### **Meteor Spectacular**

On the evening of August 12th and the morning of August 13th the Perseids Meteor Shower will peak. This year the moon will be a slim crescent and set early so the shower should be spectacular. Just find a dark spot, lean back and look at as much of the sky as possible. As always, the best viewing will be after midnight. Meteor showers are caused by the Earth passing through the dust left behind by a comet's tail, in this case comet Swift-Tuttle. The shower is named after the constellation Perseus from which the meteors appear to emanate.

Early in the evening on August 13 there will be a triple conjunction with the moon. The planets Venus, Mars, and Saturn will all be close to the thin, crescent moon. Look to the west just after sunset.

August is a wondrous month for astronomy. As an astronomy enthusiast I urge you to take advantage of the opportunities this month offers.

I hope to see you all at the Star-B-Que, Crestview Park Star Parties and other club events.

**Ed Pieret, President**  
SMCAS@live.com

**San Mateo County Astronomical Society**  
**(650)862-9602**



## The Sun Can Still Remind Us Who's Boss

by Dr. Tony Phillips

Grab your cell phone and take a good long look. It's indispensable, right? It tells time, surfs the web, keeps track of your appointments and, by the way, also makes phone calls. Modern people can hardly live without one.

One good solar flare could knock it all out.

"In the 21st century, we're increasingly dependent on technology," points out Tom Bogdan, director of NOAA's Space Weather Prediction Center in Boulder, Colorado. "This makes solar activity an important part of our daily lives."

Indeed, bad space weather can knock out power systems, telecommunications, financial and emergency services—basically, anything that needs electronics to work. That's why NOAA is building a new fleet of "space weather stations," the GOES-R satellites.

"GOES-R will bring our existing fleet of weather satellites into the 21st century," says Bogdan.

"They're designed to monitor not only Earth weather, but space weather as well."

NOAA's existing fleet of Geostationary Operational Environmental Satellites (GOES) already includes some space weather capabilities: solar ultraviolet and X-ray telescopes, a magnetometer and energetic particle sensors. GOES-R will improve upon these instruments and add important new sensors to the mix.

One of Bogdan's favorites is a particle detector named "MPS-Low," which specializes in sensing low-energy (30 eV – 30 keV) particles from the sun.

Who cares about *low-energy* particles? It turns out they can be as troublesome as their high-energy counterparts. Protons and other atomic nuclei accelerated to the highest energies by solar flares can penetrate a satellite's exterior surface, causing all kinds of problems when they reach internal electronics. Low-energy particles, particularly electrons, can't penetrate so deeply. Instead, they do their damage on the outside.

As Bogdan explains, "Low-energy particles can build up on the surfaces of spacecraft, creating a mist of charge. As voltages increase, sparks and arcs can zap electronics—or emit radio pulses that can be misinterpreted by onboard computers as a command."

The Galaxy 15 communications satellite stopped working during a solar wind storm in April 2010, and many researchers believe low-energy particles are to blame. GOES-R will be able to monitor this population of particles and alert operators when it's time to shut down sensitive systems.

"This is something new GOES-R will do for us," says Bogdan.

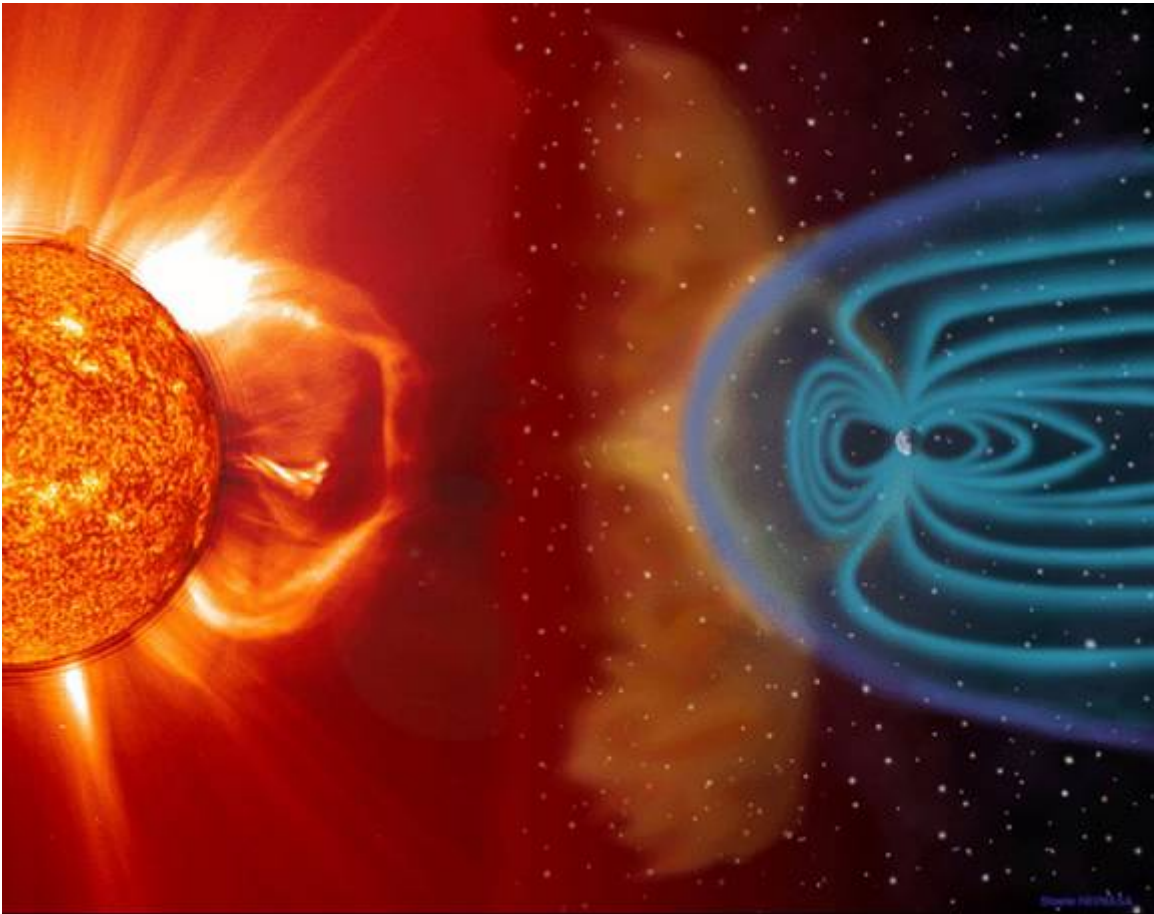
The GOES-R magnetometer is also a step ahead. It will sample our planet's magnetic field four times faster than its predecessors, sensing vibrations that previous GOES satellites might have missed. Among other things, this will help forecasters anticipate the buildup of geomagnetic storms.

And then there are the pictures. GOES-R will beam back striking images of the sun at X-ray and extreme UV wavelengths—parts of the electromagnetic spectrum where solar flares and other eruptions make themselves known with bright flashes of high-energy radiation. GOES-R will pinpoint the flashes and identify their sources, allowing forecasters to quickly assess whether or not Earth is in the "line of fire."

They might also be able to answer the question, *Is my cell phone about to stop working?*

The first GOES-R satellite is scheduled for launch in 2015. Check [www.goes-r.gov](http://www.goes-r.gov) for updates. Space weather comes down to Earth in the clear and fun explanation for young people on SciJinks, <http://scijinks.gov/space-weather-and-us>.

*This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.*



*In spite of Earth's protective magnetosphere, solar storms can wreak havoc with Earth satellites and other expensive electronics on the ground.*

NOTE FOR EDUCATORS: for their bimonthly newsletter, go to: <http://spaceplace.nasa.gov/en/educators> The newsletter is all about the many useful and free resources on The Space Place website that can be helpful to classroom and home school teachers, after-school program directors, museum and library program directors, and other informal educators.

### ***Play Photon Pileup at The Space Place***

In this fast-paced game, multi-colored photons rain in from all directions. They come from old stars, new stars, galaxies, and glowing gas. Spin the Galaxy Evolution Explorer telescope around quickly to collect three photons of the same color and record the beautiful space image one piece at a time. This telescope detects ultraviolet photons best, so those count most. Don't let the sticky non-matching photons pile up too high, or the game will end before your picture is complete. Play Photon Pile-up at <http://spaceplace.nasa.gov/en/kids/galex/photon>. And don't get too addicted!

Scope City, 350 Bay Street, San Francisco, offers a huge selection of telescopes, accessories and more. They also offer a \$25 merchandise discount to new SMCAS members. Obtain a receipt from SMCAS Treasurer showing you have paid your dues for the current year. To arrange for your discount, contact Sam Sweiss at Scope City, in the store, at 415-421-8800, or email [sanfrancisco@scopecity.com](mailto:sanfrancisco@scopecity.com). Check them out at <http://www.scopecity.com>



# OUR ANNUAL BANQUET



Gordon Myers discusses variable stars with various members



The site of our annual banquet.









View of the dock by the light of the full moon.



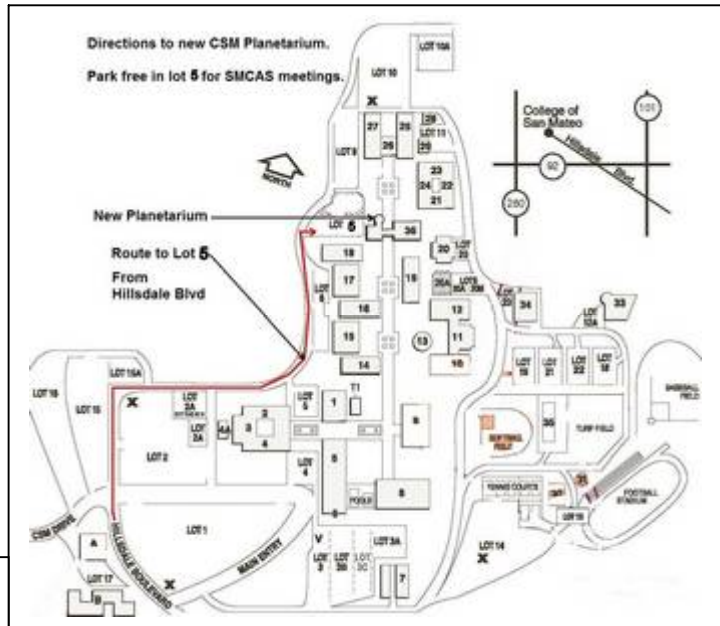
President Ed Pieret reads the "THE MUCH-COVETED METHUSELAH AWARD" presented to Mike Ryan for his many years as a member, board member, officer and president of SMCAS.

# August 2010

| Sunday | Monday  | Tuesday   | Wednesday | Thursday   | Friday  | Saturday   |
|--------|---|---|-----------|--|---|--|
| 1      | 2 <br>Last Quarter<br>20:59 PT   | 3   | 4         | 5  | 6   | 7<br>Hidden Villa<br>Star-B-Que<br><hr/> Crestview Star<br>Party |
| 8      | 9 <br>New Moon<br>19:08 PT       | 10  | 11        | 12 <br>Perseids Meteor<br>Shower | 13 <br>Perseids Meteor<br>Shower<br><hr/> Triple planetary<br>Conjunction with the<br>Moon | 14<br>Crestview Star<br>Party                                    |
| 15     | 16 <br>First Quarter<br>10:14 PT | 17  | 18        | 19   | 20  | 21<br>Jazz Under the<br>Stars                                    |
| 22     | 23  | 24 <br>Full Moon<br>09:05 PT<br>This full moon will be<br>the most distant and<br>therefore the smallest<br>of the year. | 25        | 26   | 27  | 28   |
| 29     | 30  | 31  |           |  |   |  |

2010

|         |                  | <u>Aug 7 Rise</u> | <u>Aug 7 Set</u> | <u>Aug 14 Rise</u> | <u>Aug 14 Set</u> |
|---------|------------------|-------------------|------------------|--------------------|-------------------|
| Sun     |                  | 6:18 A.M.         | 8:11 P.M.        | 6:24 A.M.          | 8:03 P.M.         |
| Moon    |                  | 3:20 A.M.         | 6:26 P.M.        | 11:57 A.M.         | 10:36 P.M.        |
| Mercury | Early evening    | 8:38 A.M.         | 9:15 P.M.        | 8:37 A.M.          | 8:54 P.M.         |
| Venus   | Early evening    | 10:05 A.M.        | 10:06 P.M.       | 10:13 A.M.         | 9:53 P.M.         |
| Mars    | Early evening    | 10:27 A.M.        | 10:21 P.M.       | 10:21 A.M.         | 10:04 P.M.        |
| Jupiter | During the night | 10:14 P.M.        | 10:20 A.M.       | 9:45 P.M.          | 9:51 A.M.         |
|         | 9 PM, E on left  | C J(I Behind) E G |                  | I J E G C          |                   |
|         | Red spot transit | 5:22 A.M.         |                  | 8:18 P.M.          |                   |
| Saturn  | During the night | 10:06 A.M.        | 10:19 P.M.       | 9:42 A.M.          | 9:53 P.M.         |
| Uranus  | During the night | 10:04 P.M.        | 10:07 A.M.       | 9:36 P.M.          | 9:39 A.M.         |
| Neptune | During the night | 8:40 P.M.         | 7:28 A.M.        | 8:12 P.M.          | 7:00 A.M.         |
| Pluto   | During the night | 5:13 P.M.         | 3:23 A.M.        | 4:45 P.M.          | 2:55 A.M.         |



### Directions to Planetarium

After coming off HW92 at Hillsdale Blvd towards CSM, proceed up hill through the second and third sets of traffic lights until you come to the first stop sign, where you enter the campus, and continue straight. After the third stop sign, turn into the first parking lot on the right. This is now called Lot 5. The planetarium is directly ahead of you. Enter the building (36) through the door facing the parking lot.

### Directions to Crestview Park

## Crestview Park

**Come out and bring the kids for a mind-expanding look at the universe!**

Bring your binoculars, telescopes, star guides, and lounge chairs for some informal star gazing at Crestview Park. Dress warmly and wear a hat. Visitors should park on the street or arrive before dark so that headlights don't affect the observers' dark adaptation. Bring small flashlights only, with the lens covered with red cellophane or red balloon. Please don't touch a telescope without permission. And parents, please watch your children.

Take Hwy 101 or El Camino to Brittan Avenue in San Carlos, and turn west (right from El Camino). From El Camino, follow Brittan about 2.3 miles to the intersection with Crestview Drive.

**From Alameda**, go about 1.4 miles to Crestview. Turn right on Crestview. A small sign saying "Crestview Park" is a half-block ahead on the right. Look to the left for the park entry road, a small street between houses #998 and #1000. If after dark, please park on Crestview near the park entrance and walk in the short distance, to avoid safety issues and disturbing the telescope setup and viewing.

**From Highway 280** to Edgewood Road. Go east (toward Bay) about 0.8 miles. Left on Crestview Dr. Go 0.5 miles uphill to the intersection with Brittan Avenue. Go one short block to the park entrance on the left.

**Note:** The park is residential, and adjacent to homes and backyards. Before inviting noisy groups, please call Ed Pieret or Leroy Amen.

**For more information, call:**  
Leroy Amen: 573-0935  
Leroy's cell: 504-5196  
Ed Pieret: 595-3691

**Membership Dues:** Membership annual dues are payable yearly, on your renewal date which is shown on your Event Horizon mailing label. See the back page of the Event Horizon for mailing instructions. Members who are over 3 months past due will be removed from the Event Horizon mailing list until their dues are paid. Members who are over 6 months past due will be removed from the active membership rolls. These members will not be eligible for club privileges but can retain membership in the Yahoo group. We will try to contact the members personally prior to making them inactive.

# Membership Application

To join the San Mateo County Astronomical Society or to renew your membership please send dues by check payable to "SMCAS" to the address below. Dues are \$35 for a new member, \$30 for Renewing members and \$25 for students and seniors.

**SMCAS, at PO Box 974, Station A, San Mateo, CA 94403**

Check one: ( ) New member ( ) Membership renewal ( ) Address or info change

**NOTE TO EXISTING MEMBERS: do not fill in address etc. unless it's changed!**

Name(s) \_\_\_\_\_

Address/City/Zip: \_\_\_\_\_

Phone(s) \_\_\_\_\_ Email \_\_\_\_\_

Meetings of the San Mateo County Astronomical Society are held the **first Friday of the month (except in July and August)** in the Planetarium at the College of San Mateo, located at 1700 West Hillsdale Blvd. in San Mateo. Exit Hwy. 92 at West Hillsdale Blvd. and, proceed uphill through the second and third sets of traffic lights until you come to the first stop sign, where you enter the campus, and continue straight. After the third stop sign, turn into the first parking lot on the right. This is Lot 7. The planetarium is directly ahead of you. Enter the building (36) through the door facing the parking lot.

**Officers: President:** Edmund Pieret; **Vice-President:** Chanan Greenberg; **Secretary:** John Fiske; **Treasurer:** Marion Weiler

**Board Members-At-Large:** Bob Franklin, Bob Frommer, Ken Lum, Mike Ryan.

**Membership:** open position **Newsletter:** Dave Wolf, Ron Cardinale, Darryl Stanford, John Garis, Bob Fies.

**Program:** Marion Weiler, **Publicity:** open position; **Reporter:** open position

**Event Horizon Editor:** Dave Wolf **NOTE:** We welcome articles and photos submitted by the 15th of the month prior to publication.

**Contacts:**

**Website:** <http://www.smcas.com>

**Email:** [SMCAS@live.com](mailto:SMCAS@live.com)

**Telephone:** Ed Pieret at (650) 862-9602



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