



SVAS Vol. 69 No. 6* September, 2012
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OBSERVER
 Sacramento Valley Astronomical Society
 Founded in 1945

Star-B-Q 2012



Great Friends, Food,
& Raffle Prizes!

Scheduled Events

Star Party
Sept 15th at HGO

Native American
Flute Music
Under the Stars



Mary Youngblood & Ramona Glasgow

Star Party
Oct 13th at HGO

General Meetings Sept 21 8:00pm
Oct 19 8:00pm



Arriving early Saturday afternoon as promised, although not as early as planned, the tarmac at Blue Canyon Airport was already half full of cars. We assembled the shade canopies, setup the Bar-B-Q grills, hung the SVAS banner on HGO, all to get ready for dinner and the following fabulous SVAS raffle. I finally ask Perry if it was time to start the grill, it seemed a bit later than usual. It was late and we piled up the charcoal, and lit the generously applied

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lighter fluid. Enough with the detail you say, but wait a second for the rest of the story. We just lit the briskets when the Forest Rangers showed up to inspect our gathering. They were very impressed with the organization, especially how the emergency fire exit lane was set up and no camping on the airport tarmac. However, they didn't like the Charcoal BBQ grill!! The fire restrictions are high, and the fire permit did not allow charcoal only a propane grill! Ross came across the tarmac just in time, summoned from his duties at the gate by walkie talkie, and showed the rangers our special permit for the charcoal. They read the permit at least twice, I don't think they were familiar with it. After a few long minutes they were finally satisfied with the grill. They stayed around for a couple hours after that, greeting a single aircraft that landed looking for a place to park. It was an astronomer dropping in (literally) for the Star-B-Q. In ret-



rospect, having the Rangers stop by was a good thing. Up until now we have been crying wolf that they may inspect at any time, and they did! Special thanks to all the SVAS members who supported our new camping and fire rules!

To start off the raffle, we began with the SVAS Star Awards ceremony. It was my great pleasure to receive an award along with Ross Gorman,

Lonnie

Ross

Perry

Walt



Walt Heiges, Bob Lea, and Perry Preston Porter. Ross and Walt have worked extremely hard at getting the Forest Service Permit for HGO signed, their award was truly deserved! Bob Lea has been a huge SVAS supporter and board member for years. He donated his time and skill to survey HGO for the

Walt Heiges



new SUP permit. It's no secret Perry P. Porter is the man doing the work of three (3.4?), again truly deserved. I (Lonnie Robinson) do what I enjoy doing most and that's working on telescopes. Getting an award for having so much fun is doubly cool! Thank you!

The raffle began with Walt manning his brand new ticket-spinner-mixer- What's it called?

Jason Gayman



Paul Redmon



Anyway, the small door kept coming off the old one at the worst times so it was ready for a replacement. Jason Gayman bought his usual huge number of tickets. I liked the way he taped them to a cardboard box, in order, so he could keep track of the numbers. My friend Paul suggested we write our numbers down on a notepad, great idea! It was easy to check especially since we bought three different number series. Paul and I were eyeing the 70mm refractor to give to his grandsons. It was won very early on, so we selected the homebuilt 6" reflector donated by Matt Jennings. My number hit! I hustled up to the podium with the number listed on our tracking paper, but there was no ticket to be found in my collection!! Returning to my seat feeling defeated, there it was on the ground right in front of my chair where it was dropped in my

Davin Enigl



haste! We used that winning ticket to claim the telescope for Paul's grandsons. They are at just the right age and interest to really enjoy that scope.

I kept expecting Jason to make his usual numerous winning trips to the raffle tables, but a family sitting next to us seemed to have great success. One after another winning ticket was theirs to claim, it was convenient that they were on the first row! Congratulations, it's almost as much fun watching someone else enjoy winning as it is to win yourself. Almost. Our thanks to everyone for buying so many tickets

and supporting the SVAS.

The sun was making it's way to the horizon, and I still didn't have my scope set up. We all got ready to share a night of observing with friends, but the sky wasn't clearing? Paul recently bought a camera holder and wanted to get some pictures of Saturn just at the edge of darkness. Just in time, the sky cleared a bit to the west and we finally managed to get the camera positioned on the eyepiece correctly. We took two fairly good shots, on my 16" Dob, before more clouds moved in. Clouds fairly dominated the evening with just a few fleeting areas of clearing, and the forecast had promised



clearing after midnight. I began calling our event Cloud-B-Q! Don't get me wrong, I enjoyed every minute of occasional observing mixed with conversing with friends. It's being with like minded people that make the event really special, I would attend clear sky or not!

I gave up, close to 2am, on a promised clearing and sacked out just at the wrong time. Tired after a long day, I thought just a few hours sleep would help and the sky might



Inam Dave & Rita



Ray Brown

clear. Waking up about 5:30am to a friends voice in my open SUV window, I found a clear sky with Venus and Jupiter shining brightly. Wouldn't you know it had been clear for a couple hours while I slept! Fumbling around half asleep to find my 2" variable polarizer, I was rewarded with some great views of the very bright planets. Sunrise was soon on it's way, but we managed views of the Orion Nebula, Andromeda Galaxy, and Castor the double star in Gemini. All too soon the sun was up, it was time for a

cup of coffee and a Danish thanks to Ross. We then all pitched in helping with dismantling the SVAS canopies and moving the Bar-B-Q grills back in the observatory.

Hope you enjoyed Star-B-Q as much as I did! Already looking forward to next year.

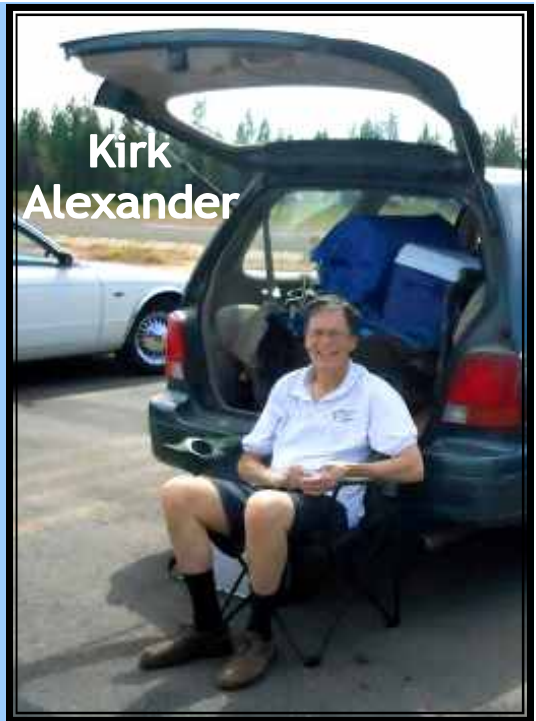
Observer Editor



**Special thanks to Wayne Lord for his Star- B-Q photographs.*



Paul, Brad, & Kevin



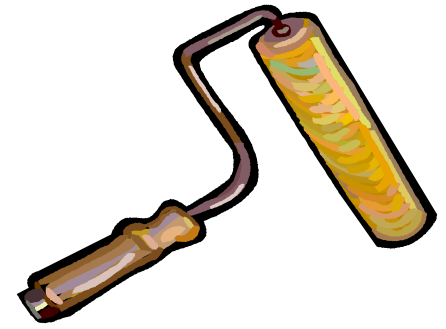
Kirk
Alexander



Sheldon
Berkowitz



HGO Paint & Cleanup



HGO looks great! Dave & Rita Macho, Kevin Heider, Perry P. Porter, and I worked last year scraping all the loose old paint off, and got it protected with primer for the winter. The new color needed to be approved



by the Forest Service so it would blend in with the surroundings. It looks so much better! The south end and back of the roll off roof area still needs painting, but from the front it looks finished. Perry engineered and built a new replacement wood flashing on the roll off roof, that had deteriorated with age. It rolls with the roof, and provides an overhang seal for rain or snow. Great job Perry It looks great!

Special thanks to Bill

Marquardt for starting one day and finishing the rest of the face the next, and Gary Shuluk, Stuart Schultz, who worked hard on the project too. Please forgive me if I missed anyone! I missed myself,



I painted part of a wall before leaving for Graeagle. Many hands make light work.

Observer Editor



Perry Preston Porter

Astro AP Photography

by Wayne Lord



After the disappointment at Blue Canyon with the cloudy skies, I decided to set up once more at home last night. Had to remember to change the program settings from Blue Canyon back to Citrus Heights for location and altitude, but other than that things went relatively well. Of course, the moon was coming up as it got darker, so that would be a problem that only time would rectify. I decided to go with the 8-inch Astrograph since I hadn't used it in a while. I did try to affix my red-dot finder to it, at least temporarily, since with the two cameras (capture and guiding) I have no visual guide to where the system is pointing. I put it on one of the tube ring bolt holes -- not ideal since it turns too easily, but it at least provided a rough guide to get a star into the field of view of the guide scope. I did a couple iterations of the Polar alignment routine but discovered I

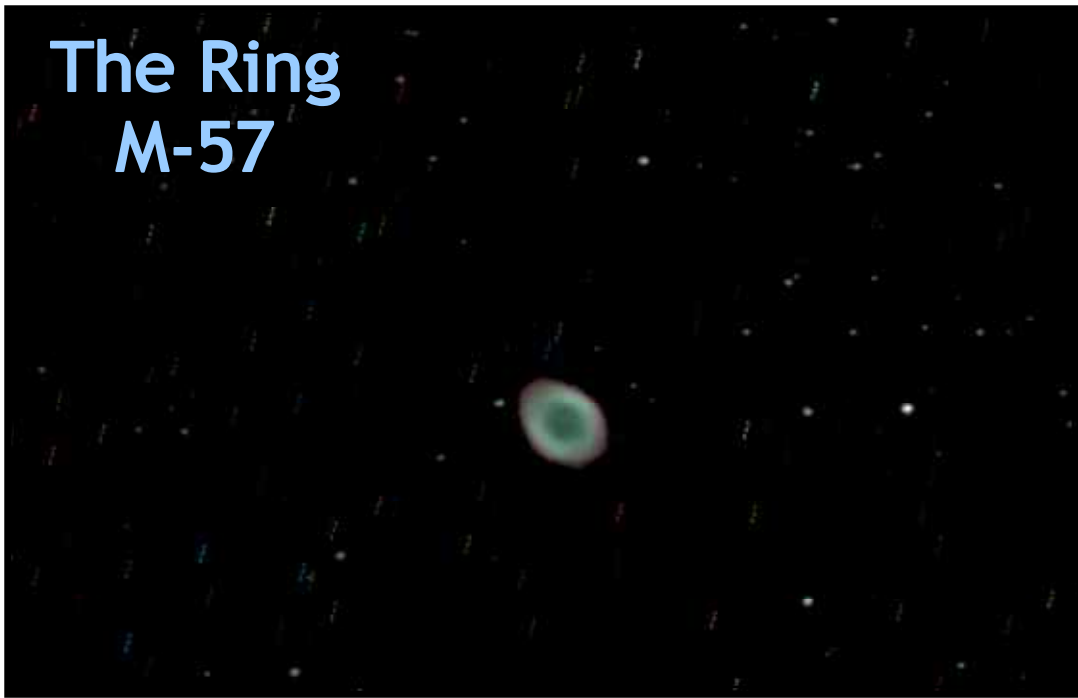
had set up with the mount rotated too far west, so had to run the azimuth adjustment as far to right as it would go. Have to get that changed for next time. That done, I zeroed out the alignment points in EQMOD to start fresh and started aiming at stars starting with Arcturus. Vega was almost directly overhead, so I skipped it and tried to find a star to the east. Finally found one at one corner of the Great Square of Pegasus. Since Andromeda was close, I tried going there but didn't find anything so went on to Cassiopeia and added one of the stars there. I noted that it is pretty much in the middle of the Milky Way, which should be a star-rich region, so shifted over to M52, with which I am not familiar. I

didn't see anything obvious in the view screens, but decided to try some exposures and see if anything showed up. First, though, I completed a PHD guiding calibration since I noted a fair amount of drift. Going to have to try to do a drift alignment sometime soon.

Something else that I tried last night, I did a preview in Nebulosity first at one minute and then at two minutes. The first result showed a doubled star image, and I figured guiding was still settling in. The two minute image was rock solid, so I bumped the time to three minutes and took a series. Still not much of real interest there, but at least it was showing nice round stars. This was without the coma corrector in place. Since it has been a while since I imaged with this scope, I didn't think about it in setting things up. I got it out of my accessory box and installed it, but was unable to achieve focus with it in place. Some-



The Ring M-57



thing else for my to do list; figure out how to get focus with the coma corrector in place.

Back to the non-coma configuration, I had to find something to focus on. Since Vega was now more to the west, I aimed at it and added another point to the alignment database. Followed down to the base of the Lyre where M57 is and added one of those stars to get a good local correction. Slewed to the Ring and there it was, even in the PHD display. Oh, forgot to mention that I put the light-pollution filter in place at the same

time I took the coma corrector off. I think it helped tame some of the milky skies due to the moon and other ambient light. Went with 3-minute exposures, again after a couple of previews to allow guiding to settle. I note in the stacked image (Series M57x8 2min.jpg) that the dark subtraction didn't work as well as usual since I can see trails of hot pixels in this image. What is interesting to note though is the com-

compact nature of the trails. This is a stack of 8 images so there should be eight dots in each trail but I can only pick out maybe four so the guiding, although not perfect, is very close.

Getting pretty late now, after midnight, but since things were going so well I didn't want to quit. Andromeda was up higher so I slewed to it.

Didn't see it in the displays, and it is too dim to show up in the red dot finder. Went back to one of the stars in Cassiopeia and re-synched on it, then slewed back to Andromeda.

Got a fuzzy ball in the PHD display, centered it and picked a nearby star to guide on. Did a couple previews and decided

to try for some longer exposures -- five minutes. Got it started and went inside for a while to warm up (I was wearing shorts and a T-shirt at the start, had to go in and get a jacket as it cooled off but was still in shorts and sandals so my lower half got pretty cool toward 12:30. Since I wasn't sure where the companion galaxies were, I just went for the place it was positioned after I finished calibrating the guiding. Only four 5-minute subs (and two darks) is probably not enough time on this target, but since it was late and I was cold, I decided to call it a night. Crawled into bed around 1 AM this morning.



Andromeda M-31

Graeagle Nca Star Party

It was great fun attending this very special Star Party at the parking lot of the now closed Graeagle Ski Area. Some weeks before, Dave Buchla



talked with the hosts at the “Plumas Eureka State Park” campsite, indicating that the Nevada County Astronomers could put on a Star Party for the campground guests in return for a couple free campsites over the weekend. They were very excited at the prospect, immediately accepting the offer. When we arrived Saturday evening, the campground hosts had posted the invite for the event where the entire campground

would see it.

Visually, the drive from I-80 north on highway 89 was absolutely stunning! I was reminded of the old TV series Ponderosa by the spacious mountain vista valleys sparsely populated with stately Ponderosa Pines. No coincidence since the original TV set was located slightly East of Lake Tahoe. I drove by an entire pasture filled with Lamas; strange looking animals. CalTrans had just completed a brand new and long section of highway 89, and my SUV ran so quiet I could barely hear the road noise coming from the fresh asphalt especially after experiencing the concrete stretches of I-80!

I arrived late which is becoming usual for me, stopping in on the way at Blue Canyon to help



Dave Buchla & Rod Fivelstad

Perry P. Porter with a bit of painting and some repairs on the SVAS HGO observatory, and missed dinner with the Nca group at a nearby restaurant. Luckily I had a late lunch on the way. We went straight to the nearby Graeagle Ski Area parking lot. It was a large lot surrounded by pines, making for an absolutely beautiful setting with a generous horizon line considering the mountains and all. We planned our



setup so as to block as much light as possible coming from visiting cars, by circling the RVs, trailers, and SUVs, and assembling the scopes in the center area. It worked rather well considering the very large number of interested campers that showed up. Dave began the evening with a welcome speech along with a brief introduction to the constellations. He just barely started speaking when a spectacular meteor flashed across the western sky, dropping sparklers along the way, and disappearing in a puff of smoke before it could become a meteorite. It was the Perseid meteor shower, and it was putting on a show! Every

minute or less there was a sparkler radiating from the north area of the sky. The oos and aawes from the crowd said it all. Great shower, best in memory. I almost forgot, we were talking about Dave's speech. So did the guests, Dave was seriously upstaged by the meteor show!

We had a drop in visiting astronomer from Graeagle, he parked next to me and set up his scope. He is a telescope maker which makes him a great guy in my opinion (Joke). We shared stories from telescope stuff to bears. Yes more bear stories about how they can easily pull the doors off a SUV in search of food. After a fun evening talking astronomy to many guests from all over the state and sharing our tele-

scopic views, we decided to make camp right there in the parking lot and stay for the night. We stowed our valuable equipment, and I brought out a new self inflating air mattress getting ready to sleep in my SUV. The bear conversations remained in my head, so I decided to lock myself in with the remote access key very close to me. The idea was set off the horn alarm if I had a visitor. I slept uninterrupted for a few hours till the morning sun coming through my window woke me up. I reached for the remote to unlock the doors. One problem, the doors in the back were still locked and as it turns out the carwash guys had bumped the child protective lock switches on when wiping the door jams. You haven't lived till you experience climbing over the seat to get out the front doors while still half asleep!

Bill and Fran Thomas invited us all over for breakfast before taking on the road back home. I really enjoyed the meal sitting in a tree lined outdoor theater, coffee and muffin in hand, and discussing the very successful Graeagle Star Party! My only complaint was it was too short a stay in such a beautiful high mountain retreat.

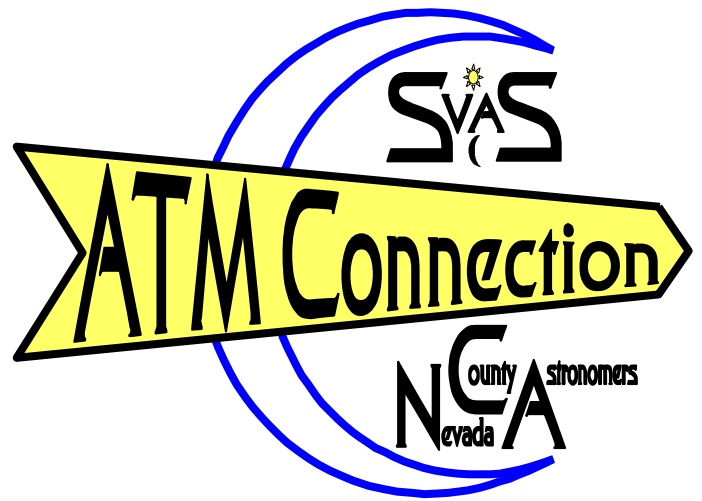
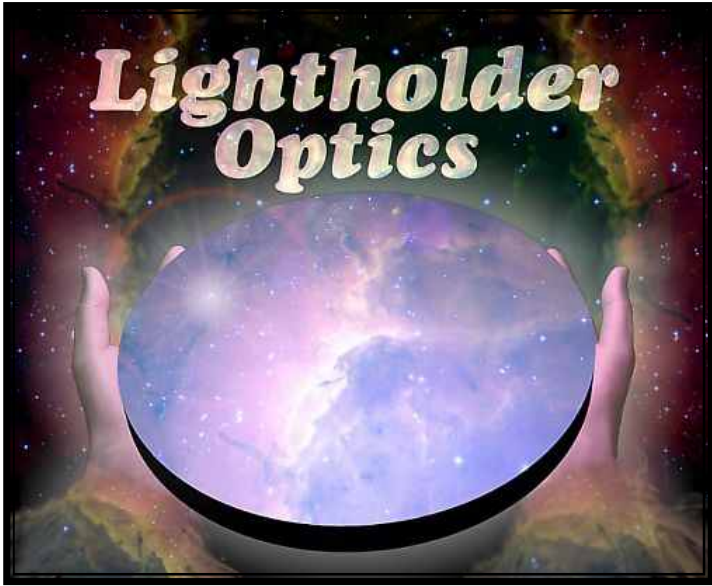
I'm always on the lookout for stuff my wife might enjoy, that would help me talk her into coming along to our star parties. If your significant other is a golfer like mine, they might be enticed by the Graeagle Meadows Golf Course. The beauty is breathtaking with all the amenities. There are many local hotels, vacation rentals, restaurants, and shops within a few miles of Graeagle. One night of stargazing in trade for a day and evening enjoying the local area should be an irresistible proposition!

Keep watch for next years event, and put in an early request to attend this scenic High Sierra Star Party.

Observer Editor



A Visit With John Lightholder



Last spring, Bill Thomas contacted John Lightholder, in South Lake Tahoe, and ask if we could drop by for a visit to talk mirror making. We were very excited when John invited us to his residence and optical shop.

The weather was perfect for a drive up highway 50, Bill picked me up at my house, and we were off for a fun afternoon talking to a professional mirror maker. There aren't many mirror makers out there, so it was a great opportunity to share our experiences and per-

haps learn something new. John greeted us on his front porch, the aromatic smell of pine trees filled the air. He had just completed a remodel of his home, and we got the grand tour. The first thing we noticed was the beautiful stone fireplace along one wall of the living room with a fireplace insert. The contractors did extensive structure rework with the ceilings and floors, and it really looked sharp. The kitchen was completely new, with beautiful light colored hardwood cabinets and fresh countertops with all the latest appliances to go with it. We talked a bit, enjoyed a refreshing drink, and then off the optics shop.

Along one wall were three mirror grinding machines. Bill immediately zeroed in on the ultra compact DC motor controllers that allowed infinite RPM adjustment without changing any belt drives. DC motors are the only way to go! John scratch built his machines and they are very well made. He uses two quill over arms running on double eccentric drives. It makes for a very sturdy arm and adds one more dimension to gain extra pattern control of the lap or grinding tool. We discussed at length how astigmatism is caused on the machine. John described his solution and reasoning about how uneven grinding action is the main culprit. Bill and I will give his method a try soon. John had a 18" F/4 mirror on the test stand to demonstrate his Foucault tester. We adjusted the tester in and out scanning the surface. It looked really good, very smooth surface, and no indication of a turned



edge. John and I agreed that waffle tree mirror edge supports rule. I like using the pivoting four bottom edge supports, instead of a sling, holding the mirror vertical for testing. If spaced correctly, they distribute the load very nearly



as well as a sling but without all the movement and uneven pressure on the front edge. Because John produces a lot of mirrors, he is expert at the Foucault test. He has many different focal lengths marked on the floor for easy setup. We spent another hour talking about his automatic pumps for abrasive and polishing compounds, and how he decants all the abrasive compounds. Decanting is allowing the large

particles to settle to the bottom of the diluted mixture, and using only the top layers. We talked about surface smoothness and how to keep the laps running smoothly. I was most interested in how he makes his laps and grinding tools. John uses ceramic tiles, attached with epoxy, on a cement backing for grinding, and I really liked the way he stores pitch laps. Each tool had a metal ring with a piece of foam board separating them. They were stacked high on the workbench and an overhead shelf. A great way to keep them moist, clean, safe, and accessible. Wow did the time fly! We were facing a long trip back home, but if it were up to me I would have overstayed my welcome well into dinner. Bill almost had to drag me away. I was completely immersed in mirror making and John was a terrific host. We promised to get together again at a future date. I would enjoy helping Bill demonstrate his "Slit Mirror Test" procedure to John.

Planning on building your own scope or replacing your current mirror? Consider Lightholder Optics. You will be in good hands with someone who really knows mirrors and cares greatly about obtaining the highest optical quality. Bill and I ask if he would be interested in giving a presentation at our meetings, and John liked the idea. John was a SVAS member for many years some time back. We are working on getting him back into the SVAS!

by Lonnie Robinson



John Lightholder @ GSSP

6TH ANNUAL
**NIGHT
UNDER
THE
STARS**
STAR PARTY



Star Gazing
Solar Telescope
Evening Slide Presentation
Night Sky Network Info Tent!

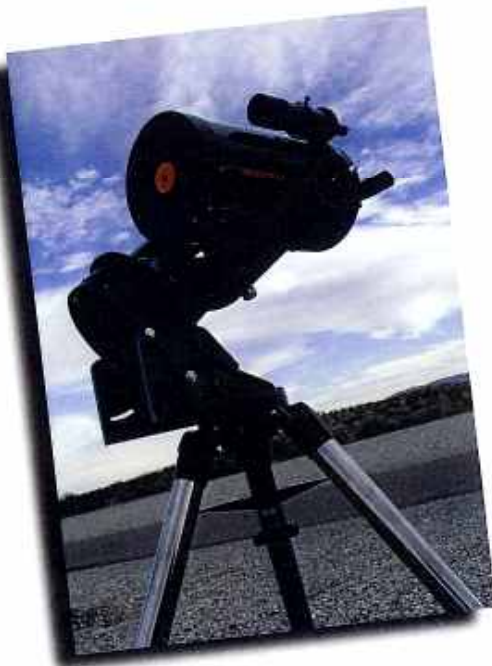


Photo taken at the event's late night Astro Photography Workshop!

November 10, 2012
Alamo Lake State Park
Wenden, Arizona

Attention Astronomy Groups

We are seeking astronomers and groups to participate at the 6th Annual **Night Under the Stars** event held at **Alamo Lake State Park** in Wenden, Arizona (about 160 miles North West of Phoenix). This is a dark sky park and one of the first state parks to be added to the **Global Star Park Network**. This year's event will be an official **Arizona Centennial Event** and we will be planning Saturday afternoon activities.

Free primitive camping is available on Friday November 9, and Saturday November 10, 2012. We have been extremely fortunate to have fantastic star viewing for previous events!

Watch our video from a previous year's event at <http://bit.ly/AlamoLake>. Learn more about the park at <http://AZStateParks.com/Parks/ALLA>

This event is supported and organized by the **Astronomers of Verde Valley** (AstroVerde.org). This astronomy club, based out of Cottonwood, was recently named Arizona State Park's **Volunteer Team of the Year**.

To participate please contact **JD Maddy** at jd@astroverde.org or call **602-672 2032**

Please forward this information to other interested people & parties! Thank you!

Arizona State Parks
1300 W. Washington
Phoenix, Arizona 85007

Phone & TTY (602) 542-4174
Toll Free (800) 285-3703
from 520 & 928 area codes
Fax (602) 542-4180

Equal Employment Opportunity Agency. This document is available in alternative formats. Contact the ADA Coordinator at (602) 542-4174.



AZStateParks.com

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Lonnie Robinson

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Membership Resources	Ross Gorman / Nerissa Adams
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Newsletter	Walt Heiges
Outreach Director	Lonnie Robinson / Walt Heiges
Community Star Parties	Walt Heiges / Perry Preston Porter
Observatory Director	Perry Preston Porter
First Light Team	Perry Preston Porter
ATM - Amateur Telescope Making	Perry Preston Porter
Speaker Seeker	Lonnie Robinson / Bill Thomas
	Richard Sandler

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.

WWW.SVAS.ORG

SVAS Observer

To Subscribe- First send in your membership application form below, with your dues, and upon approval by the board of directors the Observer (published bi-monthly) 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. 1

Articles- Manuscripts and letters are welcome in MS Word, MS Publisher, or plain text format, and emailed to the SVAS Editor. Deadline is the 22nd of the month prior to the newsletter release.

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

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SVAS Membership Application

Choose Membership Level: New: ___ or Renew: ___

Student- (student ID required) \$20/yr _____

Family or Individual- (one household) \$35/yr _____

Observatory- (membership + \$40 + approvals) \$40/yr _____

Supporting- (membership + contribution) \$75/yr _____

Contributing- (membership + contribution) \$150/yr _____

Additional tax deductible contribution: Amt \$ _____

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Name _____

Address _____

City _____ Zip _____ Phone _____

Email _____

(For SVAS Observer Newsletter)

Detach and mail with payment to: **SVAS Membership Application**
 PO Box 15274
 Sacramento, California. 95851-0274



Observatory Membership Approvals

The benefits of a regular membership plus private use of the Henry Grieb Observatory (HGO) at Blue Canyon. You must be a regular member for six months or longer, be certified and approved by the Observatory Director, and then be approved by the SVAS Board of Directors.

Note: It may take the board of directors 30 or more days to process and approve this application.

By signing this application, I acknowledge I have accessed the SVAS website, 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 the SVAS, use of its property and its 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.

Signature _____

Date _____