

The SAN MATEO COUNTY ASTRONOMICAL SOCIETY

October, 2010 578th General Meeting Notice



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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EVENT HORIZON



It is with great sadness that we mark the passing of Bob Frommer. Bob was a 20 year member of SMCAS and served on our board of directors for 10 years. He died on September 24, 2010.

The photo shows Bob at a recent SMCAS Christmas Party

A Star is Born!

(The original story has nothing to do with Hollywood)

When stars are born, they often come in litters. (Usually called clusters.) Recent work with infrared telescopes seems to indicate that ALL stars are born in compact groups. Dr. Steven Stahler, UC Berkeley astrophysicist, will discuss star formation, a subject on which he co-authored the first textbook. Just as some women can't resist adorable infants, Steve gets all googly over those first awkward moments when hydrogen gas coalesces into an adorable protostar. He'll share his baby pictures with anyone who shows up at the planetarium dome on Friday October 1 at 7:30. (See page 9 for directions.)

MONTHLY STAR PARTIES

**Crestview Park in San Carlos
Saturday October 2, 9 and 30**

See page 9 for directions
See page 7 bottom of calendar for rise & set times

ANNOUNCEMENT

Friday, October 1, 7:30pm

SPEAKER: Dr. Steven Stahler

TOPIC: The Birth of Star Clusters

TIME: 7:30pm October 1

WHERE: [The CSM Planetarium](#) Free and open to the public



Star Variability a Key to Understanding their Life Cycles

Stars are forming all around us, all the time. While a few are clumped into well-known groups, the vast majority seem to be randomly scattered throughout space. However, we have discovered that all stars are in fact born into compact groups. These primordial clusters can only be seen with the aid of infrared telescopes.

Once the young stars become visible, most are in loose associations that disperse in a few million years. A small fraction are in open clusters, which survive for a much longer time. Dr. Stahler will present a unifying theory for these observations, and also draw the connection to globular clusters.



Dr. Steven Stahler is an astrophysicist at U. C. Berkeley. Raised in Maryland, he attended graduate school at Berkeley in physics. He was a professor at MIT before returning to the Bay Area in 1992. His research centers on the grand problem of star formation, and he coauthored the first textbook in this field. Steve is an accomplished artist, and especially delights in the deep esthetic appeal of his subject. This is an aspect he tries to convey in his numerous public appearances.

From the Prez:

Astronomy Day is October 16. SMCAS will celebrate it from 4:00 p.m. to 11:00 p.m. at CSM. From the beginning to 7:00 p.m. will be a time for exhibits, demonstrations, crafts, videos and Planetarium Shows and will be followed by observing at the CSM observatory.

We have much more material available for exhibits and demonstrations than there are members willing to serve as exhibitors. The material we have comes with posters, models, instructions and extensive background information. We also have videos demonstrating the use of these materials. Topics include PlanetQuest; Our Galaxy, Our Universe; Black Hole Survival; Telescopes: Eyes on the Universe; Shadows & Silhouettes; Exploring the Solar System and Supernova. If any of these topics interest you let me know and I will get material to you and set you up as an exhibiter.

As we enter the fall season the observing will change. It will be getting dark sooner, so observing will move into the early evening which opens it up to school age children. As we switch into fall constellations, new objects become visible.

Of course, weather is more a problem as we get into our rainy season, but on clear nights the seeing is often much better than in the summer. Jupiter will dominate the sky throughout the next several months. With its retinue of four large moons, it is a great target, even for small telescopes. The moons can be seen to move over an hour's time and it's a great way to repeat some of Galileo's observations.

Speaking of small telescopes and Galileo, we have ordered a limited number of GalileoScopes. We'll make these available for members and the general public at our cost, \$30. The telescope comes as a kit which can be a little tricky to assemble. During Astronomy Day we'll have a workshop for assembly run by members who have done it before.

The GalileoScope has amazing optics for such an inexpensive telescope. I have observed the phases of Venus, the moons of Jupiter and craters on the moon with one of these and the view rivals telescopes costing hundreds of dollars.

The GalileoScope has some limitations You do have to provide your own photographic tripod and it uses sights similar to a rifle for aiming. The focusing is a simple draw tube and like most astronomical telescopes the view is reversed and inverted so it is not good for terrestrial observing.

If you would like to purchase one of these, either for your own enjoyment or as a gift to inspire someone else, let me know. First priority will go to SMCAS members and any GalileoScopes remaining will be offered to the public on Astronomy Day.

Ed Pieret, President
SMCAS@live.com

San Mateo County Astronomical Society
(650)862-9602



SAN MATEO COUNTY
ASTRONOMICAL SOCIETY



ASTRONOMY DAY

Saturday, October 16, 2010

4:00 – 11:00 p.m.

Activities and parking are



FREE



BUILDING 36 – SCIENCE BUILDING

College of San Mateo.

(directions and maps on www.smcas.com)

**Get your kids interested in Astronomy and
spark a lifelong interest in science.**

Events Include

- Continuous Planetarium Shows.
- How telescopes work.
- Space Videos.
- The search for planets around other stars.
- Hands on demonstrations.
- Astronomical instruments for your kids to construct.
- Purchase and assemble a quality Astronomical Telescope for \$30.
- Viewing the night sky through telescopes from 7:30PM to 11:00PM.



The Hunt is On!

By Carolyn Brinkworth

The world of astronomy was given new direction on August 13, 2010, with the publication of the Astro2010 Decadal Survey. Astro2010 is the latest in a series of surveys produced every 10 years by the National Research Council (NRC) of the National Academy of Sciences. This council is a team of senior astronomers who recommend priorities for the most important topics and missions for the next decade.

Up near the top of their list this decade is the search for Earth-like planets around other stars—called “extrasolar planets” or “exoplanets” —which has become one of the hottest topics in astronomy.

The first planet to be found orbiting a star like our Sun was discovered in 1995. The planet, called “51 Peg b,” is a “Hot Jupiter.” It is about 160 times the mass of Earth and orbits so close to its parent star that its gaseous “surface” is seared by its blazing sun. With no solid surface, and temperatures of about 1000 degrees Celsius (1700 Fahrenheit), there was no chance of finding life on this distant world. Since that discovery, astronomers have been on the hunt for smaller and more Earth-like planets, and today we know of around 470 extrasolar planets, ranging from about 4 times to 8000 times the mass of Earth.

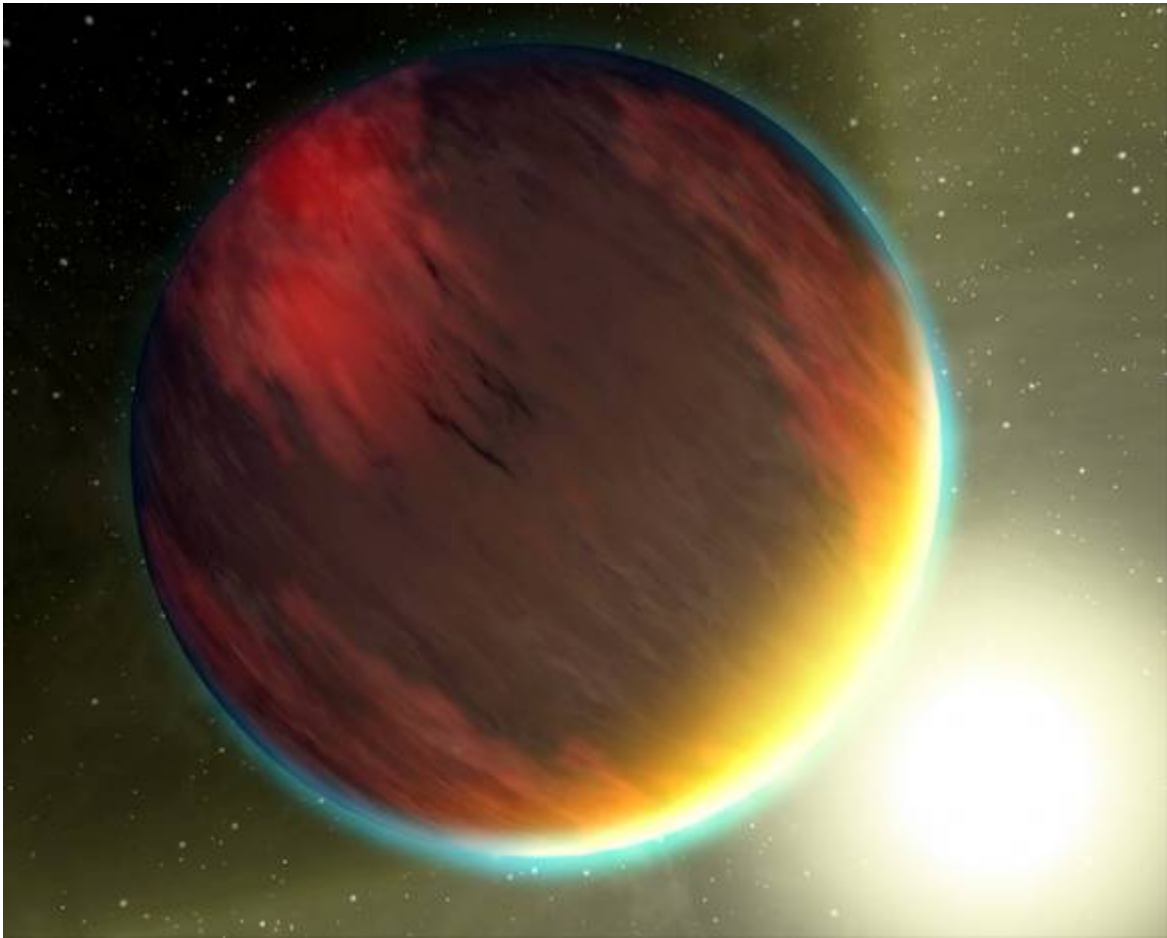
This explosion in extrasolar planet discoveries is only set to get bigger, with a NASA mission called Kepler that was launched last year. After staring at a single small patch of sky for 43 days, Kepler has detected the definite signatures of seven new exoplanets, plus 706 “planetary candidates” that are unconfirmed and in need of further investigation. Kepler is likely to revolutionize our understanding of Earth's place in the Universe.

We don't yet have the technology to search for life on exoplanets. However, the infrared Spitzer Space Telescope has detected molecules that are the basic building blocks of life in two exoplanet atmospheres. Most extrasolar planets appear unsuitable for supporting life, but at least two lie within the “habitable zone” of their stars, where conditions are theoretically right for life to gain a foothold.

We are still a long way from detecting life on other worlds, but in the last 20 years, the number of known planets in our Universe has gone from the 8 in our own Solar System to almost 500. It's clear to everyone, including the Astro2010 decadal survey team, that the hunt for exoplanets is only just beginning, and the search for life is finally underway in earnest.

Explore Spitzer's latest findings at <http://www.spitzer.caltech.edu>. Kids can dream about finding other Earths as they read “Lucy's Planet Hunt” at <http://spaceplace.nasa.gov/en/kids/storybooks/#lucy>.

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



Artist's rendering of hot gas planet HD209458b. Both the Hubble and Spitzer Space Telescopes have detected carbon dioxide, methane, and water vapor—in other words, the basic chemistry for life—in the atmosphere of this planet, although since it is a hot ball of gas, it would be unlikely to harbor life.

See other surprising UV images from the Galaxy Evolution Explorer at <http://www.galex.caltech.edu>. Kids (and grownups) can play the challenging new Photon Pileup game at <http://spaceplace.nasa.gov/en/kids/galex/photon/>.

Play and Learn

Clues from Ancient Light - With the GALEX space telescope, astronomers know the age of a source's light by its degree of red shift. In this learning-by-analogy activity, kids arrange pictures of familiar objects by judging which is older.





Make your own 2-D Flying Nanosat!

Make a Robo-Puzzle . . . Then Just Try to Solve It!

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 Error! Hyperlink reference not valid. Check them out at <http://www.scopecity.com>



October 2010

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1 SMCAS Meeting	2 Crestview Star Party
3	4	5	6	7  New Moon 10:44 PT	8 "The Sky Tonight" Planetarium Show	9 Crestview Star Party
10	11	12	13	14  First Quarter 13:27 PT	15	16 ASTRONOMY DAY
17	18	19	20	21	22  Full Moon 17:36 PT	23
24	25	26	27	28	29	30  Last Quarter 04:46 PT Crestview Star Party
31						

2010	<u>Oct 2 Rise</u>	<u>Oct 2 Set</u>	<u>Oct 9 Rise</u>	<u>Oct 9 Set</u>	<u>Oct 30 Rise</u>	<u>Oct 30 Set</u>
Sun	7:06 AM	6:51 PM	7:12 AM	6:40 PM	7:32 AM	6:13 PM
Moon	1:04 AM	3:35 PM	9:36 AM	3:46 PM	12:04 AM	2:11 PM
Mercury	6:13 AM	6:30 PM	6:47 AM	6:32 PM	8:20 AM	6:33 PM
Venus	10:02 AM	7:45 PM	9:37 AM	7:17 PM	7:24 AM	5:37 PM
Mars	9:48 AM	8:14 PM	9:44 AM	8:00 PM	9:36 AM	7:25 PM
Jupiter	6:19 PM	6:06 AM	5:49 PM	5:34 AM	4:18 PM	4:03 AM
	9 PM E. left	i J e g c		i J c e g		c J g
Red spot		9:23 PM		10:08 PM		12:26 AM on 31st
Saturn	6:54 AM	6:54 PM	6:31 AM	6:29 PM	5:20 AM	5:13 PM
Uranus	6:19 PM	6:13 AM	5:51 PM	5:45 AM	4:22 PM	4:19 AM
Neptune	4:52 PM	3:37 AM	4:24 PM	3:09 AM	3:01 PM	1:46 AM
Pluto	1:28 PM	11:37 PM	1:01 PM	11:10 PM	11:41 AM	9:49 PM
M42	12:07 AM	11:37 AM	11:39 PM	11:10 AM	10:17 PM	9:47 AM

Meet Bob Black

This is the first of a series, one per issue of the *Event Horizon*, about SMCAS members, how they got interested in astronomy, current astronomy activities and equipment, and other items of interest to the membership.



Bob Black, a resident of San Carlos, became interested in astronomy because of an influential third grade teacher. He followed up by reading in the family encyclopedia and later gift astronomy books. During a college summer vacation Bob ground, figured, and silvered a 6-inch diameter mirror, using an Edmund Scientific Corp. kit with instruction book. This mirror has been used in various home-made alt-azimuth mounts, attended several Glacier Point star parties, and now “resides” with Bob’s son in southern California.

Bob has been a SMCAS member for 25 years (plus or minus a couple), and somehow has escaped holding any club offices in all that time.

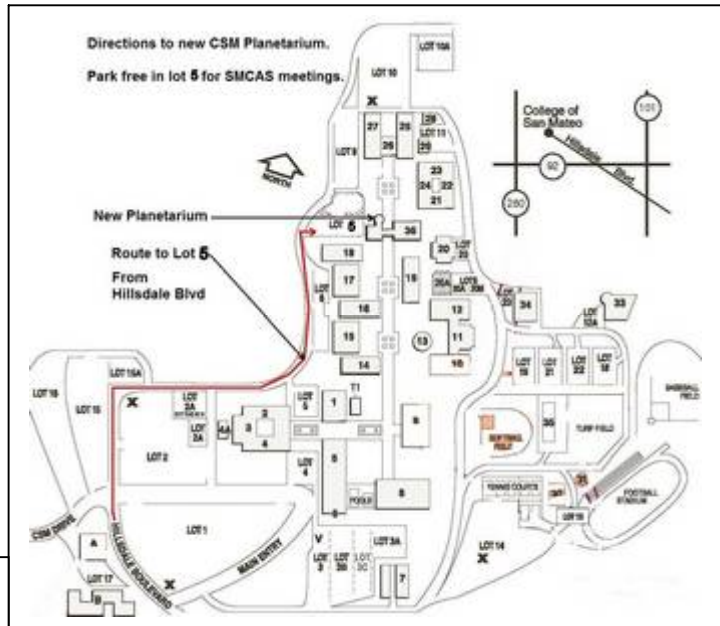
Bob is very interested in public outreach. A fine teacher, he was involved with the Astronomical Society of the Pacific’s (ASP) “Project Astro” for several years ... until his teacher partners got promoted. Now he’s working with the ASP “Family Astro” program, and thoroughly enjoys bringing astronomy to children. He says he is “surprised and delighted by their responses.” Also, Bob is the SMCAS liaison to the San Carlos Parks and Recreation Department for the purpose of using the Crestview Park for SMCAS star parties.

Other current interests include promoting dark skies by monitoring local urban “improvements” and developments that include outdoor lighting, and pressing for good lighting practices.

Currently he has three telescopes: a 60-mm Orion alt-azimuth refractor, an “ancient” 8-inch Celestron C-8 reflector, and a 10-inch Dobsonian reflector. Bob likes them all.

When pressed to name his most memorable astronomical experience, Bob narrowed his favorites to four: the 2001 Leonid meteor shower and three solar eclipses (1991 in Baja California, 1999 in the Black Sea, and 2006 in Egypt).

Text by John Fiske. Thanks to Chanan Greenberg for the composite photo.



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:

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