## The SAN MATEO COUNTY ASTRONOMICAL SOCIETY

July • Aug. 2020 Issue

667th General Meeting: August 18


Founded in 1960, the San Mateo County Astronomical Society is a 501(c)(3) non-profit organization for amateur astronomers and interested members of the public. Visitors may attend Society meetings and lectures on the first Friday of each month, September to June, and star parties two Saturdays a month. All events are free for visitors and guests. Family memberships are offered at a nominal annual cost. Detailed membership information is found at http://www.smcasas-
tro.com/membership.html where those who want can join via PayPal. Membership also includes access to our Event Horizon newsletter, discounted costs and subscriptions to calendars and magazines, monthly star parties of the Society and the College of San Mateo, use of loaner telescopes, field trips, social occasions and general meetings presenting guest speakers and programs. For additional information, please email us at SMCAS@live.com or call (650) 678-2762.

Membership forms are available near the end of this newsletter beginning on page 21.


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## President's Corner

Hi All,

I hope this finds you all healthy in mind, body and soul, and starting to return to normal in your lives. I regret we have not been able to do so as a group, but anticipate that we may see changes by July. From what I hear, we're not likely to have access to CSM's ISC Room, Planetarium, Observatory, classrooms or lobby spaces until at least December. But, with luck, we may have better prospects with Crestview Park, our seasonal church socials, and maybe even some public outreach.
There's been talk of presenting lectures online and member Inge Ruano offers the great idea of ZOOMing or livestreaming virtual star parties, accompanied by live chats. She suggests we might even extend it to the southern sky, (perhaps using other global telescope networks like SLOOH).
The new Unistellar eVscope that Ed Pieret is currently proofing, soon to be joined by other members, will lend itself well to remote viewing and social distancing, since it's small, light, almost fully automatic, and uses an app to provide electronic-stacking imagery to any computer, phone or digital projector, near or far. It also offers a good solution for stargazers from whom age has taken vision, strength and flexibility. Check out Ed's new email group for details, at SMCAS-eVscope@groups.io. Btw, the local SETI Institute, a Unistellar partner, has offered the eVscope at discount for the 3rd time, so it may be offered again in future.

We've just conducted our annual elections. Thanks to those of you who sent in proxies. You've ended up with the same Board as
last year, but that's what happens when, as usual, no members nominate themselves or others. However, we will continue to serve the membership as best we can. Besides yours truly as President, Ed Pieret remains as VP and Outreach Chair, Marion Weiler as Secretary and Speaker's Chair, and Tom McDonough as Treasurer and Member's Chair. Our Directors-at-large continue (alphabetically) to be Ed Ching, Bill Lockman, Ken Lum, Steve Minkin and pastPresident Frank Seminaro.
On Friday, June 12, word came from the Yosemite rep. that the Glacier Point Star Parties have all been canceled, not only for 2020, but for 2021 as well. This, of course, takes out our SMCAS presentations of August 28 and 29. The main issue is COVID19 restrictions which are retarding the planned phased re-opening, as well as reducing facilities and staff. The virus had already caused the club following ours to pull out of its reservation. The Park has also decided to use the shutdown to improve the difficult Glacier Point Road, and that will take until late next year. To receive and review the Park's notification letter to us and the other clubs, please contact me by phone, text or email, as described in the last paragraph below.
Our new Event Horizon Editor, Michelle Morales Torres, has really 'gotten the hang of it' with her excellent May-June issue and should have a much easier time of it with this current issue. We thank her for her dedication.

## President's Corner (cont'd)

With the great work by our member, graphic designer Lisa Cooke, we are about to receive an order of 500 beautifully redesigned SMCAS clothing patches. We're also very close to ordering a few thousand postcard-sized and trifold-brochure handouts (2 sided, full color), along with outreach table signage. Lisa also has designed a certificate to recognize our club's 60th anniversary of operation (official date July 3), and we are close to sourcing SMCASmonogrammed shirts, sweaters, hats, and maybe coffee cups, that we members can purchase.

Well, we're hopeful of getting access to Crestview Park on either Saturday, July 11 or

18, for a socialdistancing
(B.Y.O.Food) picnic, our 60th anniversary recognition, installation of officers and star party. We'll see how it goes.
Thanks all. Be and stay well. Contact me if you have questions or suggestions to make, at (650) 678-2762, or 'jmrastro@yahoo.com'. All the best.

Mike Ryan, President SMCAS

## San Mateo County Astronomical Society Fall Speaker Series September 4

The San Mateo County Astronomical Society has great presentations at our general meetings. Our meetings and presentations are open to the public. Attendance and parking are free. Children are welcome although the subjects may be too advanced for some. Our meetings are held on the first Friday of each month that the College of San Mateo is open for classes in the fall and spring semesters, from 7pm to 9:30pm. We meet in the Science Building (\#36). We gather at 7pm in the Integrated Science Center, room 110, for coffee, pizza and conversation. We then move to the Planetarium at 8 pm for the speaker's
presentation, followed by Q\&A with the speaker. Parking is free in the adjacent welllighted parking lot, marked Marie Curie Lot 5 or the nearby Galileo Lot 6 . Save the date for Sept. 4! We have a great line up of speakers at our fall 2020 general meetings:


Friday, September 4
Fantasy Flight to the Moon
Robert Garfinkle, FRAS (Fellow Royal Astronomical
Society)
Author

## Upcoming Events:

Friday, July 3, 8pm: Chabot Space and Science Center's Moon Mash Up - Livestream, page 6

Saturday, July 4, 9:45pm: Chabot Space and Science Center's Virtual Telescope Viewing Livestream, page 6

Saturday, July 11 or July 18, 2020, 6pm: Crestview Star-B-Que - Installation of Officers 60th Anniversary and star party (pandemic/weather-permitting) page 9

Saturday, August 16, 2020, sunset at 8:31 pm: Crestview Star Party, page 8 (pandemic/weather-permitting)

Saturday, August 27, 2020, sunset at 8:34 pm: Crestview Star Party, page 8 (pandemic/weather-permitting)

Crestview Star Party 2020 schedule: www.smcasastro.com/crestview-park.html


Virtual Star Party - June 20

## Virtual Events

Friday, July 3
8pm to 9pm
Chabot Space and Science Center
Moon Mash Up - Livestream


Join us on Facebook Live for a a mash-up of Moon-themed activities! We're bringing together our Moon rocks, one-of-a-kind lunar telescope images, astronomers and more. With a full, bright moon on Friday night, this is the perfect time for a lunar celebration.

Look forward to:

- A closer look at Chabot's TWO real Moon rocks
- Making your own Moon rock at home
- Moon Trivia
- Q\&A with Chabot's astronomers
- Stories about the lore of the Moon
- Seeing stunning lunar images from Chabot's own telescopes
- And more!

Website:
https://chabotspace.org/calendar/full-
moon-mash-up
Cost: Free

Saturday July 4
9:45pm to 11 pm
Chabot Space and Science Center
Virtual Telescope Viewing - Livestream


Join our resident astronomers on Facebook Live every Saturday evening live from Chabot's Observation deck!

Each week, our astronomers will guide us through spectacular night sky viewing through Nellie, Chabot's most powerful telescope. Weather permitting we will be able to view objects live through the telescopes and our astronomers will be available for an open forum for all of your most pressing astronomy questions.

See weblink for connection information. Website:
https://chabotspace.org/calendar/free-telescope-viewings/2020-07-04
Other Dates For This Event:

- Saturday, July 11
- Saturday, July 18
- Saturday, July 25
- Saturday, August 1

Cost: Free

## Solar System Rise and Set Times

By Ron Cardinale

| Crestview Star Party - Pandemic/weather-permitting |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| SMCAS 2020 (PDT) |  | Jul 11 Rise | Jul 11 Set | ul 18 Rise | Jul 18 Set |
| Sun |  | 5:58 AM | 8:31 PM | 5:52 AM | 8:34 PM |
| Moon |  | 12:16 AM | 12:16 PM | 5:14 PM | 3:00 AM |
| Mercury | In the sun's glare | 5:09 AM | 7:14 PM | 4:45 AM | 7:00 PM |
| Venus | Before sunrise | 3:26 AM | 5:23 PM | 3:14 AM | 5:15 PM |
| Mars | In the wee hours | 12:21 AM | 12:26 PM | 12:04 AM | 12:17 PM |
| Jupiter | Most of the night | 8:33 PM | 6:19 AM | 8:03 PM | 5:47 AM |
| Jupiter's moons | ei J g c |  |  |  |  |
| 10:30 PM, East on left |  |  |  |  |  |
| Saturn | Most of the night | 8:57 PM | 6:52 AM | 8:27 PM | 6:22 AM |
| Uranus | In the wee hours | 1:33 AM | 3:08 PM | 1:06 AM | 2:42 PM |
| Neptune | After midnight | 11:26 PM | 11:05 AM | 10:58 PM | 10:38 AM |
| Pluto | Most of the night | 8:41 PM | 6:23 AM | 8:13 PM | 5:54 AM |
|  |  |  |  |  |  |


| SMCAS 2020 (PDT) |  | Aug 15 Rise | Aug 15 Set | gh 22 Rise | Aug 22 Set |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Sun |  | 6:26 AM | 8:00 PM | 6:32 AM | 7:50 PM |
| Moon |  | 2:36 AM | 5:50 PM | 10:35 AM | 10:28 PM |
| Mercury | In the sun's glare | 6:13 AM | 8:03 PM | 6:55 AM | 8:12 PM |
| Venus | Before sunrise | 2:55 AM | 5:12 PM | 2:57 AM | 5:14 PM |
| Mars | Late at night | 10:44 PM | 11:25 AM | 10:22 PM | 11:07 AM |
| Jupiter | Most of the night | 6:01 PM | 3:42 AM | 5:32 PM | 3:12 AM |
| Jupiter's moons |  |  | g c | c iJ | e g |
| 10:30 PM, East on left |  |  |  |  |  |
| Saturn | Most of the night | 6:31 PM | 4:22 AM | 6:02 PM | 3:52 AM |
| Uranus | Late at night | 11:13 PM | 12:53 PM | 10:46 PM | 12:26 PM |
| Neptune | Most of the night | 9:07 PM | 8:45 AM | 8:39 PM | 8:16 AM |
| Pluto | Most of the night | 6:21 PM | 4:01 AM | 5:53 PM | 3:33 AM |
|  |  |  |  |  |  |

Rise set times from http://www.almanac.com/astronomy/rise/CA/San\ Carlos/ Jupiter's moons' positions from http://www.shallowsky.com/jupiter/

## Crestview Star Parties Going Virtual



June 28

SMCAS is currently engaged in petitioning San Carlos Parks and Recreation and the County Health Department for clearance to resume use of Crestview Park for star parties. If yes, we plan to respect limits on group numbers and social distancing.

It's uncertain what the answer will be but, until then, we are implementing, for members and guests, virtual livestream star parties via ZOOM. We're using Ed Pieret's new Unistellar eVscope, soon to be joined by others currently on order. These automated scopes connect to wifi, operate from a smartphone app, and provide their images to any electronic screen. They also do digital image stacking that progressively brightens and enhances the view to a quality that belies its compact size.

Even if we are able to restart our outdoor star parties, we can simultaneously livestream our observations from the eVscope, and may do so occasionally, or regularly. We announce our star parties by email, and so would announce this too.

In the future, any time we plan to livestream the event, the email will contain an invitational link. It will download and install ZOOM to your device if you don't already have it on your computer or phone. It will present you the meeting login link, and provide the Meeting ID and Password. If you already have ZOOM installe, the email will still show the Meeting ID and Password.
If you have questions, please send them to the author of the emailed announcement, likely either Ed Pieret or Mike Ryan.

## Save July 11 or July 18 for 60th Anniversary Star-B-Que

Our annual Board of Directors Installation Star-B-Que is still tentatively set to take place on Saturday, July 11, or on Saturday, July 18 , starting 6 pm. However, due to COVID-19, our usual delicious potluck dinner cannot take place. Instead the event has turned into a b.y.o.food event, in addition to promoting masks, and observing the social distancing separation of 6 -feet.

We normally draw between 25 and 30 people, so if the limiting group protocol is still 10, we may not be able to gather. Or we may need some workaround such as separating ourselves into two, or even three, groups. Obviously, if the pandemic expands or becomes more acute, we may need to cancel this event as well. We'll try and give the membership alerts and updates as circumstances change.

However the event still will feature our traditional installation ceremony and is still extra special this year due to the 60th anniversary of our Society. The founding meeting was on July 3 of that year and the

Star-B-Que would be our first plenary event following the 60th anniversary. We expect to present and display a commemorative certificate honoring the occasion, which is generously being prepared for us by member, and Graphic Designer Lisa Cooke.

Don't forget to bring hats and layered clothing. It can get chilly and breezy around sunset. If the skies are predicted to be clear, we will also ask you to bring your telescopes. Jupiter and Saturn should be in the sky either evening. As an outdoor event, it's obviously contingent on the weather. Cloudiness could prevent the Star Party, but not necessarily the B.Y.O.Food banquet. If overcast is likely following sunset, we have the option of shifting the event a week later, to Saturday, July 18. If that's likely to happen, there will be one or more email announcements to members, probably around July 5 or July 6.

So, let's hope for the best and for now, assume the event will take place. Plan to come gather and to have a great time!

## Taking a Look Back as We Celebrate 60 Years of The Society

## Story by Mike Ryan

On July 3, 1960, four high-school boys, as a summer school project in Robert's Rules of Order, formed the San Mateo Astronomical Society in a living room. Among the rules were a motion and majority vote of the members for anyone to go to the bathroom, and five-cent fines for a variety of infractions, such as speaking out of turn.

It was less than three years past the dawn of the space age, when the quantity of orbital satellites barely numbered in double digits, when the first man had barely stepped into space. NASA was a newly minted agency, and launched rockets routinely blew up on the launch pad. It was a time before the Internet, decades before digital communications, personal computers and personal electronic devices created the massive, nearly instantaneous information society of today, over half-a-century before the appearance of the smartphone.

The push into space was the tip of the spear for John F. Kennedy's New Frontier. The burgeoning growth of space science was becoming standard fare at coffee table and cocktail party conversations, with focus on space exploration, space physics, planetary geology, astrobiology, and the impact of spatial phenomena on the Earth, upon life on Earth, and upon the human condition. And, as a result, unprecedented numbers of people were looking around for sources of information, for description and explanation of astronomical features and phenomena, for guidance in finding and buying telescopes and complementary equipment, in learning and practicing techniques of observation, and even in reconciling the new knowledge with the structure of their own traditional beliefs.

In a time when you could count on your fingers the number of astronomical professionals in Northern California, libraries wanted amateur hobbyists to present the new activity of public "Star Parties." Schools were looking for assembly presenters, and community leaders were actively seeking knowledgeable, articulate invitees to help engage their guests at dinners and social events.

Into this dynamic came the new San Mateo Astronomical Society which, from its modest


The first president, high-school kid Rick Johnston, is handing over the gavel to his successor, Ernie Schlage, Chairman of Schlage Lock Inc. of South San Francisco. beginnings, rapidly became a knowledge focus in the community. With a small newspaper ad, it quickly grabbed the attention of the executives at the Schlage Lock Company in South San Francisco, and the first president, high-school kid Rick Johnston, handed over the gavel to his successor, Ernie Schlage, the Chairman of Schlage Lock. He and his company CEO Hollis DeVines, semi-professionalized the
(continued on page 11)

## Taking a Look Back as We Celebrate 60 Years (continued)

Society, attracting onboard American Can Company foreman Harry Leitner, retired United Airlines Pilot, Fred Jacobs, corporate executives Henry Stephens and Ed Taylor, Marketing Executive Floyd Sampson, WatkinsJohnson Electronics Manager Roy Henning, County Government Supervisor Bill Little and CSM Astronomy Chairman, Dr. Claude Anderson.


In June 1962, the Society reserved a couple of tables at the San Mateo County Fair where then 12-year-old Mike Ryan, our current president, first encountered the organization. He didn't join until April 4, 1963, following a meeting notice in the local newspaper, but has remained a member for 57 years. The Society, at the time, had been invited to meet in the San Mateo City Council Chambers, then, in mid-1963, it relocated to the facilities, including the sky projection equipment. There, membership rapidly shot up to 94, among them, a cadre of ambitious CSM science students who became the active core group for logistics and setup at star parties, public displays and outreach events.

We also had acquired access to a stargazing site at a place called 'Star Hill' on Skyline Drive, on the grounds of the old Wickett


Wickett Lumber Company Star Party Sept 8 1962, at "Star Hill" off Skyline Boulevard above Palo Alto. Lumber Company. In 1965, Floyd Sampson and Roy Henning identified Fremont Peak State Park, south of San Juan Bautista and inland from Monterrey Bay, as an outstanding dark-sky location. They led the Society there to begin the trek of Bay Area astronomy clubs to that superb stargazing spot. In the 1970's, that pilgrimage to dark skies would culminate in the establishment of the Fremont Peak Observers Association and the Fremont Peak Observatory with its 30-inch telescope.

When our presentations at CSM began to draw attendance-exceeding 70, we had the use of the large room 76 in Building 18. When we drew over a hundred, we'd use the Music Room, or the Theatre, in CSM's Building 2. And, as a valuable community resource, we were never charged a fee for their use.

During the 1960's, we were invited to set up weeklong public displays and presentations at places like the new indoor Hillsdale Shopping Center (with props borrowed from NASAAmes), at the San Mateo Public Library, and in the Beresford Park Recreation Center. We performed public sky lectures at CSM, at other local schools, and at the Coyote Point Museum (continued on page 12)

## Taking a Look Back as We Celebrate 60 Years (continued)

where Mike had to shout above, or pause for, the whining roar of landing jetliners passing overhead, with promotion and publicity provided by the hosts.

The organization leaders had written an informal set of By-Laws, which provided for four officers and five directors-at-large, in order to engage a fair percentage of the membership in support activities. But it wasn't until 1976 that we formally incorporated as the San Mateo County Astronomical Society, with filed Articles of Incorporation and new formal By-Laws. The purpose in incorporating was to encourage donations of money, telescopes, telescopemaking equipment, magazines, books and atlases, to establish a lending library, and assemble a pool of telescopes for members to

## RESULTS OF OUR ELECTIONS

We have just conducted our elections, and are preparing to install, for the $60^{\text {th }}$ time, our officers and at-large members to our Board of Directors.

Our Officers are:
Mike Ryan, continuing as president
Edmund Pieret, former president, continuing as vice president

Tom McDonough, continuing as treasurer

Marion Weiler, former president, continuing as secretary
borrow.
There is much more to the history of the Society, too much to relate here in writing. The foregoing represents the memories, experiences and impressions of current president, Mike Ryan. What Mike has attempted here is to relate that portion of our history to which he is the only remaining active witness. There may still be a very few members and past members who shared the experience of SMCAS through the 1980's and 90's, and a number of active members familiar with our history since 2000. Some of that history can be inferred from the accompanying historic photos, and Mike is always willing to share recollections of the interim years.

Mike Ryan, President SMCAS

Our five at-large Board Directors are
Edward Ching
Bill Lockman
Dr. Ken Lum
Steve Minkin
Frank Seminaro, also a former president

Please welcome your Board of Officers and Directors for 2020-2021.

Thank you.
Mike Ryan, President SMCAS

## Directions to SMCAS Public Star Parties (Weather Permitting)

From Hwy 101 or El Camino: take Brittan Avenue in San Carlos, west (toward the hills). Follow Brittan 2.3 miles (from El Camino) to Crestview Drive. Turn right on Crestview. In half-a-block, you will see a small blue-posted sign with an arrow, indicating the entry road into Crestview Park. It lies between houses with addresses \#998 and \#1000 Crestview Drive.

From Highway 280: take Edgewood Road exit. Go east (toward the Bay) about 0.8 miles. Turn left at Crestview Drive. Go 0.5-mile uphill to where Crestview meets Brittan. Again, drive the half-block, to the small blue sign on the right, and the entry road on the left.

From Hastings and Club Drives: From Belmont, take Carlmont Drive to Hastings Drive. Follow Hastings about 1.5 miles, first uphill, then down, to San Carlos where it becomes Witheridge Road, then ends a block later at Club Drive. Turn right, and climb Club Drive to Crestview Drive. Turn left and continue some 2 miles, first up, then down past Leslie Drive, to the small blue Crestview Park sign on the left. Turn right into the Crestview Park entry road.
From San Carlos, take San Carlos Avenue to Club Drive, and climb to the 5-way intersection. Take the half-right to continue on Club Drive past Witheridge Road to Crestview Drive. Proceed as above to Crestview Park.

## Crestview Park - San Carlos <br> Come on out, and bring the kids, for a mind-blowing 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. Only visitors with telescopes should drive in. Others should park on the street and walk in or arrive before dark so that car headlights don't affect the observers' dark adaptation. Bring small flashlights only, covered with red cellophane or red balloon.

These measures avoid safety issues of maneuvering in the dark, as well as ruining the night vision of the viewers.

Please don't touch a telescope without permission. And parents, please don't let children run around in the dark.

Note: If bringing a telescope and arriving after dark, please enter the Park with your headlamps and white interior lights off. If you aren't bringing a telescope, whether before or after dark, please park along Crestview Drive, and walk in.

Crestview Park is residential, adjacent to homes and backyards. Before inviting potentially noisy groups, please call Ed Pieret at (650) 595-3691 for advice and advisories. Call Ed also to check the weather and 'sky clock' and to see whether the star party is still scheduled.


## Crestview Star Party schedule is here:

http://www.smcasastro.com/crestview-park.html

## Directions to SMCAS Meetings at The College of San Mateo:

Directions to the CSM Planetarium for Meetings:
After exiting Hwy 92 at Hillsdale Blvd, climb the hill towards CSM, passing two traffic lights to the stop sign at the top of Hillsdale Blvd. Continue straight onto West Perimeter Road and follow it until you reach Lot 5, "Marie Curie", or Lot 6, "Galileo." Science (ISC) Bldg. (36) and the Planetarium lie straight ahead. Enter Bldg. 36 either

through the door facing the lot or walk around the dome to the courtyard entrance. We meet in ISC room 110 for pizza and soft drinks one hour prior to the talk in the Planetarium (Pictured below.)


## Become an SMCAS Member Today! Here's what you get:

## - Members Community

Friendly advice and guidance from experienced recreational astronomers; access to SMCAS group emails, which provide general orientation information, announcements of astronomy events, file access and exchange.

## - SMCAS Events

General meetings are held the first Friday of most months, at 7 pm in the Integrated Science Center (ISC) Room and Planetarium in the Science Center (Bldg. 36) at the College of San Mateo (CSM), 1700 W. Hillsdale Blvd., San Mateo. Meetings include lectures and presentations on space science, an activity session, and refreshments (usually pizza).

We also offer stargazing two Saturdays a month, weather permitting. Visitors and those without telescopes are welcome; members are glad to share! SMCAS also has sponsored dark-sky campouts at Fremont Peak State Park, field trips to SLAC, KIPAC and Lick Observatory, plus member-only events, including Star-B-Ques and quarterly potlucks.

- Subscriptions (free with your membership)

The Event Horizon, SMCAS' newsletter, with SMCAS and member information, viewing tips and articles.
The Reflector, published quarterly by the Astronomical League, a national alliance of astronomy groups like SMCAS.

- Significant Discounts on Equipment and Publications

Discounts on purchases at Bay Area astronomical equipment retailer Orion Telescope Center, on sky calendars and ephemerides, and on such periodicals as Sky \& Telescope and Astronomy.

## - Access to Loaner Equipment

Use of SMCAS loaner telescopes and other astronomy equipment.

- Sharing your Appreciation of Astronomy and Space Science with the General Public.

Your SMCAS membership helps bring astronomy to interested lay people, especially students and children
Annual Dues: (SMCAS is a tax-exempt non-profit 501(c)(3). Dues may be tax deductible; consult your tax advisor):
\$30 Regular Family Membership; $\$ 15$ Student Membership
Every membership includes all members of your immediate family, (including your kids).

## To join you can:

Send application (see reverse side), with payment, to: SMCAS, P.O. Box 974, Station A, San Mateo CA 94403.

- Bring the completed application and payment to a meeting or event and give it to any SMCAS officer.
- Go online at http://www.smcasastro.com, click on the Membership tab and pay via PayPal.


## Membership Application form follows below

Date: $\qquad$ Please check one: [ ] New Member or [ ] Renewal
[ ] \$30 Regular Family Membership;
[ ] \$15 Student Membership

All members, please indicate areas of interest below. New members, please complete entire form. Renewing members, please provide your name and any information that has changed in the last year.

We will list your name, address, email address, and phone number(s) in our membership roster unless you have checked the box preceding that information. The membership roster is distributed to active members only.

Each member's name and mailing address must be provided to the Astronomical League (AL), SMCAS' umbrella organization. If you don't want AL to have your phone number and email address, indicate below.
[ ] Name(s) $\qquad$ [ ] Email Address $\qquad$
[ ] Address $\qquad$
[ ] City \& Zip Code $\qquad$
[ ] Phone Number(s): $\qquad$ [ ] Do not provide my phone number(s) to the AL.
[ ] Don't provide my email address to the AL. (Checking this means you can ONLY get The Reflector by regular mail) Please check one: send The Reflector [ ] by mail, or [ ] by email.

## Areas of Interest:

SMCAS encourages member involvement. We invite you to provide additional information about your interests, skills, occupation and prior experience. Please identify SMCAS projects and functions that you might like to help facilitate.

Please indicate which of the following activities might be of interest to you:
__ Star Parties - Do you own a telescope you can bring: Yes ( ) No ( )
___ General Meetings - Finding (or being) a Speaker. Official greeter. Set up or take down ISC or refreshments.
Family Science Day \& Astronomy Festival (Usually at CSM the first Saturday in October).
Social Events - Equinoctial and Summer Solstice potlucks, Summer Star-B-Que, Holiday Potluck.
__ SMCAS Membership and Promotional Drives
__ Communications - 'Event Horizon' Newsletter, Website(s), Facebook page, group email, Publicity posting.
___ Educational Programs - School, museum and library star parties, Bay Area Astro teacher assistants.
Other/Comments:

