

The SAN MATEO COUNTY ASTRONOMICAL SOCIETY

July-August, 2011 588th 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

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 or call (650) 862-9602.

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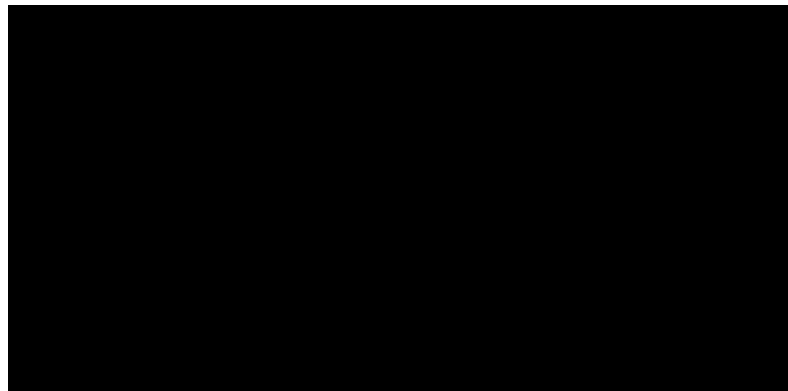
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UNIVERSE CLOSED FOR JULY-AUGUST

(Stars, galaxies shut down to save energy)

Your friendly SMCAS astronomers, professional and amateur, are taking a summer break, except for events like our annual Banquet, the Star-B-Que at Hidden Villa and Crestview Star Parties.

See the flyers inside this special July-August issue to learn all the fun details.



View of night sky during July-August. (See above.)

MONTHLY STAR PARTIES

Crestview Park in San Carlos

**Saturday 7/2/2011, 7/23/2011,
7/30/2011, 8/20/2011, 8/27/2011**

ANNOUNCEMENTS

Sending a Student to Mars! A SMART Project Update

By Marion Weiler

In July we will ‘launch our student to Mars’. Our SMCAS member and CSM astronomy student Luis Alvarez will depart Moffett Field on an Air National Guard C-130 aircraft. He will be bound for the Haughton-Mars Project Research Station (MMPRS) at Haughton Impact Crater on Devon Island in the High Arctic for a three week field trip. While on this trip, he will assist in conducting the SMART site location study, as well as assist on a variety of scientific and engineering endeavors, from helping test space suits and robotic arms, to astrobiology experiments in the permafrost.

Similar to traveling to Mars, Luis will not be traveling in a straight line.

He will be traveling via Vancouver, BC; Yellowknife, Northern Territories; and finally Resolute Bay, Nunavut, one of the northernmost cities in Canada, far North of the Arctic Circle at almost 75 degrees North latitude. In the native [Inuktitut](#) language, Resolute Bay is called ‘Qausuittuq’ (ᑕᑭᑭᑦᑭᑦᑭᑦ) *literally* “place with no dawn”. Fortunately, in summer this means the sun will never set on Luis! This trip will not only launch our student on an incredible journey and educational experience, but will help launch CSM’s Astronomy program in new directions, making it a visible star among the community college astronomy programs in the US. This journey for Luis and CSM is being made possible generous donations from SMCAS members and others. Thank you all!! Much appreciated! We were able to raise the minimum needed (\$6,000) for Luis’s travel costs, but continue to need to raise funds for his incidental expenses and a stipend. So, additional SMART donations gladly accepted!



Luis and CSM’s Mohsen Janatpour After a SMART planning meeting at the SETI Institute (one of the SMART Project partners) in Mountain View.



Dr.Pascal Lee (R), Luis Alvarez, Marion Weiler at SMART planning session at CSM.

From the Prez:

The SMART Project

I would like to thank everyone who contributed to the SMART project. As a result of your generosity, we were able to raise enough money to fund sending a representative to the Haughton-Mars Project in the high Arctic with Dr. Pascal Lee this month. We still need additional funds to help pay for incidentals, but we have enough to schedule the trip.

The representative we have chosen is Luis Alvarez, who will be going as a student intern. Louis is both a student at CSM and a member of SMCAS.



During his time in the Arctic, Louis will be scouting out a location for the SMART scope. He will also be involved in various projects with the Mars Institute such as testing space suits, experimenting with different designs for human transport and testing robots.

As can be seen from this photograph taken last year, the area is quite desolate which makes it ideal for simulation a Mars environment. The lack of any civilization within hundreds of miles and the long arctic night is the reason that it would make a great telescope site.

Beyond the SMART telescope, this project will provide significant advantages to CSM and SMCAS. It will help CSM accredit a degree in astronomy and will provide publicity and prestige for their astronomy program.

SMCAS benefits from the prestige of working with The Mars Institute and the SETI institute which will help us with recruiting members and attracting speakers. We can also expect to receive significant publicity because of the project. Another major benefit is that it strengthens the relationship between SMCAS and CSM.

ANNUAL INSTALLATION-OF-OFFICERS BANQUET

Although there is no SMCAS meeting in July, we do have our annual members-only banquet. This is a tradition that dates back to the founding of SMCAS.

Once again, we will be holding the banquet at the beautiful Waterfront Restaurant in Redwood City.

Members are asked to purchase an entree for each guest. Coffee, decaffeinated coffee or hot tea are included and SMCAS is providing hors d'oeuvres and desert. Drinks, including alcoholic drinks, can be purchased.

Please let us know if you are planning to attend by filling out and mailing the form on the next page. If you prefer, you can reserve and pay for your entree by credit card online on our website at http://www.smcas.com/events/2011_banquet/

You can also let us know if you are coming by dropping a note to SMCAS@live.com and paying by cash or check at the door. If you would like to come but are not sure if you can make it, let us know and pay at the door.

Come early and enjoy the view and fellowship.

Hidden Villa Star-B-Que

Once again, SMCAS will have a Star-B-Que at Hidden Villa. The event combines food, a public Star Party with a chance to meet astronomers from other bay area clubs. The event will be held on August 6th starting at 6:00PM followed by a show featuring our friend Dave Rodrigues, the AstroWizard. After Dave's show there will be a public Star Party. See Page 5 for details and directions.

Ed Pieret, President
(650)862-9602

San Mateo County Astronomical Society
SMCAS@live.com

2011 S.M.C.A.S. ANNUAL INSTALLATION-OF-OFFICERS BANQUET

Our annual Installation of Officers Banquet will be held on July 16th, at the Waterfront Restaurant, #1Uccelli Blvd, Redwood City. See their map at <http://www.waterfrontrwc.com>). Come for no-host cocktails at 6:00PM, dinner at 7:00PM Members not able to attend the dinner are invited, without charge, to the program, starting about 8:15PM in the first-floor meeting room.

Astronomy Program to be Announced

All meals will be served with a salad, potatoes du jour and vegetables, bread & butter, chocolate sundae for dessert, coffee/decaf, or hot tea. Tax and tip are included in the price. The Society will provide trays of hors d'oeuvres during the no-host cocktail hour. Wines, (chardonnay, white zinfandel, merlot and cabernet) are available starting at \$20 the bottle.

Come early to mix and mingle, to enjoy the view, appetizers and the company of fellow astronomers! Bring a favorite book, gadget, 'scope, etc. for Show & Tell.

Entree choices are:

| | | | |
|--------------------|---------|-----------------|---------|
| Linguini Primavera | \$16.95 | Chicken Marsala | \$23.95 |
| Grilled Salmon | \$25.95 | New York Steak | \$28.95 |

Parents (or grandparents) bringing kids under 13 may buy them a hot dog, burger, sandwich or chicken nuggets, drink, dessert, tax & tip for \$12, or order a kid's a la carte entrée for \$9.

To reserve, fill out the following form and mail it with check for SMCAS, to: SMCAS, PO Box 974 Station A, San Mateo, CA 94404.

| | | |
|-------|---------------|----------|
| _____ | _____ | \$ _____ |
| Name | Entree choice | Cost |

| | | |
|-------|---------------|----------|
| _____ | _____ | \$ _____ |
| Name | Entree choice | Cost |

| | | |
|-------|---------------|----------|
| _____ | _____ | \$ _____ |
| Name | Entree choice | Cost |

| | | |
|-------|---------------|----------|
| _____ | _____ | \$ _____ |
| Name | Entree choice | Cost |

Total Amount of Check Enclosed \$ _____

If you would like to pay by Credit Card, go to http://www.smcas.com/events/2011_banquet/.

To pay at the door (**Cash or Check only**) send a note to SMCAS@live.com to let us know you are coming.

For questions re the banquet, contact Ed Pieret at (650) 862-9602, or epieret@comcast.net. For questions about the menu or venue, call Jose, restaurant manager, at (650) 298-9896.

Annual Hidden Villa Star-B-Que

On August 6 we will again be holding our annual Hidden Villa Star-B-Que. The event starts with a scrumptious Bar-B-Que for members and guests 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.

The difference this year is that the Peninsula Astronomical Society will no longer be a joint sponsor. Instead, we will invite members from all the local astronomical societies to join us. Members of other clubs will be asked to contribute to the cost of the event, although it will remain free for SMCAS members and their guests.

The astronomers attending will have free admission to the park and 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 other club members, meet other Bay Area astronomers 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 so that we have enough Bar-B-Que meat for everyone.



The Astro Wizard in action

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.





Finding Planets among the Stars

by Dr. Tony Phillips

Strange but true: When it comes to finding new extra-solar planets, or exoplanets, stars can be an incredible nuisance.

It's a matter of luminosity. Stars are bright, but their planets are not. Indeed, when an astronomer peers across light years to find a distant Earth-like world, what he often finds instead is an annoying glare. The light of the star itself makes the star's dim planetary system nearly impossible to see.

Talk about frustration! How would *you* like to be an astronomer who's constantly vexed by stars?

Fortunately, there may be a solution. It comes from NASA's Galaxy Evolution Explorer, an ultraviolet space telescope orbiting Earth since 2003. In a new study, researchers say the Galaxy Evolution Explorer is able to pinpoint dim stars that might not badly outshine their own planets.

"We've discovered a new technique of using ultraviolet light to search for young, low-mass stars near the Earth," said David Rodriguez, a graduate student of astronomy at UCLA, and the study's lead author. "These M-class stars, also known as red dwarfs, make excellent targets for future direct imaging of exoplanets."

Young red dwarfs produce a telltale glow in the ultraviolet part of the electromagnetic spectrum that Galaxy Evolution Explorer can sense. Because dwarf stars are so numerous—as a class, they account for more than two-thirds of the stars in the galaxy—astronomers could reap a rich bounty of targets.

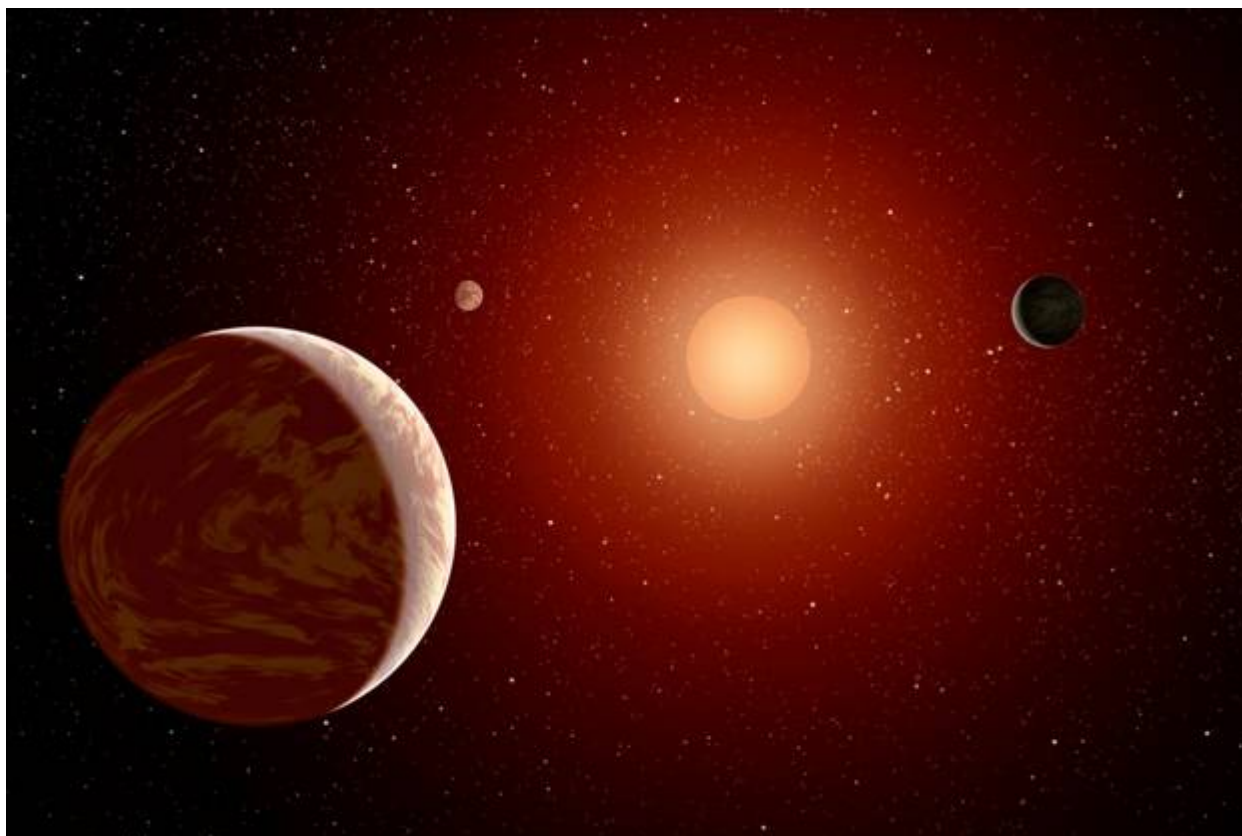
In many ways, these stars represent a best-case scenario for planet hunting. They are close and in clear lines-of-sight, which generally makes viewing easier. Their low mass means they are dimmer than heavier stars, so their light is less likely to mask the feeble light of a planet. And because they are young, their planets are freshly formed, and thus warmer and brighter than older planetary bodies.

Astronomers know of more than five hundred distant planets, but very few have actually been seen. Many exoplanets are detected indirectly by means of their "wobbles"—the gravitational tugs they exert on their central stars. Some are found when they transit the parent star, momentarily dimming the glare, but not dimming it enough to reveal the planet itself. The new Galaxy Evolution Explorer technique might eventually lead to planets that can be seen directly. That would be good because, as Rodriguez points out, "seeing *is* believing."

And it just might make astronomers feel a little better about the stars.

The Galaxy Evolution Explorer Web site at <http://www.galex.caltech.edu> describes many of the other discoveries and accomplishments of this mission. And for kids, how do astronomers know how far away a star or galaxy is? Play "How Old do I Look" on The Space Place at <http://spaceplace.nasa.gov/whats-older> and find out!

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



Exoplanets are easier to see directly when their star is a dim, red dwarf.

General Meeting Notes – June 3, 2011

About 45 people came to the General Meeting in the College of San Mateo Planetarium, which was preceded by a social half-hour with pizza and beverages. President Ed Pieret made a few announcements about upcoming events (Star Parties, Jazz Under the Stars, the Annual Banquet on July 16th) and no General Meeting during either July or August. Ed also made a pitch for donating funds to the SMART project (sending a CSM astronomy student, Luis Alvarez, to the Houghton-Mars Project Research Station, Devon Island, in the far Canadian Arctic this summer. See the SMCAS website for information.






Per the SMCAS by-laws, an election was held for the four club officer positions and the five at-large Board positions. No nominations had been made since the last General Meeting, nor at this Meeting, other than the slate of candidates (all incumbents) proposed by the Board, and the slate was elected by voice vote. Accordingly, the following will be re-installed at the July 16th Banquet:

President: Ed Pieret Vice President: Chanan Greenberg Secretary: John Fiske
Treasurer: Marion Weiler At-large Board Members: Ken Lum, Mike Ryan,
Murad Hamidouche, Bill Shelander and Bob Franklin

The lack of other nominees is disappointing ... the Board needs new “blood”!

The featured presentation was given by Dr. Russ Belikov, Astrophysicist, NASA Ames Research Center, *Direct Imaging of Earth-like Planets*. Dr. Belikov reviewed the four detection methods and results to date, including those of the Kepler Mission. Future direct-imaging will present incredible technological challenges. For example, designing an optical system that can image two objects, one of which is 30 magnitudes brighter than the other, and the two objects are separated by a mere one-tenth of an arc second. Dr. Belikov reviewed the reasons why mirror-based systems hold more promise than lens-based systems.

July 2011

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--------|-----------------------|---------|-----------|----------|---|---|
| | | | | | 1 New Moon  Partial Solar Eclipse | 2 Crestview Star Party |
| 3 | 4 Independence Day | 5 | 6 | 7 | 8 First Quarter  Planetarium Show | 9 Jazz Under the Stars |
| 10 | 11 | 12 | 13 | 14 | 15 Full Moon  | 16 Annual SMCAS Banquet |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 Last Quarter  Crestview Star Party |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 New Moon  Crestview Star Party |
| 31 | | | | | | |

2011 - PDT

| | <u>Jul 2 Rise</u> | <u>Jul 2 Set</u> | <u>Jul 23 Rise</u> | <u>Jul 23 Set</u> | <u>Jul 30 Rise</u> | <u>Jul 30 Set</u> |
|------------------------|-------------------|------------------|--------------------|-------------------|--------------------|-------------------|
| Sun | 5:52 AM | 8:34 PM | 6:05 AM | 8:25 PM | 6:11 AM | 8:19 PM |
| Moon | 7:19 AM | 9:38 PM | 12:07 AM | 2:19 PM | 6:10 AM | 8:11 PM |
| Mercury | 7:26 AM | 9:56 PM | 8:22 AM | 9:35 PM | 8:15 AM | 9:11 PM |
| Venus | 4:59 AM | 7:41 PM | 5:33 AM | 8:04 PM | 5:47 AM | 8:07 PM |
| Mars | 3:40 AM | 6:07 PM | 3:13 AM | 5:54 PM | 3:05 AM | 5:48 PM |
| Jupiter | 2:01 AM | 3:21 PM | 12:47 AM | 2:13 PM | 12:21 AM | 1:49 PM |
| 12 AM next day, E=left | e i J g c | | c e i J g | | e i c J g | |
| Red Spot transit | 11:43 PM | | 2:05 AM on 24th | | 2:51 AM on 31st | |
| Saturn | 1:14 PM | 1:09 AM | 11:56 AM | 11:45 PM | 11:31 AM | 11:19 PM |
| Uranus | 12:41 AM | 12:51 PM | 11:14 PM | 11:28 AM | 10:46 PM | 11:00 AM |
| Neptune | 11:11 PM | 10:06 AM | 9:47 PM | 8:41 AM | 9:19 PM | 8:13 AM |
| Pluto | 7:49 PM | 5:56 AM | 6:25 PM | 4:31 AM | 5:57 PM | 4:03 AM |

August 2011

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---|--------|---------|-----------|----------|--------|--|
| | 1 | 2 | 3 | 4 | 5 | 6 First Quarter  Hidden Villa Star-B-Que |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 Full Moon  |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 Crestview Star Party |
| 21 Last Quarter  | 22 | 23 | 24 | 25 | 26 | 27 Crestview Star Party |
| 28 New Moon  | 29 | 30 | 31 | | | |

2011 - PDT

| | <u>Aug 20 Rise</u> | <u>Aug 20 Set</u> | <u>Aug 27 Rise</u> | <u>Aug 27 Set</u> |
|--------------------------------|--------------------|-------------------|--------------------|-------------------|
| Sun | 6:29 AM | 7:55 PM | 6:35 A M | 7:46 PM |
| Moon | 11:16 PM | 1:05 PM | 4:58 A M | 6:42 PM |
| Mercury | 6:07 AM | 7:17 PM | 5:25 A M | 6:53 PM |
| Venus | 6:34 AM | 8:03 PM | 6:49 A M | 7:59 PM |
| Mars | 2:43 AM | 5:25 PM | 2:37 A M | 5:16 PM |
| Jupiter | 10:59 PM | 12:33 PM | 10:32 P M | 12:06 PM |
| 3 AM on next day, East on left | e i J g c | | c e i g J | |
| Red Spot transit | 7:15 PM | | 8:01 PM | |
| Saturn | 10:17 AM | 10:00 PM | 9:53 A M | 9:34 PM |
| Uranus | 9:23 PM | 9:35 AM | 8:54 P M | 9:07 AM |
| Neptune | 7:55 PM | 6:47 AM | 7:27 P M | 6:19 AM |
| Pluto | 4:33 PM | 2:39 AM | 4:05 P M | 2:11 AM |

Meet Bill Shelander, SMCAS Board Member

Note: this is the eighth in a series of biographies introducing active club members. The previous seven bios featured Bob Black, Ron Cardinale, Leroy Amen, Bob Fies, Bob Franklin, Marion Weiler, and Chanan Greenberg, respectively.

Bill's interest in astronomy started with Boy Scout activities, *using the stars to navigate during night treks, and telling stories about the constellations was great campfire entertainment.* Later Bill used the stars for navigation and entertainment during two sailing transits of the Pacific Ocean, and introduced his children to the wonders of stars, constellations, satellites and meteors during camping trips in the Sierra Nevada mountains, teaching them the reasons for Moon phases, causes of seasons, and other natural environmental phenomena.

Bill came to his first SMCAS General Meeting around 1999 with his son Ace, who was interested in science. The speaker discussed measuring Type 1-A supernovae, and the unexpected indication of the accelerating expansion of the Universe. Bill was hooked. Current interests are cosmology and astrophysics. *How stars, planets, solar systems, galaxies, and multi-verses are formed continue to intrigue me. I like to know how things work.*

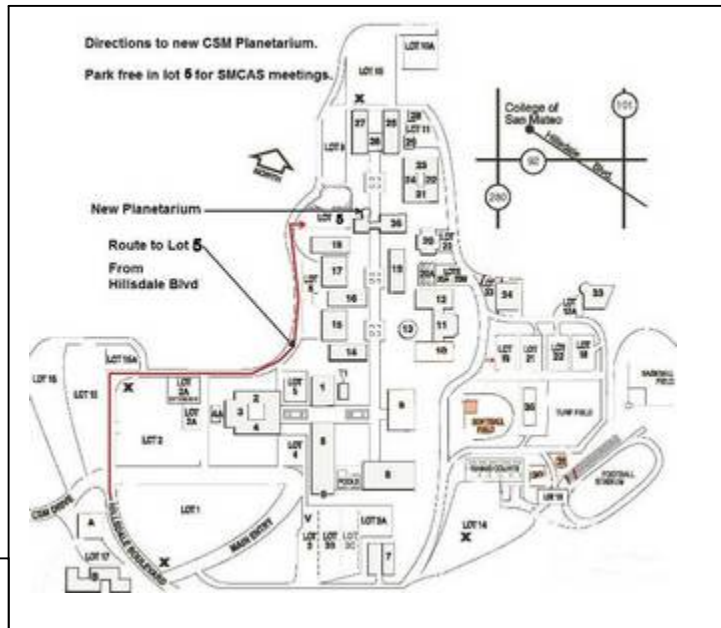


Besides serving as an At-Large Board Member, Bill likes to help new visitors participate in Club activities, or discover new interests at Astronomy Day. *Technologies have enabled profound new human understanding, and I believe it is our responsibility to pass that knowledge on to everyone who is open to learning. I enjoy seeing that spark of insight when kids and their parents learn something new. Astronomy brackets a rather wide range of interests from building telescopes and positioning computer controls to launching rockets and programming autonomous robots. The hands-on making of things attracts very creative people and the constant learning of new knowledge stimulates the intellect. Astronomy has truly opened some new horizons for me.*

Bill described several “most interesting astronomical experiences.” These included *climbing inside telescopes at Lick Observatory on Mt. Hamilton, the radio telescope arrays in Owens Valley and White Mountains, and the Stanford Radio Telescope; watching Neil Armstrong set foot on the Moon; seeing Space Shuttles blast off and land; and listening to George Smoot and Saul Perlmutter talk about Dark Matter and Dark Energy have left bright memories.*

Bill's day job is the Entrepreneurial and Business Development Specialist for Lawrence Berkeley National Laboratory. He has an MBA from Stanford and a Masters in Engineering from West Virginia College, and has had over 20 years experience managing venture funds and start up companies.

Text by John Fiske; photo (very official-looking) provided by Bill.



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 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, Ken Lum, Mike Ryan, Murad Hamidouche.

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

Telephone: Ed Pieret at (650) 862-9602



SMCAS
P.O. Box 974
Station A
San Mateo, CA 94403