

The SAN MATEO COUNTY ASTRONOMICAL SOCIETY

October, 2008 554th 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.

SUN QUILTS SOLAR SYSTEM TO LAUNCH SOLO CAREER!!

(Bright future forecast for singing star)

Dr. Phil Scherrer, Research Professor at Stanford's Department of Physics, Center for Space Science and Astrophysics, and Hansen Experimental Physics Laboratory, has taken a microphone to the sun. As he explains it, "The sun is just a big ball of gas filled up with sound waves bouncing around in all directions." By tuning into those waves, we can assess the sun's health and its vocal chops. Dr. Scherrer will discuss the HMI (Helioseismic and Magnetic Imager), to be launched in December 2008. The HMI will help scientists decide if the sun is destined for Hollywood or if it will be insulted by Simon Cowell.

For a fascinating talk on this new way to check out the sun, come to the ISC on Friday, October 3, at 7:30.

(See p 9 for directions)

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MONTHLY STAR PARTIES

Crestview Park in San Carlos
Saturday October 4, 18 & 25

See p 9 for directions

See p 8 bottom of calendar for rise & set times

NOTICE: to continue receiving paper copies, you must OPT IN.

To save copying and mailing costs, we invite you to view our online Event Horizon at http://www.smcas.com/newsletter/event_horizon_-_current/ Starting in November, if you still prefer to receive a paper copy in the mail, you will have to fill out and return the form on page 3.

ANNOUNCEMENTS

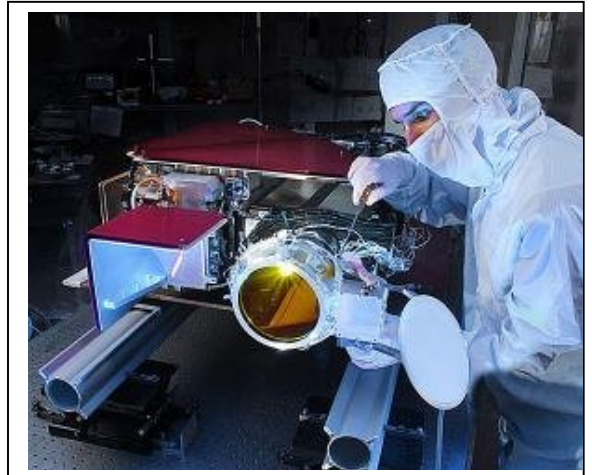
SUN LAUNCHES SINGING CAREER WITH ALBUM OF STANDARDS

(Hits include "Lucky Old Sun" and "Blue Moon")

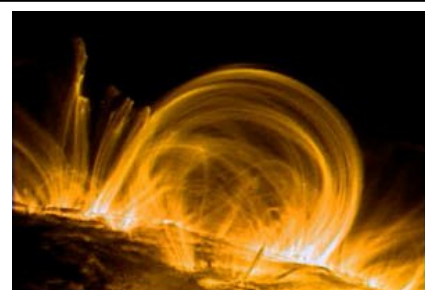
Think of the sun as an acoustic instrument with sound waves continuously rebounding around inside, the way seismic waves reverberate inside Earth. The speed and other characteristics of the waves offers indications of the flows beneath the surface, possibly identifying precursor events that could provide advance warning of dangerous solar storms and sunspots. The study of these waves is the science known as helioseismology, and it is no small task. "It's like deducing the interior structure of a piano by listening to it fall down a flight of stairs," Dr. Scherrer says. The HMI (Helioseismic and Magnetic Imager), to be launched in December 2008, will give scientists a new ear to listen in on the sun, and give the earth and astronauts a better early warning system of potential danger. Dr. Scherrer will talk about the future of helioseismology. The Helioseismic and Magnetic Imager (HMI) investigation is based on measurements obtained with the HMI instrument as part of the Solar Dynamics Observatory (SDO) mission scheduled to launch in December 2008. The goal is to study the origin of solar variability and to characterize and understand the Sun's interior and the various components of magnetic activity. When an Atlas V missile finally lofts the HMI into geosynchronous orbit 22,500 miles above Earth, it will, with total disregard for the usual parental advice, stare directly into the sun. For several years it will record, in unprecedented detail, the behavior of powerful magnetic fields in the sun and the subtle surface undulations that surrender information about crucial activity deep within. Every two seconds, for at least five years, HMI will snap a high-resolution image and download it to a radio link in New Mexico. The HMI was designed in collaboration with Dr Philip Scherrer, HMI Principal Investigator, and other scientists at Stanford University. SDO will carry two other instruments in addition to HMI. The combination of their observations may enable researchers to establish the relationships between the internal dynamics and surface activity, and perhaps better understand the causes of violent solar activity.



Dr Scherrer earned his Ph.D. in Physics at the University of California at Berkeley.



Working on the HMI

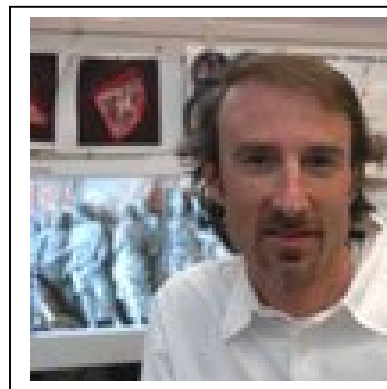


Sun-tracer loops



**FOR NOVEMBER: Reflectance Imaging:
Relighting the Antikythera Mechanism**

November's speaker: Dr. Tom Malzbender of HP Labs will discuss his work with reflectance imaging as it relates to deciphering writing on the Antikythera Mechanism, an ancient Greek geared device possibly used to predict sun and moon positions and predict eclipses. Its mechanical complexity was unmatched for 1000 years.



Event Horizon: Choose Paper or Electronic Version

Members of the SMCAS Yahoo Group who want to receive the Event Horizon electronically needn't do anything. Others please fill out and return this form.

I still need my mailed copy of the Event Horizon!

Member Name _____

I would like to receive the electronic copy but I don't know how to become a member of the Yahoo group. Please send instructions and an invitation to:

Member Name _____

Email Address _____

Mail to: SMCAS, at PO Box 974, Station A, San Mateo, CA 94403 or drop off at any club meeting or event.

NOTE: Due to copyright issues, the Abrams Calendars will no longer be included in the printed versions of the Event Horizon.

From the Prez:

One of the suggestions we received to revitalize the club was to form committees to carry out major functions. This structure will allow more members to become involved in club activities and to spread the work load. It also will allow any members who have any relevant work or hobby related skills to use them to benefit the club.

The board has decided to form four committees as a start. The committees and their responsibility are as follows.

1) Publicity

- a) Publicize SMCAS through the Web, local newspapers, local TV, schools, libraries and any other outlets that the members may suggest
- b) Devise publicity material including handouts, posters and scripts.
- c) Be responsible for the SMCAS Website
- d) Plan and arrange SMCAS presence in other venues such as local fairs.

2) Meetings and facilities

- a) Insure that facilities are available and set up for all meetings
- b) Arrange for special events like the Christmas Party
- c) Provide refreshments for regular meetings

3) Outreach

- a) Plan for major events like Astronomy Day (with other committees)
- b) Arrange for School and Organization star parties,
- c) Plan and conduct lectures and exhibits for local events
- d) Provide materials for members who are presenting to the public.
- e) Keep track of outreach material belonging to SMCAS

4) Equipment

- a) Maintain an inventory of SMCAS owned equipment along with location.
- b) Repair and service the equipment as required
- c) Administer the membership loaner program

I'd like to ask you to consider joining one or more of these committees. It's a great way to contribute to the club and get involved in more than just the Friday meetings. We plan to keep the duties for each committee member light.

I will have sign-up sheets available at the October 3 meeting.

Ed Pieret, President - San Mateo County Astronomical Society



Extreme Starburst

by Dr. Tony Phillips

A star is born. A star is born. A star is born.

Repeat that phrase 4000 times and you start to get an idea what life is like in distant galaxy J100054+023436.

Astronomers using NASA's Spitzer Space Telescope and ground-based observatories have found this galaxy gives birth to as many as 4000 stars a year. For comparison, in the same period of time the Milky Way produces only about 10. This makes J100054+023436 an extreme starburst galaxy.

"We call it the "Baby Boom galaxy," says Peter Capak of NASA's Spitzer Science Center at the California Institute of Technology in Pasadena, CA. "It is undergoing a major baby boom, producing most of its stars all at once. If our human population was produced in a similar boom, then almost all people alive today would be the same age."

Capak is lead author of a paper entitled "Spectroscopic Confirmation of an Extreme Starburst at Redshift 4.547" detailing the discovery in the July 10th issue of *Astrophysical Journal Letters*.

The galaxy appears to be a merger, a "train wreck" of two or more galaxies crashing together. The crash is what produces the baby boom. Clouds of interstellar gas within the two galaxies press against one another and collapse to form stars, dozens to hundreds at a time.

This isn't the first time astronomers have witnessed a galaxy producing so many stars. "There are some other extreme starburst galaxies in the local universe," says Capak. But the Baby Boom galaxy is special because it is not local. It lies about 12.3 billion light years from Earth, which means we are seeing it as it was 12.3 billion years ago. The universe itself is no older than 14 billion years, so this galaxy is just a youngster (Capak likens it to a 6-year-old human) previously thought to be incapable of such rapid-fire star production.

The Baby Boom galaxy poses a challenge to the Hierarchical Model of galaxy evolution favored by many astronomers. According to the Hierarchical Model, galaxies grow by merging; Add two small galaxies together, and you get a bigger galaxy. In the early years of the universe, all galaxies were small, and they produced correspondingly small bursts of star formation when they merged. "Yet in J100054+023436, we see an extreme starburst. The merging galaxies must be pretty large."

Capak and colleagues are busy looking for more Baby Boomers "to see if this is a one-off case or a common occurrence." The theory of evolution of galaxies hangs in the balance.

Meanwhile... A star is born. A star is born. A star is born.

See more breathtaking Spitzer images at www.spitzer.caltech.edu/Media/mediaimages. Kids can play the new Spitzer "Sign Here!" game at spaceplace.nasa.gov/en/kids/spitzer/signs.

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



The “Baby Boom” galaxy loosely resembles the galaxy shown here, called Zw II 96, in this Hubble Space Telescope image. This galaxy is only 500 million light-years away, while the Baby Boom galaxy is 12.3 billion light-years away.

To boost tourism now that 2008 Olympics have ended, China leaders plan solar eclipse for July 22, 2009

If any members are thinking about chasing this long-duration TSE, better start planning now. Tours are already starting to book up. One tour of interest in terms of itinerary and price, has the following website: <http://www.eclipse-chasers.com/esafari/default.htm>. Rick Brown has been an eclipse chaser since 1991, and reporter Jake Silverstein accompanied his group to Turkey in 2006, writing up the trip in the June/July 2006 issue of Seed Magazine. Other tours are also worth checking out, and can be found by Googling China Eclipse 2009 Tours.

NOTE: Anyone interested in booking with Rick needs to contact him. He has some spaces left, but not many. Your editor and his wife have paid their first deposit.

San Mateo County Astronomical Society General Meeting Minutes September 5, 2008

1. Ed made announcements

- a. We are back on schedule for our monthly meetings on the first Friday of the month
- b. The Star Parties for September are on the 20th and 27th
- c. The SMCAS is open to presenting at or helping with school and group events
- d. Jazz Under the Stars is Saturday, September 7 in the observatory at CSM
- e. The next planetarium show is Friday, September 12 at CSM at 7:30pm

2. Changes to the club membership

- a. The Event Horizon is going green to the new e-Horizon
- b. An email link to the document on the SMCAS website will be sent to members
- c. Discontinuing use of the Abrams Calendar
- d. Creating new ID cards
- e. Dues structure is changing. New members will be \$35, renewals \$30 and student and seniors \$25.
- f. If anyone is interested in Astrophotography please see Chanan Greengberg
- g. Suggested forming committees for the following activities
 - i. Committee for Astronomy Day and other events
 1. Coordinate the club to display at fairs to increase membership (waive application fee to encourage sign-ups)
 - ii. Committee for meeting facilities, refreshments, setup, and clean up
 - iii. Committee publicity of club functions
 - iv. Committee for equipment maintenance and inventory

3. SMCAS will be contacting members to verify email addresses

4. SMCAS will consider hosting a Star-B-Que in the fall instead of a summer banquet. Comments welcome.

5. Presentation by Ed on the Supernova

- a. With the help of a few volunteers, Ed showed the group an explosion of a supernova. Each volunteer held a tennis ball and a ping pong ball and dropped them simultaneously to create the effects of an explosion.
- b. Members also viewed the laptop presentation that emphasized the exercise.

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. Check them out at <http://www.scopecity.com>



San Mateo County
Astronomical Society

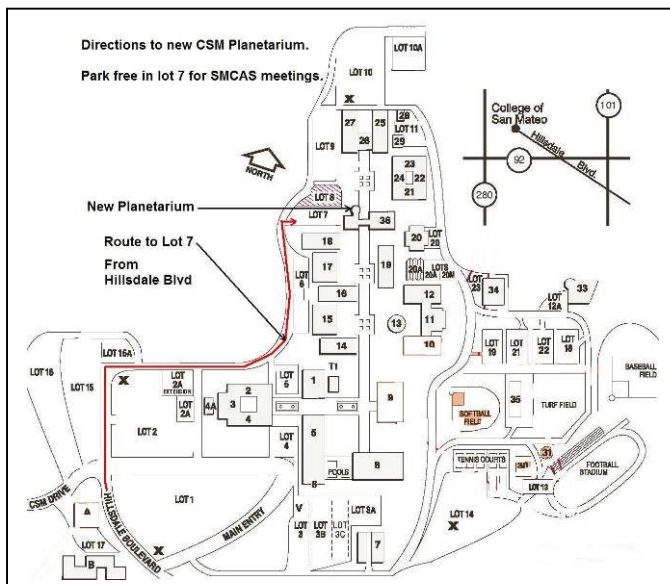
October 2008

Pacific Daylight
Saving Time

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	NM 1:12 AM 6	7	8 Draconid meteors.	9	10 SMCAS Meeting!! Planetarium show @ CSM.	11 Astronomy Day! Jazz Under the Stars.
12	13	14 FQ 2:04 AM	15	16	17 Moon occults Pleiades.	18 Star Party @ Crestview Epsilon Geminid meteors.
19	20	21 Orionid meteors. LQ 4:55 AM	22	23	24 Leo Minorid meteors.	25 Star Party @ Crestview
26	27	28 NM 4:14 PM	29	30	31	

Object	Oct 4 Rise	Oct 4 Set	Oct 18 Rise	Oct 18 Set	Oct 25 Rise	Oct 25 Set
Sun	7:08 AM	6:47 PM	7:21 AM	6:27 PM	7:27 AM	6:18 PM
Moon	12:35 PM	9:47 PM	8:25 PM	12:06 PM	4:16 AM	4:30 PM
Mercury	7:28 AM	6:44 PM	5:53 AM	5:47 PM	6:00 AM	5:40 PM
Venus	9:44 AM	8:07 PM	10:16 AM	8:02 PM	10:31 AM	8:03 PM
Mars	8:39 AM	7:33 PM	8:31 AM	7:04 PM	8:28 AM	6:50 PM
Jupiter	2:22 PM	11:58 PM	1:33 PM	11:10 PM	1:09 PM	10:47 PM
9 PM, E on left red spot transit		c g J i e 5:41 PM		J i e 7:18 PM		c J i e 8:07 PM
Saturn	4:56 AM	5:48 PM	4:09 AM	4:53 PM	3:45 AM	4:28 PM
Uranus	5:49 PM	5:23 AM	4:48 PM	4:26 AM	4:20 PM	3:57 AM
Neptune	4:29 PM	3:05 AM	3:33 PM	2:09 AM	3:06 PM	1:41 AM
Pluto	12:57 PM	11:14 PM	12:03 PM	10:20 PM	11:36 AM	9:53 PM

- Astronomy Day is on the 4th!!
- All four of the moon phases occur on Tuesday this month.-- RC



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 flash-lights 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.

Directions to ISC and 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 Lot 7. The planetarium is directly ahead of you. Enter the building (36) through the door facing the parking lot.

Directions to Crestview Park

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:** Helen Asker; **Treasurer:** Bob Franklin

Board Members-At-Large: Bob Frommer, Ken Lum, Mike Ryan., Marion Weiler, and John Fiske.

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

Program: Marion Weiler, **Publicity:** Helen Asker; **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

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