



**SVAS** Vol. 70 No. 6\* Nov-Dec, 2013  
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**OBSERVER**  
 Sacramento Valley Astronomical Society  
 Founded in 1945

# Seasons Greetings



The holidays are here already and Thanksgiving is just around the corner. We need to get into the celebration mood very soon. I thought Gary's great HGO photo would add to the holiday mood and stay on point with our astronomy topic. Now is the time to be with family and friends, and any spare time could be devoted to those unfinished Astro projects. It's also a good time to start dropping hints about that special eyepiece or filter you have been wanting

all year. Santa needs a little help now and then. It's also a good time to reflect on all the star parties and special events of the past year, and start planning how to make them even better for 2014.



Photo by Gary Shuluk

The SVAS Officers and Board members extend their best wishes for the holiday season! It's been a great year for the SVAS!

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# SVAS Event Calendar



**November 3** New Moon



**November 1-2** Blue Canyon

Two star parties this month, weather permitting!



**November 15, General Meeting, Friday at 8:00pm**

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



**November 29-30** Blue Canyon.

Bring your leftover turkey for a snack.

<b>Star Party Schedule for 2013</b>	
November 1-2 & 29-30	
December 6-7	
<b>Blue Canyon</b>	



**Dec 2** New Moon



**Dec 6-7** Blue Canyon



**December 20, General Meeting, Friday at 8:00pm**

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

## Star-B-Q 2014!

We believe in plenty of advance notice, so next years Star-B-Q will be held July 26, 2014. Hopefully missing major holidays and other events, GSSP is scheduled for June 26-29, 2014. We are already working on raffle prizes and plan on assembling the shade canopies and tables earlier to get things going smoothly.



## SVAS President talks about Membership Cards



Dear SVAS Members,

The last Saturday in Sept, I drove to Bill Marquardt's house in Vacaville and we put together the membership card mailers for the 55 or so members that have renewed since July. In preparation for my visit, Bill had already printed and laminated membership cards for each of our 140 or so members. He had also printed labels and prepped the envelopes for mailing. So when I arrived, we just had to stuff the envelopes with a letter explaining the membership card and insert a card. I mailed the 55 completed mailers that afternoon. He listened to the Board's concerns and figured out the solutions to make the membership card work. Now we just need to get the word out, and follow through on the card's purpose.

For those who have renewed their SVAS membership in recent months, a new permanent SVAS Membership card has been mailed to you. Please keep this card in a safe place, and carry it with you for all SVAS functions, including star gazing at important means by which you can identify yourself as an SVAS member in good standing.

**The SVAS Board owes a big thank you to Bill Marquardt for taking on this project and following through!**

The card has been laminated, so it should hold up for a number of years. If, however, your membership card is lost or damaged, a replacement card can be provided at a cost equal to a full year's membership fee. My suggestion would be to keep it in your wallet or purse, or alternately, to hole punch the card and affix a lanyard to it.

Next July when you renew your membership, a custom sticker with the new membership year marked on it will be sent. This sticker should be placed over the "2014" that is printed on the card now. If you decide not to renew your membership in July, keep the card or turn it in to the Board. That way you avoid the card replacement cost if you decide later to rejoin SVAS.

For members that still need to remit their prorated membership fees between now and July 1, 2014. A temporary paper membership card will be provided soon. However, if you would like to start to enjoy the benefits of a permanent official membership card, then just send in your membership renewal in advance. We will send you the new card.

For instance, if your membership renew date is this December, then fill out and sign the membership application, and remit \$18 for a general membership (6 mos until next June multiplied by \$3 per month). Or remit \$42 for an observatory membership (6 mos until next June multiplied by \$7 per month).

When you receive your card, check the spelling of your name. If there is a typo, then mail your card and the correction to SVAS's PO Box. A new, corrected card will be sent free of charge.

Thanks, call me with any questions/concerns.

Ross



# HGO News

Stuart Schulz just sent in this photo (Oct 31) of the new snow shield on the front porch of HGO, proof the maintenance elves are still performing their magic. It's designed to keep the snow away from the front door, and make snow shoveling much easier. The benches are removed and the smaller panels installed in their place. Next spring the benches will be put back and all the panels removed. It's a bit snug sliding in the side opening to open the door. I suggested we cut a round pattern in the panels edge to match and accommodate my ever enlarging belly! Just kidding.

We had a good dusting of snow, but it's melting fast.

Observer Editor





# Kirk Alexander

## 1950 - 2013



SVAS Officers and Board of Directors

**Forrest Lockhart:** I was saddened to learn of the death of Kirk Alexander. A finer gentleman I have never met. Over the years of my SVAS membership, Kirk and I had some memorable times together. One evening at HGO we set up his 4" TeleVue Genesis and my TeleVue NP-101 side by side, pointed them at a nebula, then installed various deep sky filters. Everyone there was encouraged to take a long look through each scope, and record their opinions of the view. Then we changed filters and did another survey. The results for each filter were distributed at the end of the survey, and the session generated a lot of spirited discussion.

One Star-B-Q we went on a very-late-night (early morning) search of the elusive Horsehead nebula. Never leaving anything to chance, Kirk had printed detailed charts, while I supplied a variety of Line and Narrowband filters.

Since my little refractor wasn't up to the job, we used Kirk's Obsession Dob. When, at last, we found the little gem I guess we got a bit excited and noisy. The next morning a few early-to-bed campers expressed their colorful objections to our exuberance. Kirk and I were both publicly apologetic, but didn't let this interfere with our personal delight in finding the nebula.

We had some good times under the stars, memories to last a lifetime. Too bad his was cut so tragically short.

I shall miss him!

**Lonnie Robinson:** I know I speak for the entire Sacramento Valley Astronomical Society when I express my sorrow that Kirk has passed. I enjoyed his can do attitude, which helped guide the SVAS Board of Directors in making some very difficult club decisions. I'm glad I had the chance to occasionally share views of the heavens with Kirk, and thought of him as my friend.

Kirk will be greatly missed!

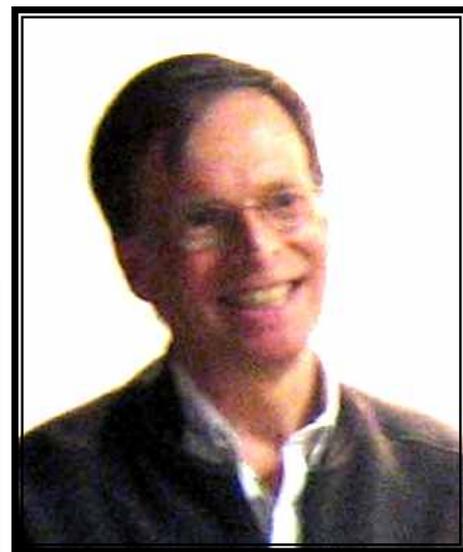
**Sacramento Bee:**

Kirk Alexander, a Davis resident who was instrumental in helping the University of California develop on-line courses, passed away peacefully at home on October 1 after a courageous 4-year battle with cancer. His wife Joan and daughters Kate and Christine were by his side. He was 63 years old. Kirk was born in Denver, Colorado on June 9, 1950 the first son of parents Bruce D. and Phyllis S. ("Chick") Alexander. He spent his early years in Denver, but attended high school in the east, graduating from Choate preparatory school ('68). Kirk received a B.A. degree in Art History ('72) and a M.S. degree in Civil Engineering ('75) from Princeton University. In 1975, Kirk went to work for Princeton University, where he led various educational technology projects until 2003. He lived in the Princeton area for 35 years.



In 2003, Kirk and his family moved to Davis, California, where he managed educational technology and online learning projects at the University of California. Kirk married Joan Ogden in 1989 and they have two daughters Kate Alexander, 23, of Somerville, MA, and Christine Alexander, 19, of New York City, NY. Kirk had a lifelong love of the beauty he found in nature, art and technology. This love was expressed in his work, and in his many avocations and interests. Kirk was a pioneer in using computer technology in the humanities. As a student he developed some of the first-ever computer models of Gothic cathedrals which enabled new understandings of architectural history. He led Princeton's University's Interactive Computer Graphics Laboratory in the 1980s, a seedbed for creative use of graphics in science, math and the arts. He was the technical lead on the Piero project, a sophisticated use of computer graphics in art history. A rare mind who could travel in both the art and technology worlds, Kirk brought the practitioners of these disciplines together in new ways and catalyzed new insights. Over the past few years, he worked as Technology Lead for UC Online Education at University of California's Office of the President. He had a brilliant intellect and a wonderful ability to see things from many sides, combined with humor and realism. Kirk loved the outdoors and was an avid hiker, biker, skier and kayaker. Some of his happiest times were spent hiking the trails around Miramonte, the Alexander family mountain home in Coal Creek canyon, Colorado. He also loved astronomy, and spent many hours stargazing and seeking to understand the universe. He especially enjoyed star parties, taking his daughters on jaunts into the country to look at deep sky wonders. Kirk was generous and giving and made many good friends throughout the world. They will miss him dearly. Kirk served his community through his involvement with the Davis Schools Foundation, Tuleyome, and the Sacramento Valley Astronomical Society. Kirk is survived by his wife of 24 years Joan Ogden of Davis, California and his daughters Kate Alexander and Christine Alexander. Also surviving him are his father Bruce D. Alexander, and brothers Bruce K. (Lisa) and Paul (Carolyn), three nieces (Madison, Sarah, and Morgan Alexander), one nephew (Colton Alexander) and several cousins, all of Denver. His mother Phyllis pre-deceased him.

His family and friends will miss him keenly.



# Calling *all* Sun Gazers



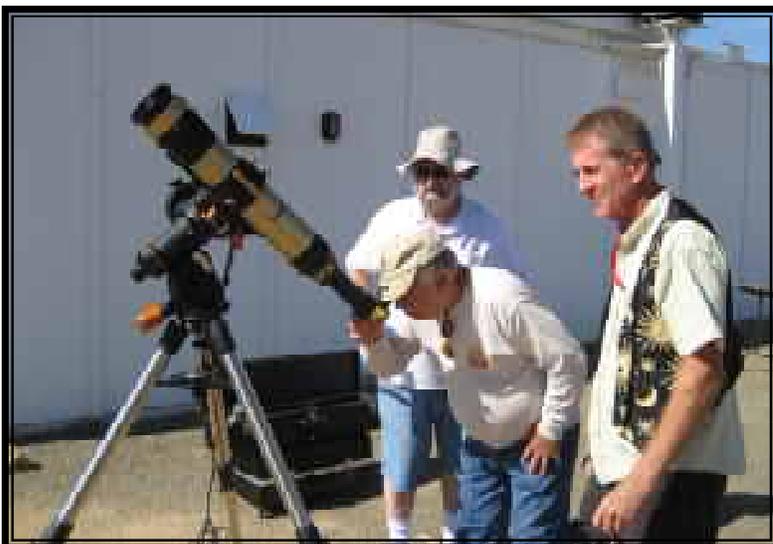
by Lonnie Robinson



Walt extended me an invite to attend a solar get together at the Cameron Park Observatory, Wednesday Oct 16, at 10:00am. Forrest Lockhart, Gene & Pat, Nicole, Charlie Coburn, Bill Hagbery, and Walt Heiges were already there with several solar scopes set up to the rear of the observatory. It was a meeting of the minds for solar observing, a conscientious effort to unite the local astronomy clubs to participate together in a very interesting part of our hobby. The public has eagerly welcomed solar viewing with huge turnouts at club sponsored events. The three major clubs in the Sacramento area, SVAS, NcA (Nevada County Astronomers),

SsG (Sierra Star Gazers), and Cameron Park Observatory, all vie for the opportunity to set up for solar viewings, and special celestial events, at local schools. As a rule, each club participates at the events closest to them. Every once and a while there is a request that borders two clubs, so we must decide who can conveniently take care of it considering prior obligations. Everyone's goal was to promote solar observing, and combine and share the areas club resources. It is our hope that occasionally we all can get together for the large events, for instance the next partial solar eclipse predicted for Oct 23, 2014.

**“Calling all Sun Gazers” is a shout out to all SVAS members who may be interested in sharing views of our star with the public, so please contact a Board member and volunteer. We need members with or without dedicated solar scopes or solar filters, to help represent our club. Come join the fun!**



**“Calling all Sun Gazers” is a shout out to all SVAS members who may be interested in sharing views of our star with the public, so please contact a SVAS Board member or Officer and volunteer. We need members with or without dedicated solar scopes or solar filters, to help represent our club. The idea is to have at least two members or more helping with each single scope. Give Walt Heiges a call (916-684-2421) and let him know you would like to join the fun, then dust off that solar telescope or add on solar filter. We also need someone to spearhead the overall organizational effort and become the SVAS front man of solar, helping Walt solicit, organize, and coordinate future events.**

There is a lot of responsibility sharing views of the potentially extremely dangerous Sun, so Forrest has offered to help train our member volunteers in all the safety procedures. He is certified through the Folsom Lake College for viewing safety, which is required of the Cameron Park observatory docents for insurance reasons. It is a huge public service to warn the public, especially young kids, of the dangers viewing the Sun without proper filters. Forrest has three rules: Rule #1 is don't look at the Sun, Rule #2 is don't look at the Sun, and Rule #3 is be sure a follow rules #1 & #2!

We talked a lot about the best equipment, and I'm new to this exciting field but learning fast. It was just May of last year during the Venus Transit and after the great solar eclipse, that I decided to obtain a solar filter for my scope. Not wanting to spend a lot of money, I decided to buy the white-gray solar film from Baader Planetarium. Thousands Oaks Optical was sold out at the time, so they sent me their Black Polymer 8.5x11" plastic film filter for a total of \$46.22 out the door. The Black Polymer displays the sun in a very realistic yellow color, and claims excellent sunspot detail with very good faculae and surface granulation. The film came with mounting instructions, so I made my own cell mount

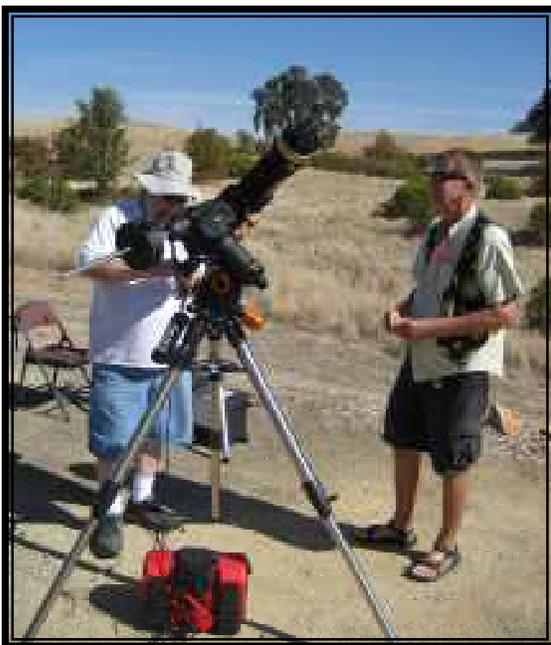


**Forrest Lockhart has three rules:  
Rule #1 is don't look at the Sun,  
Rule #2 is don't look at the Sun, and  
Rule #3 is be sure a follow rules #1 & #2! Can't say enough about safety!**

out of 1" thick white HDP (high density polyethylene). The instructions suggested the film be glued to the frame with a second hold down ring attached with screws for extra security. It was a fun job using my router to cut the outside

perimeter about 3/4" larger than my 8" Meade objective. Next I routed the inside like a bowl to snugly fit the Meade, sliding over it about 3/4". Then cutting out the center was the easy part, and little more

difficult making the ABS plastic retainer ring. I used double backed tape to secure each part to an old piece of plywood for routing. I also used double backed tape to secure the filter before screwing the retainer ring down. After threading four nylon retainer bolts in the parameter, it was a



great looking filter if I must say so myself! The nylon bolts were positioned just right to securely catch in the outer groove of the Meade's objective cell. Take care to retighten the bolts after it warms up in the Sun, since it expands a bit causing it loosen up.



The views are amazing utilizing the relatively large 8" Meade, and it was great to have tracking ability, however one look through a Coronado H-Alpha filter really lowered my satisfaction level with the yellow filter. I could easily see sunspots, magnify them up fairly close, but there wasn't a hint of any solar prominences or surface granulation that's visible in H-Alpha. The one advantage was the larger aperture of the Meade exhibiting greater resolution and detail of the sunspots, and it should allow more magnification. Here's the rub, the Sun's heat keeps the atmosphere

turbulent and the polymer tends to distort the views, hindering high magnification for close inspection. I



would like to try two 6.5" filters on my 16" Dob, spaced opposite of each other and spread out to the 16" diameter.



They would return the resolution and detail of the 16", and light gathering is a non issue with the Sun. A stop down mask with similar dual openings should work nicely for lunar and planetary work at night. It would maintain the 16"s resolution, decrease the brightness, eliminate the secondary obstruction, while leaving the f/ ratio unchanged. Both the yellow and white filters display synthetic solar colors created by the filter makeup. The Sun's true color is close to white, but the Earth's atmosphere absorbs and scatters all the colors but yellow.



H-Alpha is definitely the way to go, but very expensive. I would suggest buying a dedicated Solar H-Alpha scope rather than adding filters to an existing scope, because the optics are fine tuned for the H-Alpha's specific light frequencies. I thought about adding the required filters to my 8" Meade Cassegrain, but decided it would be best to piggy-back a complete small solar scope and take advantage of the clock drive. I could also use my yellow filter at the same time. Check out two manufacturers: Coronado (now owned by Meade Instruments) and Lunt Solar Systems, they each make a personal size solar scope for under \$700. Many of the folks I have talked with preferred the Lunt scope, they suggest it has a great filter

design and excellent quality control. Coronado has long been the standard for solar. The H-Alpha system requires two filters; the H-Alpha goes under the eyepiece in the diagonal, and the primary reduction filter over the objective working as a pair. The bandwidth is described in Angstroms usually somewhere between .9 to .3 ang. The lower the number, the more expensive but you can expect more detail in the Sun's oscillating hydrogen surface. Less than .5 ang usually employs a technique called double stacking. They use two reduction filters over the objective stacked on top of each other to obtain the narrower light bandwidth. However, most of the comments I hear indicate a single filter is the best way to go since double stacking reduces the light too much. With the reduced light, you need to dark adapt your eyes a bit to see the darker image well, and that's difficult to do in sunlight!



Which ever way you decide to get solar equipped, it's a fascinating part of our hobby. Starting out economically is a great way to cultivate your interest. Definitely worth mentioning, never use filters that are only installed in the eyepiece or diagonal, they can crack with the intense heat of the focused Sun!!! Instead of worrying about staying warm enough and packing many layers of clothing and hand warmers, you only need to worry about your sun-screen and wearing a cool looking hat! It's a great way to enjoy our hobby during the winter months!



Most Astro objects are static, so it's great fun to watch the dynamic ever changing solar activity. This photo from EarthSky is a one year composite of our Sun's activity. Notice how the biggest prominences originate from the sunspot regions. These active regions are the result of powerful magnetic fields, sometimes thousands of times greater than the Earth's, and associated with sun spots. The sunspots have an 11 year cycle, which begins further north and south of the Sun's equator. As the cycle progresses they move closer to the equator, and we are very close to maximum this year.

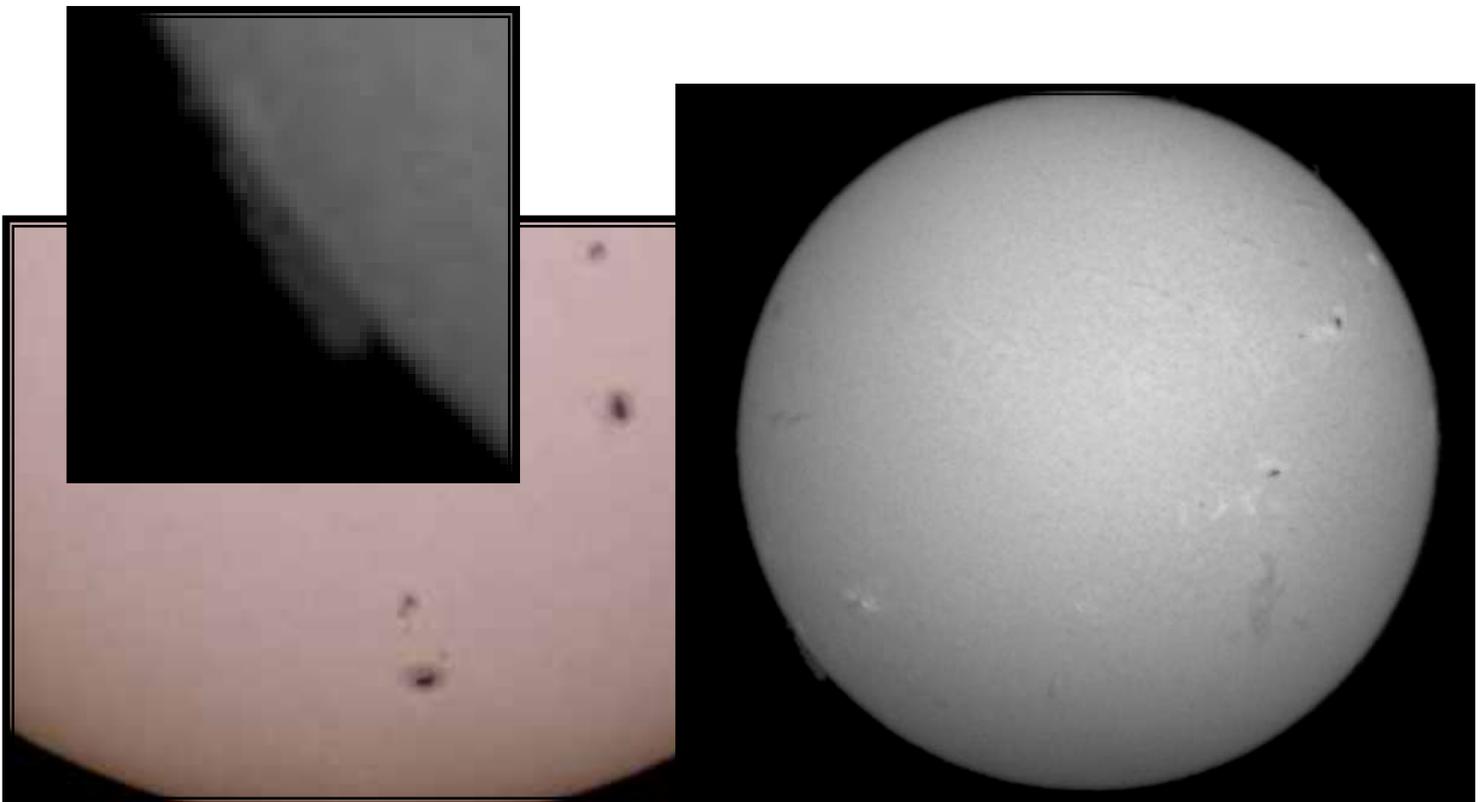
Photo courtesy of EarthSky

There is a correlation of Earth's weather trends and the Sun's sunspot activity. Records show colder winters associated with fewer sunspots, and therefore less energy release during that time.

It's really humbling to consider the size of the Earth compared to a solar flair!

The Sun's diameter is 100 times the Earth, and a flare can be several (10 to 20?) Earth diameters high.

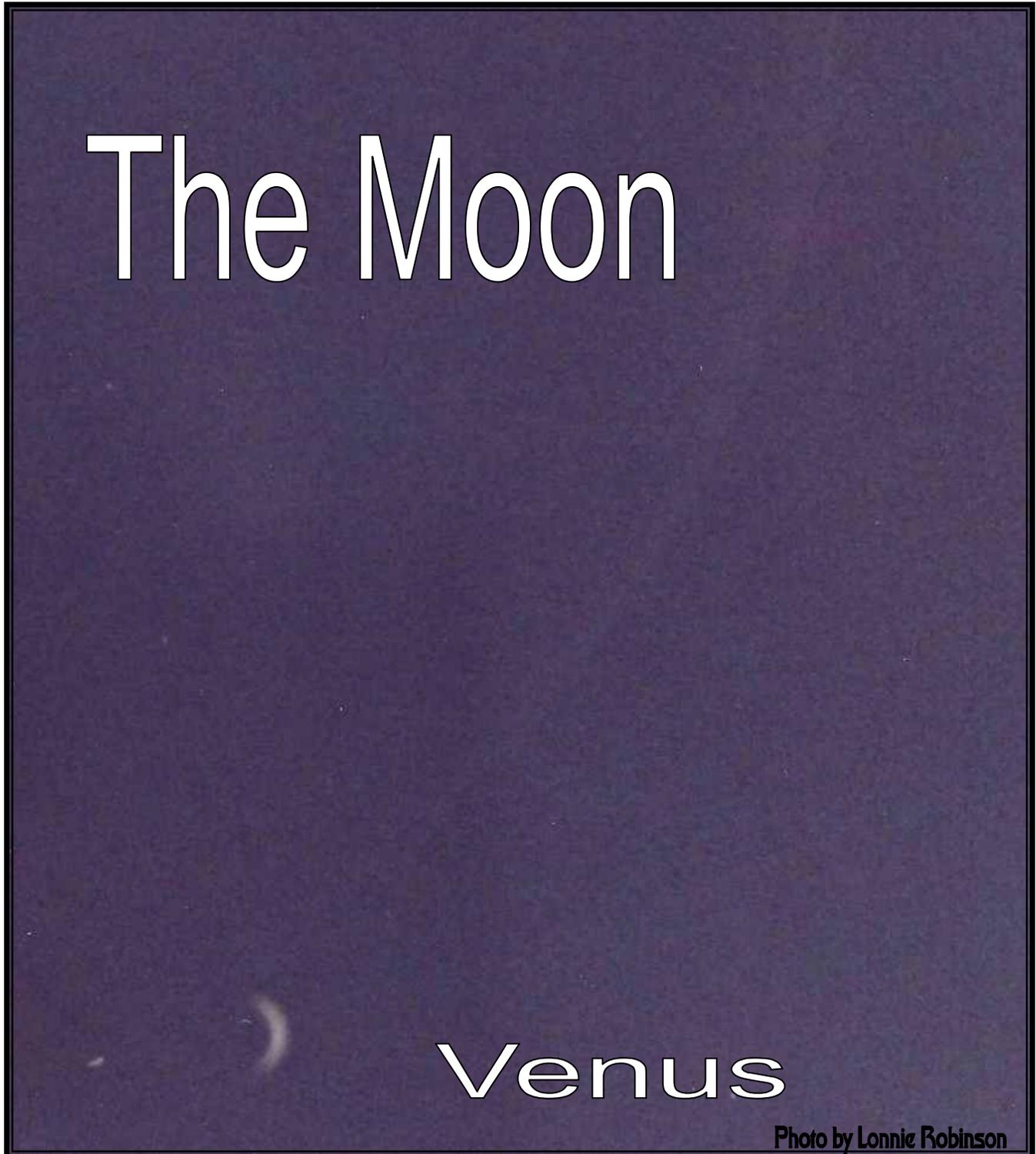
Tim Tingey sent these great photos of current activity. The photo bottom left is a white glass filter, and the other from a Coronado H-Alpha. The detail is amazing, you can see the surface granulation, filaments, and flairs around the Sun's edge. We observed several fantastic flairs at the Cameron Park Observatory, one seemed to reach out from the sun and another arched high from the surface and back again!



I had a chance to photograph the crescent Moon occulting a crescent Venus many years ago. It was great fun because it was almost noon time! Everyone looks at the Venus photo and asks, is that the Moon? You can see the Moon's faint outline above Venus in this film photo taken with eyepiece projection. This is a natural extension of solar, and observing the Moon and planets during the day is very doable. Most folks don't realize we can see planets in daylight, but be certain they are far enough away from the Sun that your scope couldn't accidentally be moved, causing permanent eye damage!!! I can't say enough about safety!

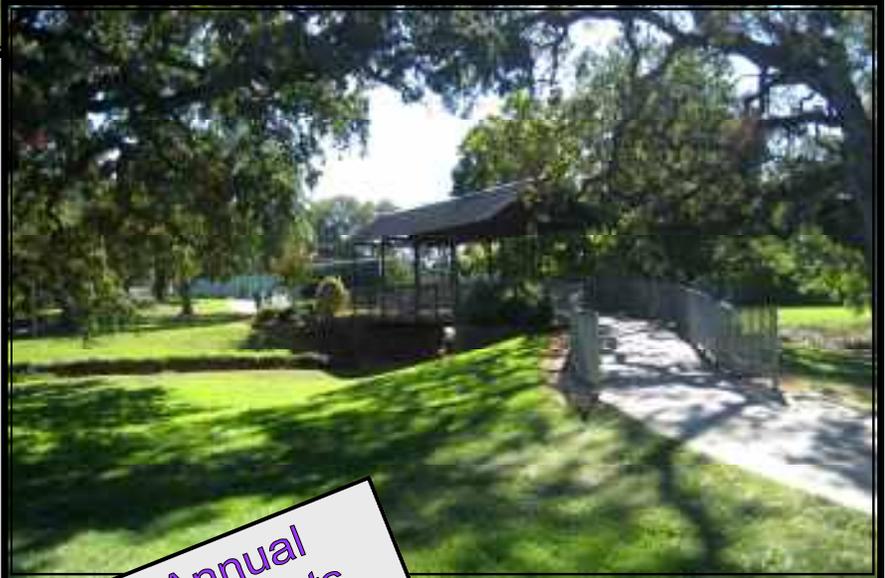
Solar equipment or not, I hope you come join the fun of sharing our star with the public.

Observer Editor



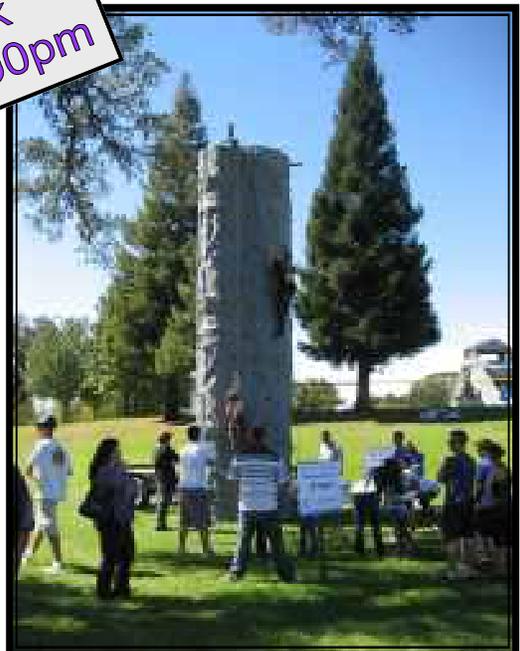


All week long I planned for the Sunday FunDay at Rusch Park, my scope was packed with all the solar equipment and ready to go. Wait ask us to be there before 9:00am, so we could drive in right up to the display area, unload our equipment, and park our cars close by on a small grassy hill. There would be so many visitors walking around with their children, that the cars could not be moved again until closing at 3:00pm. I was very disappointed that my evening business continued extra late, making the early morning 9:00am arrival really tough for me.



I arrived about noon, without my scope

**17th Annual  
Citrus Heights  
Sunday FunDay  
September 22nd  
Rusch Park  
11:00am - 3:00pm**





Walt Heiges



Tim Tingey



but camera in hand, hoping to help out any way I could. I paid the price for being late, because there was precious little parking available. I finally found a spot at the bowling alley next door. There were already lines of visitors at the telescopes, and the perfect weather was promising a very enjoyable afternoon with only occasional light clouds obscuring the Sun. I had a great time watching and listening to the youngsters commenting about their views of the Sun. I really liked Walt's description of why the Sun's surface looks so rough, he said we are looking at the helium gas boiling up to the surface. He's a natural at chatting with newcomers to our hobby. Almost everyone asks about the sunspots, and the hydrogen alpha filters bring out the prominences flaring out from the sphere and the granulated surface in action. Great fun describing what is happening to a youngster!

Bill Hagbery brought his H-Alpha scope, and his huge meteorite. This meteorite is very impressive, when picking it up you expect it to weight so much less. I had a great idea that Bill should drill a hole in it and use it for a telescope counter weight. Crazy yes? Bill didn't like the idea either, but he politely smiled.

I took a short walk to check out the many display booths. All sorts of stuff for sale from jewelry to custom T shirts. There were many professional displays including the Fire Department and Veterans of Foreign Wars. No shortage of food booths, jewelry and clothing vendors, and activities such as rock climbing and play areas for the kids. There was a small passenger train carrying folks around the park on the many walkways. All this with the backdrop of Rusch park, displaying scenic beauty in every direction with artistic bridges spanning the small creek and a well groomed landscape.

A world away from the city hustle.





Perry P. Porter



Bill Hagbery



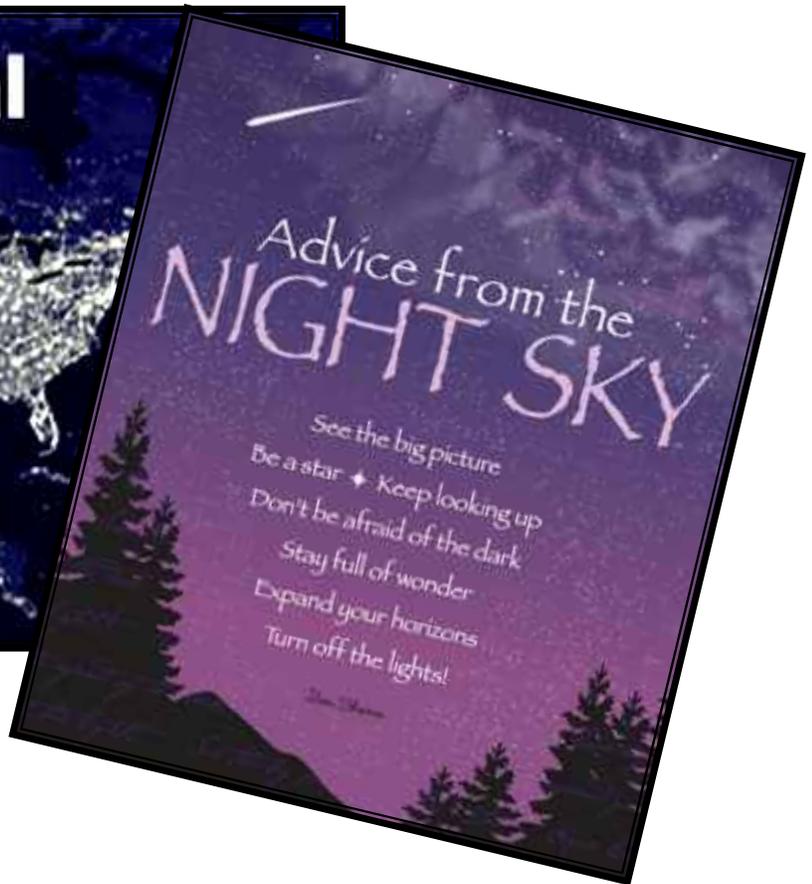
Lonnie Robinson



It was great fun to see some of my pizza customers there! Ben and Sheila (upper left photo) have been customers since the early eighties! The photos at left of Bill's 13.4 lb Campo del Cielo meteorite from Argentina, give you an idea of it's size. The two youngsters were amazed at it's weight when passing it to each other, let alone contemplating the journey it made arriving here on Earth.

Come join us next year representing the SVAS for a little Sun worship at Rusch park.

Observer Editor



I was pleased to see Jack and Beverly Sales manning their International Dark-Sky Association booth at the Rusch Park Sunday FunDay. It seems Walt and Jack follow each other around to many events, finding their booths located in close proximity. Jack and Beverly have been SVAS members and IDA supporters for many years, and it's great to have someone working so hard to preserve the dark skies we all appreciate.

Jack announced at our last board meeting, that he had a brief discussion with a Placer county supervisor about the IDA and light pollution. They expressed interest, and it would be an excellent opportunity to continue the conversation since it directly pertains to our dark skies at Blue Canyon. Jack is planning on giving a presentation and talk at a future SVAS meeting,

about the International Dark-Sky Association. He will share with us the different types of new lighting available to help preserve our high contrast views of the heavens and help protect the environment.

Be sure to attend and lend your support!

Observer Editor



# Star Party Report

# Sept 7th at HGO

by **Lonnie Robinson**

I had a friend tell me "you never know what to expect at HGO", with regards to the weather! Well, that goes for the smoke too! The trip up the mountain was initially quite disappointing observing a lot of low hanging smoke from a nearby forest fire. As I approached Blue Canyon the smoke obscured the distant mountains. I arrived about 2:30, and was the only SVAS guy there. Could it be that I would be the only observer that evening? There were three young people standing on the ramp to HGO, who flew in from the bay area to visit with friends and parked their aircraft on the tarmac. We talked for a while before their friend picked them up. It was quite breezy all afternoon, and as the evening progressed the sky began to clear and the wind decreased raising my hopes considerably for good transparency! You can see some smoke still on the horizon with the crescent Moon and Venus at the upper left.



I had arrived early to work on the HGO's 16" Ritchie, hoping to install a Si Tec go to system in the very near future. The biggest challenge so far has been designing and making the servo motor mounts so the belts and gears will fit in the limited space of the Mathis mount. More on this topic later.

Sheldon Berkowitz was the first to arrive and set up his scope. I told him the reclining chair is now his trademark, and it's indeed the way to go with binoculars. It was great fun to find out he is also interested in radio



Sheldon Berkowitz



Greg Blandin

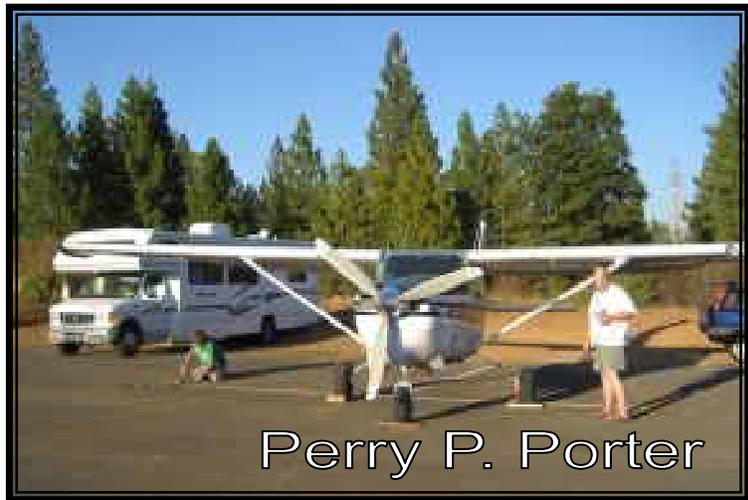
control aircraft. We shared many stories about airplanes we have built and the radio equipment used. The things I learned when building models, the extreme disappointment of crashes, and the following rebuilds, has taught me so much about daily life. The detail and patience required to finish and rebuild these models spills over to telescope building!

Later on Perry P. Porter showed up and Greg Blandin shortly afterwards with his RV and fantastic 25" Dob. It

weighs a lot, and it took two of us to lift it into the rocker box. Notice his homemade equatorial table. He shared some great views with us, my favorite was the NGC891 Galaxy which is difficult for me to pull out from all the background stars. Greg



was my guest for the day until his membership renewal clears the board. The Galaxy above is a DSS photo of one of my favorite Galaxies NGC7331 in Pegasus. Stevens Quintet is close by.



Perry P. Porter

Bill and Marsha Port dropped by, as our guests, with two great looking big scopes. One was his, and the other hers, both packed in their small car.

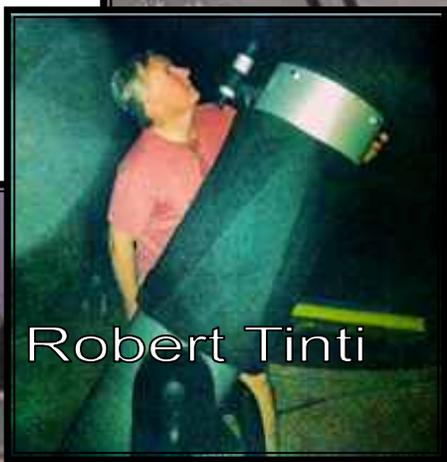
It's most intriguing that they are both interested in the same hobby! How their story evolved would be fun to hear and share with our members!

Davin Enigl arrived with several friends and neighbors to view the sky. Later on he shared some sad news that he will be moving to So. Carolina very soon. He will be sorely missed, but he promised to keep in touch.

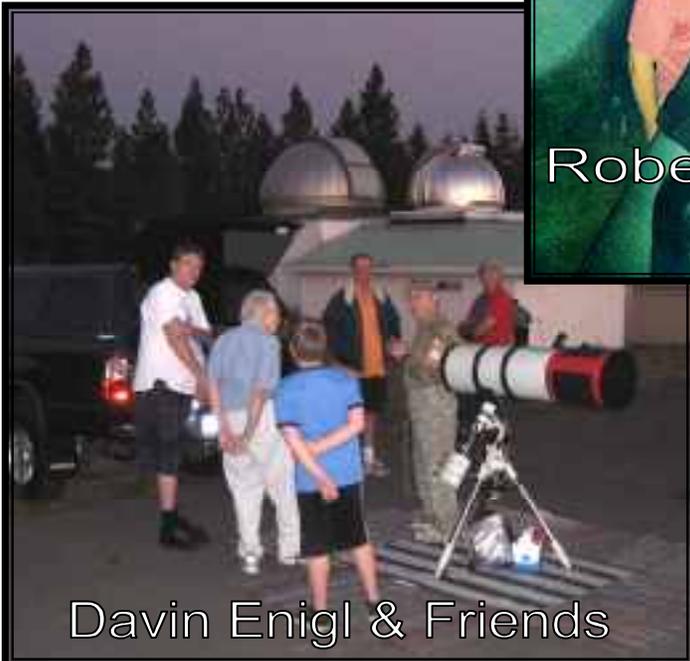
Tim Tingey arrived after dusk, and drove right by Perry and me completely ignoring us (kidding), parking on the south end of the tarmac. We were going to work on the Messier objects together. After dark, we walked down to say



Bill & Marsha Port



Robert Tinti

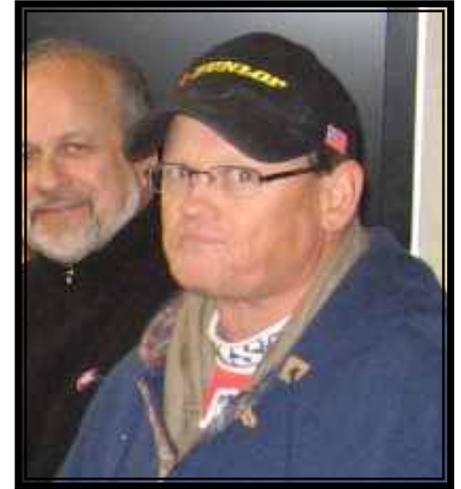


Davin Enigl & Friends

hello, and since his scope has wheels we decided to roll it over by mine in front of HGO. We had a great time manually finding several objects, and occasionally using the computer for help. I'm getting better all the time. I'll be trying to persuade him to write a regular Messier article for the newsletter. Robert Tinti, a new member, brought his new 12" Orion Dob. We had a long discussion about eyepieces.

The seeing turned out to be rather excellent, with the clarity, we judged, at about a seven of ten. Quite good considering all the smoke. M51 showed good detail, only lacking some brightness. M100 was just at the threshold in my 16", still showing the difficult to see detail in the arms. All in all it was a great star party!

# Messier Marathon



by Tim Tingey

**Tim:** This November and December would be an excellent chance to catch up on the Messier list observations and the sequential method for finding as many in one evening that is practical and possible. Remember in past newsletter articles we hoped for a Messier Marathon during March 2014, using this year to acquaint all interested in how to accomplish it. November's Messier list included summer favorites like M13, M8, M20, M22, M17, M11, M57, M51, M81 and M82, M92, M71, M27, M29, M56, M2, M15, M52, M101 and M102, M75, M55, M30 to name a few. Then fall and winter constellations become visible earlier in the evening or early morning going into late November. The great square of Pegasus dominates the sky on Nov.1, CASSIOPEIA and ANDROMEDA are high and prominent with M103, M76, M34, M33. M31, M32, M110. Into November (or staying up later into the early morning in early November) M45, M35, M37, M36, M38, M42, M43, M78. These 38 don't include all that will be visible in these two months in an evening to early morning session. But by locating these you will find others. A messier marathon is finding all **110** messier objects in one sundown to sunrise session. This takes place in March at latitudes 35 to 40 degrees and requires practice and training. Lonnie and I are willing to help all those interested so please give it some thought and let us know through the Yahoo Group and emails. Prairie City OHV is our winter star party site but won't be the location of the marathon in March. The skies there are not suitable for that because of light intrusion from Sacramento and Folsom. A more desirable location will be chosen, perhaps Cronin Ranch. Earlier this March Lonnie and I made our first stab at finding as many Messier Objects in one night as possible and did pretty well. The Northern Skies Messier Marathon Spring Sequence and Checklist is available at [www.astras-stargate.com/messierlist.htm](http://www.astras-stargate.com/messierlist.htm). Finder charts are available from me, and online through organizing a Messier Marathon Google search, also Don Machholz's book on Messier Marathons is invaluable and includes the charts.

Even if you're not interested in the Messier Marathon in March, but very much want to know what's up, the best time for viewing, what's prominent and interesting, or what your scope can see, then the Messier list will teach you the constellations and how to navigate the night sky. It's been said there's no better exercise for the beginning astronomer.

**Lonnie:** We have two star parties scheduled at Blue Canyon, in November! This is a great opportunity for some Messier practice, so let's get together. Don't forget we can utilize the big 16" Dob stored in HGO. It has a Telrad and finder scope, we only need eyepieces. Call or write Tim or me, let us know you will be there and we'll figure out where to meet up. It will be cooling down quickly in the evening, so bring plenty of layers to keep warm. Disposable hand warmers have proven indispensable for snow skiing, they should be invaluable for observing too. If all else fails, the warm up room in HGO is a great place to relax, talk observing, and get warm for the next session at the telescope.

Hope to see you there!



by Lonnie Robinson

Forrest Lockhart has been trying to find a good home for his 12.5" mirror blank and glass tool, and last week Paul Redmon made the decision it would make a great first mirror. We made the trip to Cameron Park Observatory, Forrest is the Docent there, to make the purchase. Talk about an appropriate setting to acquire your first mirror blank, with the observatory backdrop of astrophotos and the large telescopes in the observation room next door. Forrest had everything up and running so we could get a look in the 17" PlaneWave, it was a full Moon evening so the Moon it was. The large aperture makes the craters seem to jump right at you with the three dimensional effect of high resolution. Albireo a yellow and blue double was next, and Forrest pointed out that for color challenged folks it's helpful to defocus a bit to make the color stand out. It helped me a lot! After a short visit, Paul made the purchase and promised to invite Forrest to the telescope's first light.



Paul Redmon & Forrest Lockhart



The mirror had been ground to a fine grit, but it measured in at  $f/11.26$ , a bit longer focus than our planned  $f/5.5$ ! The use of a .0001 spherometer sure takes the guesswork out of measuring. Paul and I are going to use a 8" solid steel tool, 80 grit silicone carbide, and the mirror machine to hog out the curve to  $f/5.5$ . We "only" have about  $3/16$ " to go. When the proper curve depth is established, we'll make a 9" plaster tile tool to stationary post grind with 120, 220, 280, silicone grits, and then 25, 15, 9, micron aluminum oxide before polishing. The photo of the glass tiles from Lowes shows drawing a circle with a beam compass,

prior to scoring the tiles with a Dremel cutoff tool before breaking them to size with a chisel. We'll use marine epoxy to attach them to the plaster tool after sealing it with urethane. Mostafa is still deciding which size mirror to make. Cost, weight, and eyepiece height are difficult choices. I'm still working on the SVAS 16" too.

Join the fun, give me a call.



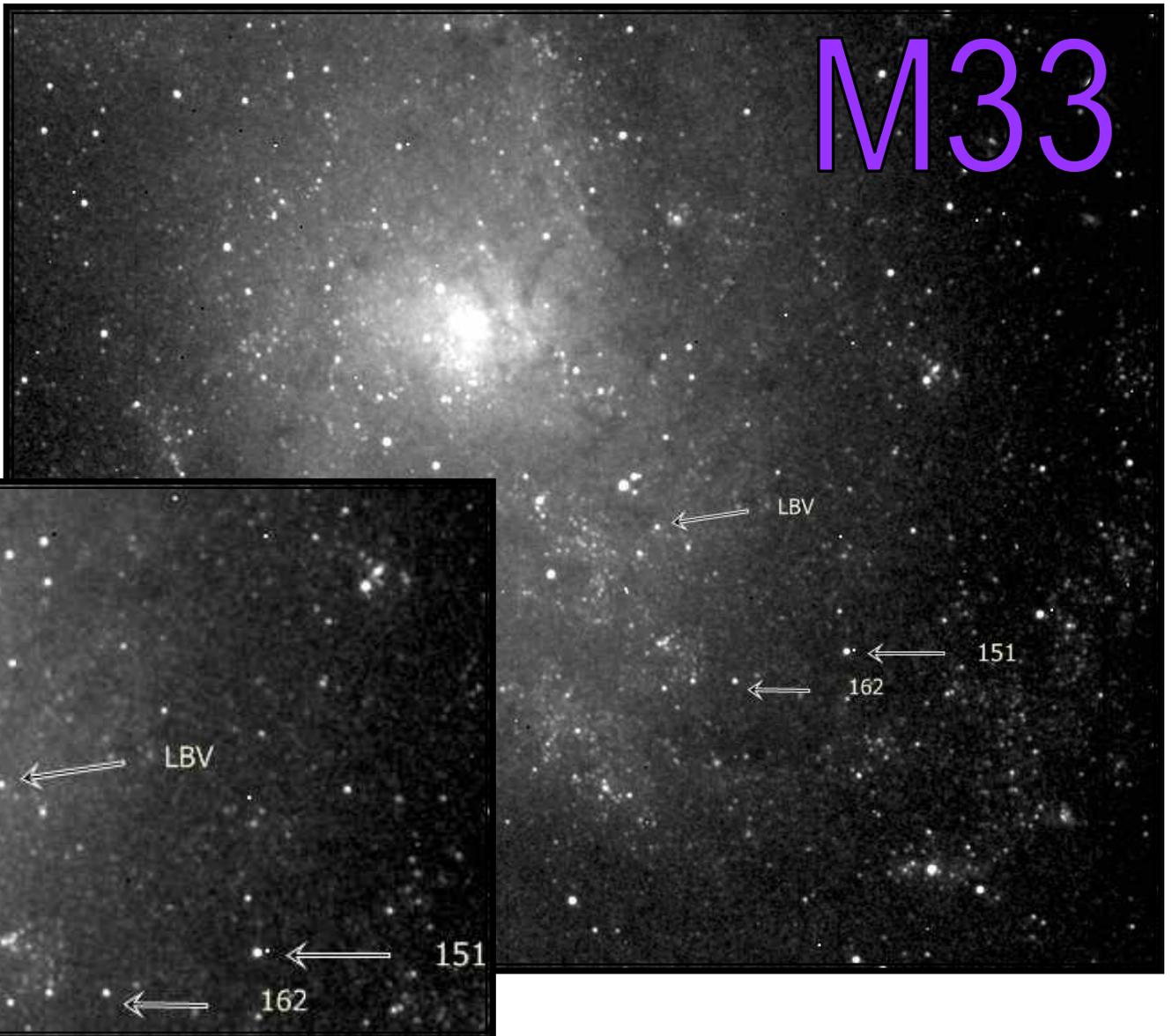
# What's uP

by Bill Goff



I've run across what might be a fun observing challenge for SVAS members. There is a LBV (luminous blue variable) in M33 that has gone into outburst. The challenge is that it's one of those rare occasions when a visual observer would be able to see an individual star in another galaxy, other than supernovae of course. Normally, supergiants even in M31 or M33 are 18th magnitude or fainter. I've measured this one at 16.1 recently. These objects are normally 50 solar masses and described as astrophysical geysers in a recent NASA ADS posting from the PASP at: <http://adsabs.harvard.edu/abs/1994PASP..106.1025H>

This object is identified as M33 Var C in the astronomical literature. Here is a recent image of mine. The target is marked LBV and the other marked stars show their magnitudes without the decimal, 151 is a 15.1 mag. This target should be visible in 12.5-14" scopes in good skies. Use the brighter stars on the image to star hop to the region and use high power to maximize contrast for this faint object. If you'd like a larger copy of the image, email me at [b-goff@sbcglobal.net](mailto:b-goff@sbcglobal.net)



# School Star Party Report

by Wayne Lord

# Heritage Oak Elementary



Perry P. Porter



I have lost track of how many fall star parties I have been to at this school. I think it is 5 or 6 times. Most of the previous times have been quite successful, with crowds of young kids wanting to look through our telescopes. Unfortunately, the weather did not cooperate this time, with scattered clouds increasing before dark and sticking around during the allotted time for the kids to come. We were able to spot the Summer Triangle intermittently, and Venus finally showed up briefly down close to the houses to the west of our location. The clouds not only obscured much of the sky but also reflected the light from the surface back down, overwhelming any of the dim stars that otherwise might have been visible.

A few children and adults showed up, but about all we could show them were bright stars. All the helicopters and aircraft traffic from the police action for the hostage situation in Roseville provided the major aerial display. Road closures also delayed some of the people showing up. We had six members show up. I left early, around 7:45, when it was obvious that the clouds were not going to cooperate. Until next time.



# SVAS Dues

The SVAS Board of Directors has unanimously voted for July 1st to be the new annual membership renewal due date. It will be the same date for all members. We have been discussing this for several months, listening to the members suggestions, and decided it would be easier for all concerned to have one date. Here are the discussion points:



- \*Easier for members to remember when their annual membership is due.**
- \*We can remind everyone a few months ahead of time.**
- \*Dues may be paid at Star-B-Q.**
- \*Membership cards will be mailed to you.**
- \*Dues will already be paid prior to SVAS elections.**
- \*Easier for our treasurer to plan our yearly budget expenditures.**

In order to make it easier to prorate existing and new memberships to the new date, we changed the amount slightly so it would be evenly divisible by 12 months.

Here are the new rates:

<b>Student;</b>	<b>Was \$20,</b>	<b>now \$24</b>	<b>or \$2 per month.</b>
<b>Family or Individual;</b>	<b>Was \$35,</b>	<b>now \$36</b>	<b>or \$3 per month.</b>
<b>Observatory;</b>	<b>Was \$40,</b>	<b>now \$48</b>	<b>or \$4 per month.</b>

Please make an additional one time adjustment payment from your current expiration date to the new July 1st due date. Then everyone's membership will come due each July.

The SVAS Officers and Board of Directors, hope this will be a smooth and welcome transition for everyone!

# SVAS Officers 2013

**President** *Ross Gorman*      **Vice President** *Walt Heiges*

**Secretary** *Nerissa Adams*      **Treasurer** *Kevin Normington*      **Past President** *Liam McDaid*

## SVAS Board of Directors

*Perry Preston Porter*    *Ramona Glasgow*    *Lonnie Robinson*

*Richard Sandler*      *Tim Tingey*      *Bill Marquardt*

## Committees

<b>Membership Resources</b>	Ross Gorman / Nerissa Adams
<b>Star-B-Q</b>	Ross Gorman / Walt Heiges
<b>Newsletter Editors</b>	Walt Heiges
<b>Speaker Seeker</b>	Lonnie Robinson / Walt Heiges
<b>SVAS Web Site</b>	Liam McDaid
<b>Outreach Director</b>	Margaret Minnick
<b>Community Star Parties</b>	Walt Heiges / Perry P. Porter
<b>Observatory Director</b>	Perry Preston Porter
<b>First Light Team</b>	Perry Preston Porter
<b>HGO Maintenance Director</b>	Perry Preston Porter
<b>Telescope Loaner Program</b>	Stuart Schulz
<b>Amateur Telescope Making</b>	Tim Tingey
	Lonnie Robinson / Bill Thomas

## 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 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.

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## SVAS Membership Application

Choose a Membership Level:      New: \_\_\_ or Renew: \_\_\_

Student- (student ID required)      \$24/yr or \$2/mo \_\_\_\_\_

Family or Individual- (one household)      \$36/yr or \$3mo \_\_\_\_\_

Observatory- (membership+\$48+approvals)      \$48/yr or \$4mo \_\_\_\_\_

Additional tax deductible contribution:      Amt \$ \_\_\_\_\_

(Please prorate dues to July 1st renewal date)      Total \$ \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zip \_\_\_\_\_ (Please Print)

Phone \_\_\_\_\_ (Email for newsletter mailing)

Email \_\_\_\_\_

Detach and mail      SVAS Membership Application  
 with payment to:      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 SVAS 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.

### Required Signature

Date \_\_\_\_\_