



SVAS

Vol.73 No.5* Sept-October, 2016

OBSERVER

Sacramento Valley Astronomical Society

Founded in 1945

Star-B-Q 2016

Inside This Issue

- | | |
|----|---------------------------------|
| 2 | Event Calendar—Main Events |
| 3 | SVAS Guest Speaker Schedule |
| 5 | Rusch Park Family Campout |
| 6 | Glacier Point Star Partry |
| 12 | Star-B-Q 2016 |
| 22 | Raj Dixit, Member Profile |
| 24 | HGO Nights, Stuart Schulz |
| 25 | White Dwarf Rotation, Bill Goff |
| 26 | Astro Views, Ralph Merletti |
| 27 | Classifieds |
| 28 | SVAS Main Events |
| 29 | Star Party Site Maps |

HGO Photo by Terry Dietz

SVAS Event Calendar



Aug 31, Wednesday

New Moon.



Sept 3, Saturday

Blue Canyon, weather permitting



Sept 16, Friday, SVAS General Meeting, 8:00pm.

Sacramento City College, Mohr Hall Room 3,
3835 Freeport Boulevard, Sacramento, CA.

Sept 25, Sunday Funday at Rusch Park

Fun day viewing our star, hanging out with friends,
and enjoying the public. Contact Walt Heiges for
information.



Sept 30, Friday, New Moon



Oct 1, Saturday

Blue Canyon, weather permitting



Oct 21, Friday, SVAS General Meeting, 8:00pm.

Sacramento City College, Mohr Hall Room 3,
3835 Freeport Boulevard, Sacramento, CA.



Oct 29 Saturday

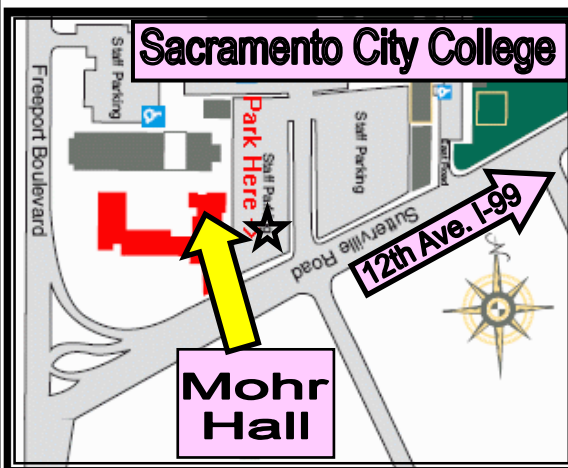
Blue Canyon, weather permitting

Star Party Schedule for 2016

Star Parties

Sept 3
Oct 1
Oct 29
Dec 3

Blue Canyon



Community Star Parties

Contact Wayne Lord

SVAS Guest Speakers

Speaker Seeker Fera Zamani



It's a Friday night – but wait- you're in luck. Because it's not just any ordinary Friday night, but the 3rd Friday of the Month – which means there's a SVAS Meeting at 8 p.m. at Sac City College. You go in maybe not too sure what to expect, and then you are greeted by some of the most exciting Speakers and Presenters in the field of Astronomy. One of the goals of the SVAS is to bring dynamic speakers to just about every meeting (the exceptions being the March general election meeting, the July Star B Q, and a possible December meeting at the Powerhouse Science Center with a planetarium show) so they can share their expertise and insight with members and open the door for some great discussions.

SVAS meetings are held in a stadium style classroom at Mohr Hall, which provides the perfect platform for speakers to present in an academic setting (Similar to TED talks) complete with their power point slides on an overhead projector, and yet still remains small enough to actively engage with the audience.

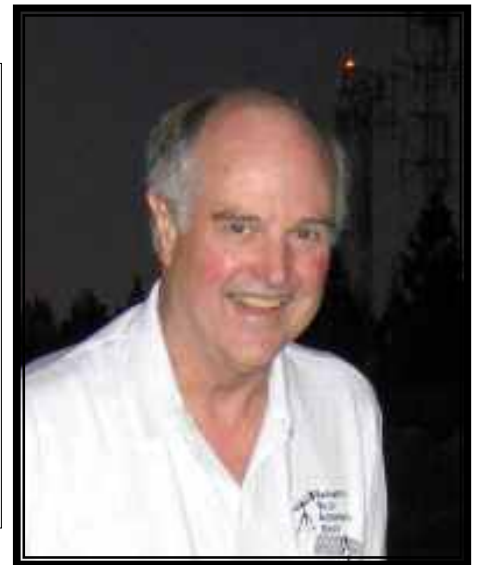
Here is a little challenge for you – if you personally know of anyone truly exceptional in the field of Astronomy, who might be willing to speak to us, please refer them our way! We love to be able to offer a variety of topics and speakers.

Perfecting Telescope Pointing Accuracy

September 16, 2016 Lonnie Robinson SVAS Vice President

Will present on Telescope Mechanical & Optical Tube Alignment, RA-Dec Alt-Az Mount Motions, Simplifying Polar & Drift Alignment, Choosing Guide Stars, Pointing Devices, Computer Control; Hardware & Software.

Beginners to Experts



October 21, 2016: Chuck Real SVAS Board Member

Will present on Near-Earth Objects or NEO's. He will discuss historical and pre-historical evidence of large extraterrestrial impacts on Earth, and work that is currently underway to better understand the risks future impacts could pose to humanity.

Check out the SVAS newsletter article dated July / Aug, 2015, page 8.

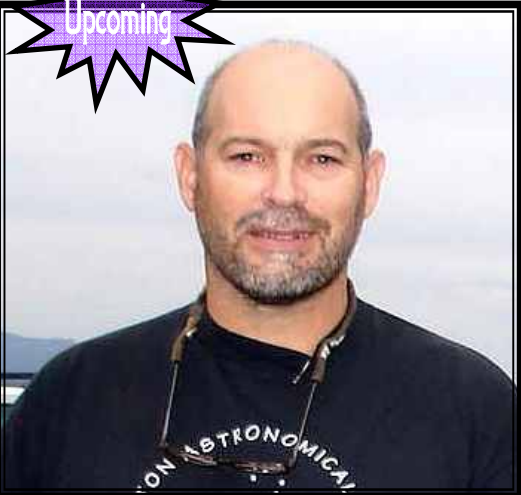


Continued from previous page

**November 18, 2016: Bob Fies
Owner of Aluminum Coating**

Will present on proper aluminum coating for telescope mirrors, and his experience with laser spotting at Lick Observatory.

John Dobson asked Bob, many years ago, if he could figure out how to coat telescope mirrors. He achieved the goal, and coated countless mirrors for John and the San Francisco Sidewalk Astronomers. Check out his web site; <http://www.alcoat.net/> and the SVAS newsletter article dated Jan / Feb, 2016



**Jan 20, 2017: Jeff Baldwin,
of the Stockton Astronomical Society (SAS), and
Dr. Larry Grimes, are sched-**

uled to fly on SOFIA this fall, and have agreed to share their experience with the SVAS next January.

More info coming soon.
<http://www.seti.org/seti-educators/nasa-selects-educators-fly-with-astronomers-sofia-airborne-observatory>



Feb 17, 2017: Dr. Don Goldman, a deep sky astro-
photographer who will talk on the topics of Planetary Nebulae (e.g. Dumbbell, Ring, Helix). What are they? How do they evolve? What do the varied morphologies that we see in images mean? Is there more there than meets the eye? Why are they good imaging targets even with local light pollution? How do we image them? Check out his web site at

<http://mstecker.com/pages/appgoldman.htm>



PREMIUM FILTERS FOR
ASTRONOMICAL IMAGING
AND RESEARCH

SVAS



Rusch Park

Family Camp Out

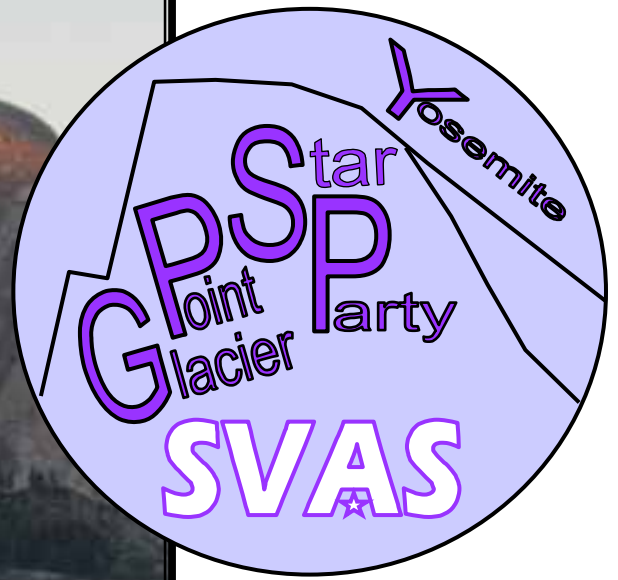


This is an annual favorite for the SVAS. Folks from all over gather for a fun overnight camping experience at Rusch park in Citrus Heights. They enjoy all sorts of activities from horseshoes to swimming, and the SVAS gets all the attention just after dark and before it's time to turn in for the night. We had great views of Jupiter setting in the west, Mars and Saturn in the south. There was a bit too much light for the fainter objects, lots of flashlights, glowing balloons, and light sticks. The campers enjoy a fun group breakfast the following morning.



A photograph of a mountain peak, likely El Capitan, at dusk or dawn. The sky is a mix of light and dark, and the mountain is illuminated from the side, showing its rugged texture.

Glacier Point 2016



We had an especially good time at Yosemite this year! The group photo below says it all, just look at the huge smiles! Luckily, there was little to no atmospheric effect from the nearby forest fires. It was breathtakingly clear until late Friday evening, but the clouds rolled in late Saturday. Last year was a bit cold during Labor Day, this year the temperature seemed perfect, a bit cool, but very comfortable for the 7214 foot altitude.





We were awaiting sunset, just got our scopes set up, and took this group photo above. It shows more smiling faces of happy astronomers. From left to right; Bill Hagbery, Raj Dixit, Randy Hellewell, Lonnie Robinson, Charles Jones, and Tom Braun. Mike Bailey and Fera Zamani are absent from this photo.

Last year we were asked to give a presentation to the park visitors, this year I was prepared with a short talk on light speed and measuring the vast distances in the universe. Tom Braun is setting up the tape measure so we could compare some reasonable distance to the speed of light. Raj Dixit is looking on. Below is the view towards the



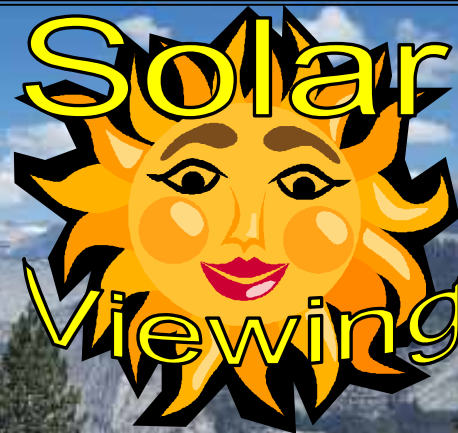
north, and the short trail to the Yosemite Valley overlook. Don't miss this view, the valley is 3200' almost straight down! The vista of the whole Yosemite Valley is simply breathtaking. This is truly Astro Gods Country!

If a picture is worth a thousand words, then this article starts off with 17,000 unprinted words. Yosemite photos must rate more than 1,000 words each don't you think?

Looking out over the valley from Glacier Point, are two of Yosemite's most beautiful falls, the upper is Nevada Falls and the lower is Vernal Falls. It was so quiet after our guests departed around 10pm, that the distant sound of the water cascading down the falls was more like a roar. Each year before dark, we aim our scopes at these falls for some fantastic close up views. Half Dome gets our attention too, we watch the climbers as they arrive on top and pose for photos while looking down at the valley. Every once in a while, we see them getting ready for the night in their hammock like tents attached to the vertical wall.

Food is never in short supply, the photos below are Charles and his sons Benjamin & Thomas chowing down. The bottom right shows my attempt at shish kabob. More than an attempt, they were delicious and easy! I cut all the pieces before leaving home. I made enough to share with everyone. Nothing like the smell of grilled steak at high altitude! I've probably said that at least once before.





Cool Solar Viewing at Glacier Point

Bill Hagbery is our established solar guru, and he invited me to tag along to share the fun. We had a lot of visitors, they loved sharing the views of our Star. There were a couple sunspots, but not a lot of activity. Two of us made for easy breaks, and lunch from the visitor center just behind our scope.





Clockwise from upper left, Raj is talking with Michael, Fera's significant other. Tom's Lisa is enjoying the moment, Mike Bailey, me and my Dob, and Charles Jones setting up his camera.





The above photo is our last breakfast Sunday morning. It turned out to be great fun, Tom cooked pancakes, Charles scrambled eggs, and I cooked sausage. We all chowed down together, and shared our great Glacier Point experiences. We will do breakfast together again! It was sad breaking camp, three days and two nights go by all too quickly.

I have decided I like taking route 140 both in and out of the park. It seems more direct than 120, less up and down climbing, only about 25 minutes longer, and a picturesque drive following the Merced river down the mountain. I'm told there are remains of the old Yosemite Valley RR on opposite sides of the river, extending from Merced to the park entrance. The photo below is Arch Rock, just inside the park's 140 entrance, it screams you are now entering an area that got special attention from mother nature. She really outdid herself, glaciers carving shier walls from solid granite and leaving one of the most beautiful valleys in the world!

I drove to El Portal and gassed up, it's one of the only stations on the parks west side. Then I stopped in Mariposa, looking for food and a short rest for the long trip home. I found a great little restaurant called the Sugar Pine Café, with a very unique menu. My choice was a portabella mushroom sandwich, and when told it had no meat I ordered a cheeseburger wit a portabella added. Wow, that was a memorable hamburger, the grilled portabella was large enough to drape outside the burger and so good!

Now well nourished and a bit rested, the drive home seemed so much shorter. I left with many fond memories that will beckon me to return again next year!

Observer Editor





Star-B-Q 2016



“Fantastic” about covers the SVAS 2016 Star-B-Q. Last year we had a great raffle, great food, and friends. This year was the same, but we added great weather, clear skies, and lots more members. We also had a special treat, Vic Maris of Stellarvue joined in on the fun, more about him later in this article.

We were well prepared by getting the canopy erected Friday. Somehow, one of the canopies steel framework pieces was miss-numbered. As Murphy would have it, we finally found it in the side of the first canopy we just finished. Great fun to almost start over taking it apart and swapping out the piece. It turns out that the pieces are numbered with stick on letters. They kept falling off, and we renumbered the pieces with a sharpie. Someone goofed last year with the wrong number! Yes we tried to follow instructions.

We setup the ice carts for water, and finished setting up the tables Saturday afternoon. We also finished setting up the grill area early, we were ready for the great turnout!

BBQ at Star-B-Q

Charles Jones was busy at the grill again this year. He did a fantastic job cooking everything near perfection. We have some work to do getting the grill up to speed for next year.

Special thank you to everyone who participated in the pot luck! We had a great variety of salads, chip dips, side dishes, and dessert to choose from. Just the right finish to a great Bar-B-Q.

This year we did a fantastic job with the food, next year it will be that much easier to achieve a repeat performance!



★ Star-B-Q Raffle!



We had another great raffle, lots of tickets sold to the numerous members attending. The Board got together mailing out requests to the various vendors asking for donations, with a good response. Eyepieces, Barlow's, filters, telescopes, and books were among the prizes.

Vic Maris graciously donated a very expensive Stellarvue refractor and mount. It was ready to go, a complete viewing system. Thank you Vic! He suggested next year we raffle the best prizes towards the last, a great idea that would add to the anticipation and finish with a high-light.

Walt Heiges did duty calling out the numbers, Kevin Heider ran the ticket scrambler, and Kevin Normington manned the SVAS garment table.





Clockwise from top left; Bill & Fran Thomas, Dave Buchla, Steve McGough, John Griffin & Bruce Sayer.



Clockwise from top left; Tom Braun, Paul Redmon and Lonnie Robinson displaying their twin Dobs, and so many others. At the bottom is new SVAS member David Scharlach, Thanks for the oranges for breakfast, and welcome to the SVAS!





Clockwise from upper left, Nick Johonie, Raj and Michael, Chuck Real's hunting blind to hide his computer monitor light. He reported it worked really well, and it has the potential to add some warmth and shield the wind. It's really easy to set up, and very inexpensive. Could work for many of the photographers and Mallincam guys.



Our parking was almost full up, but we had room for quite a few more cars. There was no parking on the runway side, but it sufficed as an emergency access lane. We were able to park more cars close in.



Clockwise from upper left, Terry Sandbeck with his 8" Celestron, Dave Buchla demonstrates how easy it is to wheel out the heavy mount for his 14" Celestron, and Bill Marquardt and his wife next to their scopes.

Vic Maris of Stellarvue as Galileo



We had a very special speaker Saturday evening, Vic Maris of Stellarvue. I kept hearing about his Galileo presentation, but had never had the chance to see it. It was great fun spending twilight enjoying the show. Vic talked about the skies, constellations, and the vast distances to the many objects we view. The talk then went to the story of Galileo, and Vic dressed up the part. It was very entertaining hearing Galileo impersonated so well. It was almost as if he was there describing his discoveries and paying the price for boldly standing by his Sun centered solar system model. Not a soul moved the whole time, enjoying every minute!

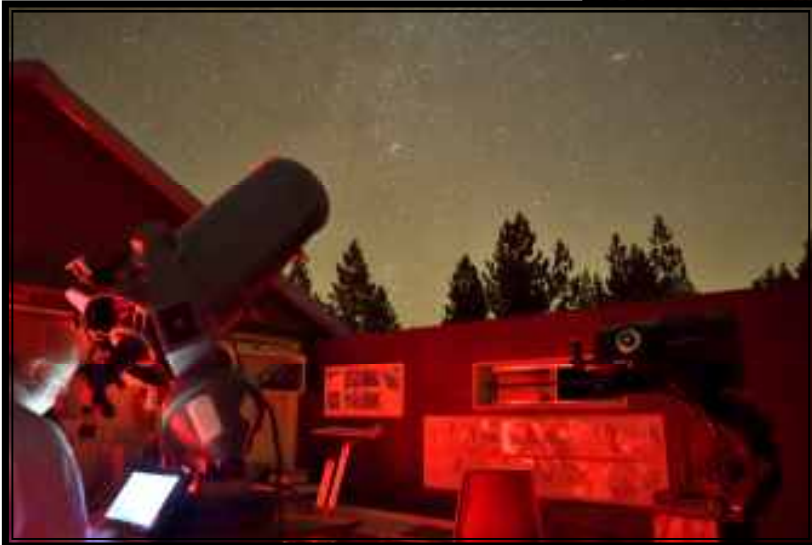
When Vic's talk was finished, it was getting quite dark. Time for some serious observing under great skies. Vic joined us with one of his Stellarvue refractors, and shared his new eyepiece line with us. I hope he will return soon!



Milky Way Vistas at HGO Star-B-Q



by Terry Dietz



Star-B-Q Breakfast

Well, it was really difficult to beat our breakfast at Glacier Point, but we did our best. We all had a great time cooking for everyone Sunday morning, just before tearing down the tables and canopy. We planned for three dozen breakfasts, but we ended up running out of everything but eggs. I only regret feeding folks on the run, not having a chance to get together and talk. Charles Jones was again at the grill scrambling eggs, Tom Braun grilling pancakes, and Bill Gilmore cooking sausage. We sent everyone to each cooking station to fill up on these scrumptious breakfast offerings.

After breakfast, either Benjamin or Thomas (can't tell for the Burger King hat, and they are twins), Ralph Merletti, Randy Hellwell, and Paul Redmon, helped take down the canopy.

We all shared the modest cost of the food, and plan on doing it again next year with even better organization!



Raj Dixit

by
Fera Zumani

If you visited Glacier Point in Yosemite on July 9th you would have seen a small crowd gathered around Raj Dixit

as he helped them get an up close and personal look at Saturn, Jupiter, and various other planets and objects in the night sky.

Ever the thoughtful host, a delicious box of croissants and cookies would have awaited you, so that you could enjoy a treat while he taught you the ins and outs of his scope - a 10 inch Orion XT10i IntelliScope - a Push-To Dobsonian – and offered his insights into the night sky. Raj's patience and obvious passion for observing inspired me to find out more about him, and to help offer other beginner astronomy enthusiasts (and perhaps a thing or two for the more seasoned) helpful insights and tips.

Raj Dixit has an enthusiasm to help explain the universe to eager participants. He is definitely a people person. What is also pretty impressive about him is that he is very detailed as to the types of notes and organization system he employs, so as to keep track of the planets and deep space objects he has seen, how many times he's seen them, what eyepiece was used, the seeing conditions, etc.

In this issue, we take a closer look, and try to understand the man behind the scope.

Name: Raj Dixit

Occupation by Day: Attorney

Background:

His father made a 6 inch Newtonian telescope, which Raj used as a kid. He proceeded to take astronomy at Foot-hill Community College while still a high school student. Then life caught up with him – college and law school and a career as an Attorney. The busy days kept him away from astronomy.

He got back into astronomy the summer of 2015 when he read in the news about the Perseid Meteor Shower. He went online looking for good deals on Orion Dobsonian telescopes. First he bought an 8" Dob, then upgraded to his current 10 inch model. He has already observed all 110 of the Messier objects and about 220 of the Herschel 400 objects. Online searches for fellow astronomy enthusiasts led him to join SVAS.

Area of Interest: He is a "faint fuzzy guy" whose primary interest is Deep Space objects- nebulae, galaxies, and star clusters. His current 10" Dob is good for that, but he hopes to upgrade to a 12" or maybe even a 14" – the joy (and curse) of Aperture Fever.

His favorite object is M31 – the Andromeda Galaxy. He also likes M51 – the Whirlpool Galaxy, and the double star Albireo in Cygnus is always a reliable target.

Here are his tips:

Plan your observing session in advance. Develop a target list (organize by constellation; the reader is free to choose whatever method works best for them) A week or so before any star party, work with your star atlases/ reference books and write out your goals. Raj prefers to organize by constellation, then list the object's name or NGC

Member Profile

number, and also notes the recommended magnification for the object. He also tries to look up photos of the object online (or have reference books available in the field with photos of the object), so as to have an idea of how his target might appear in the eyepiece. Highly recommended; *The Night Sky Observer's Guide*, the *Interstellarum Deep Sky Atlas*, as well as the *Jumbo Pocket Sky Atlas*.

Raj wants to remind the public that astronomy is for everyone. The public often fears that the hobby is too expensive – and admittedly, astronomy magazines with glossy photos of high-tech computerized scopes/mounts, and sophisticated eyepieces (all of which are pricey) feed that perception. But, one can enter astronomy simply by laying back on the grass and staring up at the heavens. A simple pair of 10x50 binoculars can provide a great time under the stars. Finally, decent beginner scopes can be had for \$200-\$500. One can of course spend a lot of money on astronomy gear, but it's not mandatory. Anyone can enjoy the beauty of the night sky without having to shell out the big bucks.

His favorite eyepiece is his 13mm Orion Stratus 1.25"/2" hybrid eyepiece. In his XT10i Dob, that eyepiece gives him about 92x magnification, roughly a $\frac{3}{4}$ degree true field of view (the apparent field of view is 68 degrees), and an exit pupil of 2.75mm. The majority of Raj's deep space object observations have been done with that eyepiece, as it provides, in his eyes, the perfect perspective – high magnification without being too high; a good field of view, and a sharp, crisp image.

Deep space objects are his favorite because of the thrilling idea that the light from galaxies entering his eyes, has traveled millions of light years. He has seen galaxies so distant that when those photons hitting the rods of his eyes first began their journey, dinosaurs roamed the Earth! His future goals are to complete the Herschel 400, then upgrade to a bigger scope and see all 2500 Herschel objects.

Raj agrees with Albert Einstein regarding the most amazing thing about the Cosmos: **"The most incomprehensible thing about the world is that it is comprehensible."** The astronomer who most influenced him is Sir Isaac Newton, who receives his vote as the most intelligent human being to ever live. His theories on the universe were just as stunning as Einstein's, and Newton had the disadvantage of living in the 17th and 18th centuries. Of course, Sir Isaac also invented the Newtonian telescope – the basic design of the Dobsonian telescope that Raj uses (*Dobsonian refers to the mount; Dobsonian telescopes are Newtonian in their optical design*).

If NASA's budget were unlimited, Raj would focus on a combination of large space telescopes and manned exploration of the Solar System beginning with a permanent Lunar base. This base would serve as a launching point for missions (and eventual permanent outposts) on Mars, the Galilean moons of Jupiter, and perhaps Titan.

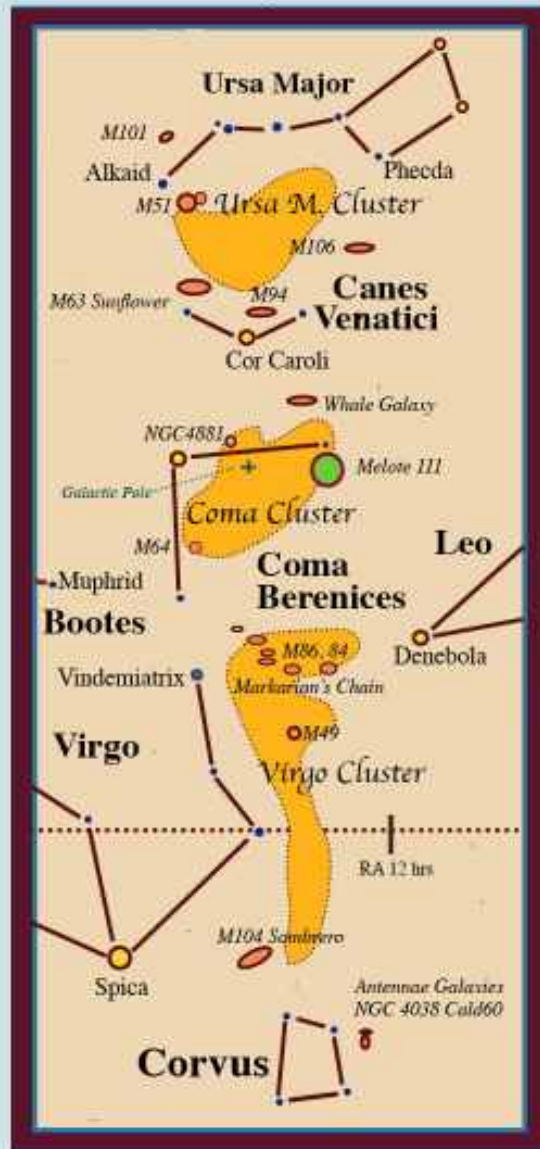
If you know of a fellow astronomer who has a special story to tell, please contact the editor or Fera Zumani.



Stuart Schulz 6711stuart@gmail.com 916-621-8408

Galaxies and their Clusters

A view of the southern sky in May and June appears to offer the stargazer little of interest from horizon to the zenith and beyond. While major constellation shapes are visible, there is none of the pyrotechnics we are used to seeing when viewing the interior of our Milky Way--no real starclouds or glowing nebula. But because we are looking toward the galactic pole, away from the obscuring dust and gases of the galactic disc (the Milky Way) we are presented with an open door into deep space, teeming with millions of galaxies organized into gravitationally bound clusters, and those clusters into superclusters. Very little of this can be seen with the naked eye, but long-exposure astrophotography reveals many of the billions of elliptical and spiral galaxies concentrated in nearby clusters, such as the Virgo (of which our Local Group is a part), and the Coma and Ursa Major Clusters.



Markarian's Chain M84 M86
Processed with PixInsight
Bryant Henley



NGC 6946 Five-inch Refractor, Apo
U LRGB 1 hr each Gary Shulok



M63 Sunflower Galaxy above
Cel 11 QSI6120 Adam Phillips



M104 Sombrero
Galaxy, left
Cel 11 QSI 6120
Adam Phillips



M82, 81 Left; M51
on Right, taken on
Stellarvue SV130
and SBIG 8300M
with Astrodon filters. Ten subs per
channel (RGB - 4
min, L-6 min),
CCD Stack, then
PS6 to create com-
posites and enhance
Luminance.
Frank Dibbell

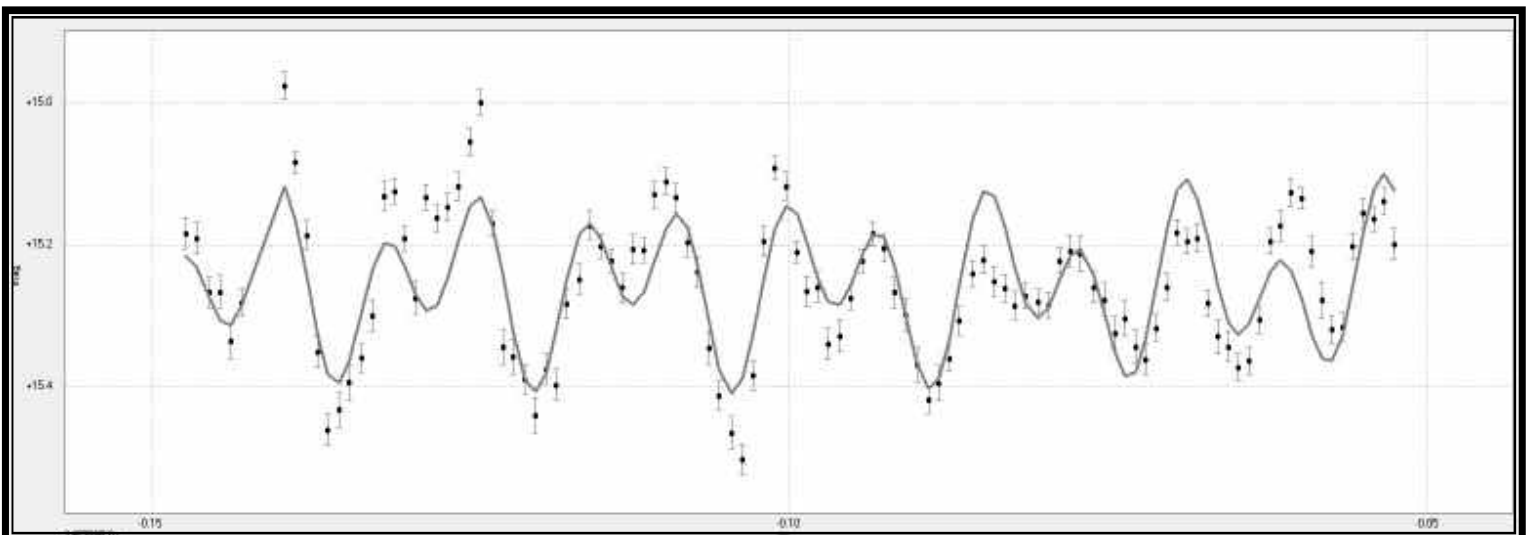


White Dwarf Rotation



by Bill Goff

Here's one to wrap your head around! The chart shows observations I made of the changing brightness of an object in Aquarius known to be a two stars orbiting each other. Each of the dots is a 60 second long measurement of brightness over a two-hour period. Astronomers at Notre Dame say the eleven minute sawtooth pattern in the graph shows the rotational period of one of the stars, known to be a white dwarf. Imagine that, an object the size of planet Earth, weighing about as much as our Sun, spinning in eleven minutes!



Astro AV Views

by Ralph Merletti



The 2016 opposition of Mars was a disappointment for me. Low sky altitude and low contrast made for disappointing views even at 111x in my 3" inch refractor.

The view of the Milky Way at the SVAS Blue Canyon Star-B-Q on the night of July 30-31st was stunning. A view of Saturn and it's moons was most impressive through a 5"+ refractor, there.

In the early morning of Aug. 18th the full moon barely grazed the outer penumbra of Earth's shadow for about 34 minutes (mid-point 2:42am PDT) in an invisible penumbral lunar eclipse. At 111x, I could barely see the shadows of crater rims cast on the far side of those craters or other mountainous features on the moon's south polar limb. A pre-umbral observation (which becomes more noticeable closer to the umbral edge as sunlight is reduced to a sliver) I've made at many lunar eclipses, I've never seen this covered in either of the major astronomical magazines.

Over a year ago we learned photographically that Pluto has a "heart," but some online research is required to find the approximate location of Pluto's poles and equator. Pluto's equator runs horizontally through the lower portion of the heart-shaped ice sheet, while its north pole was tipped into the sunlight, and Pluto's far south was not photographed and in darkness. The designated central meridian is apparently a longitude on the side of Pluto somewhat opposite from the side with the heart shape. Again, I have not seen this preliminary and/or approx. information covered in the major astronomical magazines, so far.

It's less than a year from now! What are you doing in preparation for the Monday, Aug. 21st, 2017 total solar eclipse, which runs from Oregon to South Carolina? I recently received an e-mail from a correspondent back East, saying that he has learned that all lodging in Casper WY has been booked. As for myself, I've already been considering a car-camping trip to an area on the Oregon/Idaho border.

Large Aperture Aluminum Telescopes with SlipStream GoTo Drive System

These all metal telescopes offer extreme durability, precision of movement, ease of use and a pleasing low profile aerospace look. They feature:

- * Highest quality optics
- * *Feathertouch* focuser
- * Argo Navis DSC's
- * SlipStream Drive with slip clutches on both axes
- * Rigid welded structure
- * Durable powder coating and black anodizing
- * Available in sizes from 16" to 40" and f/ratios from f2.8 to f4.



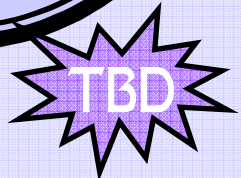
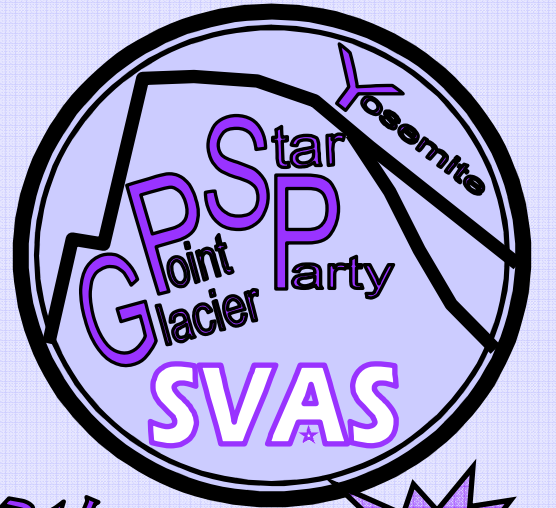
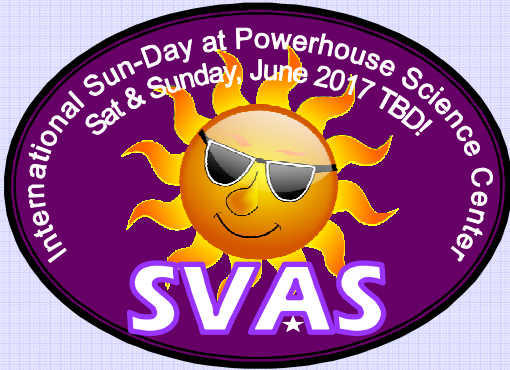
This is a complete telescope system. It will automatically GoTo and then track any object you bring up on the Argo Navis. Or you can move the scope by hand at any time with no clutches to engage or disengage. A wireless hand control also gives you a 3-speed slew for both axes, allowing you to center objects or do fine guiding. Check our website for pricing and details.

EQUATORIAL PLATFORMS

15736 McQuiston Lane Grass Valley, CA 95945
530-274-9113 tomosy@nccn.net
www.equatorialplatforms.com

**Check out
Cloudy Nights Classifieds
for Astro Stuff**

SVAS Main Events



SVAS Sponsors!



SVAS Officers

President *Walt Heiges* **Vice President** *Lonnie Robinson*

Secretary *Kevin Heider* **Treasurer** *Kevin Normington* **Past President** *Ross Gorman*

SVAS Board of Directors

~ Even Year Term ~

~ Odd Year Term ~

Perry Preston Porter *Tom Braun*

Chuck Real

Fera Zamani

Charles Jones *David Macho*

Committees

Membership / New Members	Walt Heiges / Kevin Normington
Star-B-Q & Resources	Walt Heiges
Yosemite Star Party	Tom Braun
Newsletter Editors	Lonnie Robinson / Walt Heiges
Speaker Seeker	Fera Zamani
SVAS Web Site	Gary Shuluk / Walt Heiges
Public Outreach Director	Walt Heiges
Community Star Parties	Wayne Lord
Observatory Director	Perry Preston Porter
Help for Beginners	Perry Preston Porter
HGO Maintenance Director	Stuart Schulz
Amateur Telescope Making	Lonnie Robinson / Bill Thomas
Scholarships	Chuck Real / Kevin Normington

Where We Meet

General Meetings the third Friday of each month beginning at 8:00pm.
Board Meetings begin at 6:30 on the same day. All members are welcome.
Star Parties on weekends nearest the new Moon.

Sacramento City College
 Mohr Hall Room 3
 3835 Freeport Boulevard
 Sacramento, CA.
 (12th St. Exit West off I-99)

WWW.SVAS.ORG

SVAS Observer - Newsletter

To Subscribe— First send in your membership application form below, with your dues, and upon approval by the Board of Directors the Observer newsletter (published bi-monthly beginning January) will be sent to your supplied email address in .pdf format. Second, request to join the SVAS Yahoo Group at <http://groups.yahoo.com/group/svas-members>. This group will keep you informed with the day to day current events and discussions.

Articles— Manuscripts and letters are welcome in MS Word, MS Publisher, or plain text format, and emailed to the SVAS Editor. Submission deadline is the 15th of the newsletter release month.

Advertising— Commercial, non-personal advertising, business card, and full page are available. Classified advertising is free to SVAS members.

Copyrights— Except for individually copyrighted articles, permission is granted to other amateur astronomy organizations to reproduce articles in whole or in part, for internal non-profit use, provided credit is given to the SVAS Observer and the authors of the reproduced materials. Copyrighted material appears in this publication solely for non-profit educational and research purposes, in accordance with title 17 U.S.C. section 107.

SVAS Membership Application

Date ___/___/___ Membership (check one) New: ___ or Renew: ___

Annual Renewal Month is June (Expires July 1st)

(Four months minimum membership is requested, please include the following year if necessary)

General Member (Family-Individual)	Prorate @ \$3 per month	\$36 per yr _____
Observatory Member <small>(Please read Observatory Membership)</small>	Prorate @ \$7 per month	\$84 per yr _____ <small>(General Membership included)</small>
Student Member (ID required)	Prorate @ \$2 per month	\$24 per yr _____

Additional Tax Deductible Contribution \$ _____

Total Enclosed Amount \$ _____

Print Name _____

Address _____

City _____ Zip _____

Phone _____ (E-mail required for newsletter mailing)

E-mail _____

Signature _____

Observatory Membership

Observatory Membership offers the benefits of a regular membership plus the private use of the Henry Grieb Observatory (HGO) at Blue Canyon. **To apply, you must have been a general member for six months or longer, be certified and approved by the Observatory Director, and then approved by the SVAS Board of Directors.**



Please allow 30 Days Or More for Application Approval

By signing this application, I acknowledge I have accessed the SVAS website SVAS.org, read and understand the SVAS bylaws and the rules governing the USFS Special Use Permit. In doing so, I agree to abide by the respective "terms and conditions" of each as they relate to using the SVAS property and facilities. I further understand and acknowledge that failure to abide by these "terms and conditions" can result in revocation of use privileges and/or SVAS membership.

Detach, <u>SIGN</u> , & mail with payment.	To: SVAS Membership Application PO Box 15274 Sacramento, California. 95851-0274
---	---