



# SVAS OBSERVER

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SACRAMENTO VALLEY ASTRONOMICAL SOCIETY  
FOUNDED IN 1945

## HGO Update



The Henry Grieb Observatory (HGO) will be "Open and the Coffee Will be On" . . . MORE OFTEN in 2008! A proposed star party list is posted of the seventeen darkest Saturdays in 2008 on Yahoo SVAS-biz mail list. This proposal gives us five more star parties than usual. For these nights we need Observatory Members, or Board members, or Officers willing to host the parties, or at least open HGO. There are about 50 people who have keys to HGO – all are eligible to host.

Generally, the HGO warming room (for those chilly winter nights) is open from sundown Saturday until dawn Sunday on star party nights. HGO is our primary site. Plan going there first, weather permitting. Cronan Ranch is our alternate site-of-last-resort. Any member can freely go to either site virtually any time (subject to a few rules), but it's nicer to go when other people are there – HINT: Use the Yahoo SVAS-Members mail list to coordinate your plans. See the member's only section at [www.svas.org](http://www.svas.org) for driving directions to the locations.

Observing Report: HGO was open and the hot coffee was on because of some very nice volunteers at the September 15th official and October 6th unofficial star parties. Thank you to the volunteers! Our official October 13th star party had no volunteers, so HGO remained closed.

In September and October the conditions were dark and clear, with a 6.5 magnitude skies. Dozens of college students filled the observing chamber at times. For the students' FYI: The telescope is a 16-inch Richey-Chrétien variation of Cassegrain design with 3200mm focal length (f.l.). The 55mm f.l. eye piece divided by 3200 f.l. gives a magnification of 58 diameters – our lowest. We also had



a 26mm and a 17mm eye-piece - 123x and 188x respectively.

Later, between 11:30 p.m. to 4 a.m. in September, we attempted some extremely dim objects thanks to Alvin Huey (the author of many "faint fuzzy" sky chart books e.g. Hickson, Arp galaxies and Abell planetary nebula). We found many of them with Alvin's 22-inch Dobsonian or the HGO 16-inch Richey-Chrétien. Most of these objects are dimmer than those in the NGC. For instance, we saw one of the globular star clusters orbiting the Andromeda galaxy M31 2.5 million light years away! Late in the night we re-collimated the 16-inch Richey-Chrétien telescope on dim stars. We then turned to the Pegasus-I galactic cluster and immediately saw NGC7619 and 7626. Then, by relaxing, stilling the eyes from movement exhaling slowly and using averted vision, we saw 7631, 7612, 7623 and possibly U-12535. After that we went to NGC7541, 7448/7454 at the star Markab. NGC7454 was also easily seen. We used a simple planisphere for getting the gross sky location, then we used the (newly issued, 2006)

Herald-Bobroff AstroAtlas, and finally The Night Sky Observation Guide Vol. 1 and 2 by Kepple and Sanner to star hop. We closed HGO at 4:30 a.m. Some people continued observing Venus even under bright sky conditions well after sunrise. Seven vehicles and three tents with about a dozen people stayed until morning.

In October, we found galactic clusters Abell 2666 and 2634 in Pegasus. We then concentrated on a dozen edge-on galaxies bagging the twin NGC7339/7332. Next was the Pegasus-I cluster of NGC7626/7623/7621/7619/et. al. It looks like we can see down to a visual magnitude of 13.8 with the 16-inch Richey Chrétien. Thanks to Alvin, Jay and wife, John and son, and Paul for fighting the snow and opening/closing the HGO roof. About a half-dozen people stayed for breakfast.

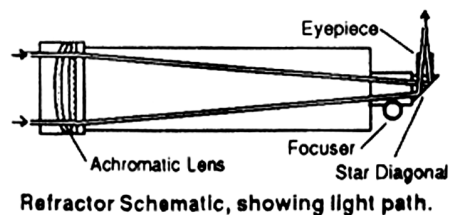
Targets for the next Star Party: NGC 2683 (Lynx) 9.0 (visual magnitude), NGC 3034 (Ursa Major) M82, NGC 3079 (Ursa Major) 10.9, NGC 3115 (lenticular)(Sextans) 8.9 a Caldwell, NGC 3432 (Leo Minor) 11.3, NGC 3877 (Ursa

# Professor Scopé's Corner

**A**perture seems to drive all astronomers so I suppose we should continue this time with aperture. Like in selecting a good real estate deal, you must consider three things: LOCATION! LOCATION! LOCATION! Selecting the correct telescope is driven by a similar criterion: APERTURE! APERTURE! APERTURE!

A telescope collects light and brings it to focus. The amount of light a telescope collects determines the amount of information presented to your eyes. In general, the more light a telescope collects the brighter and more detailed the object will appear. The aperture of a telescope determines its light-gathering ability. Aperture is defined as the diameter of the primary lens or mirror and it is measured in units of millimeter, centimeters or inches. The larger the telescope aperture you have then the greater its light-gathering power. Aperture is the single most influential feature when it comes to determining what you can see through any particular telescope. I will be showing comparison views that can be expected in telescopes of various apertures.

A small aperture telescope such as a 60mm refractor will collect enough light to show you nice views of the Moon. Jupiter, Saturn, Mars and Venus will resolve as small disks but will not show very much detail. This is because the small aperture of the telescope limits the upper magnification to about 100X. Deep-sky objects such as star clusters, nebulae and galaxies will not be visible at all unless viewed from a very dark site. Even then, you will be limited to viewing only the brightest of these celestial treasures.

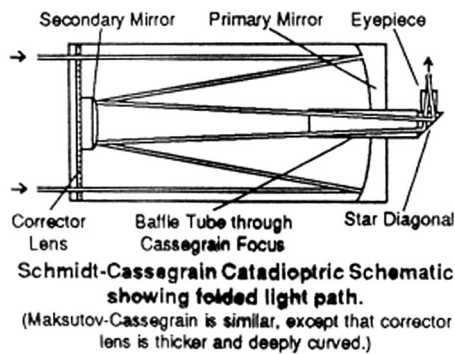


A 4.5-inch Newtonian telescope has 360% the light-gathering capacity of a 60mm telescope. The Moon will appear very bright and detailed. Jupiter, Saturn, Mars and Venus will appear larger and more detailed due to the additional magnification—upper limit about 200X—that

can be applied. Jupiter will show atmospheric detail and Saturn's rings will be quite apparent. Hundreds of deep-sky objects are within the reach of this telescope, especially if viewed from a dark sky site. Bright, highly condensed objects will appear particularly detailed.

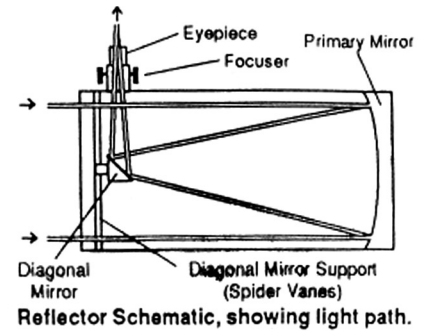
The 6-inch Dobsonian telescope has 173% the light-gathering power of the 4.5-inch telescope. The upper magnification limit is about 275X, planetary and lunar views are quite impressive. Jupiter's atmosphere shows detail within its belts and zones. Continental features on Mars become more obvious. The Moon is uncomfortably bright at low power and a neutral density filter is needed to cut down the amount of light that reaches your eye. Bright nebulae are incredibly detailed and some bright galaxies show spiral structure and other detail.

When you move to an 8-inch Schmidt-Cassegrain, this jump in aperture yields a 78% growth over the light-gathering of the 6-inch telescope. Jupiter and Mars show a wealth of detail at 300X. Divisions within Saturn's ring system are fairly easy to detect. Clusters of galaxies are visible from a dark sky site but most still appear as fuzzy blobs. There are still just a few that show spiral structure or any detail.



When you jump to a 10-inch Newtonian reflector you also jump 56% in light-gathering capability. This extra capability does not result in significantly improved planetary images. However, deep-sky objects do show more detail and structure. There are literally thousands of galaxies within the grasp of a 10-inch telescope. From a dark site, many will show details such as spiral structure, dark lanes and H II regions where new stars are forming. A treasure trove of star clusters,

emission nebulae and planetary nebulae are also within the reach of this telescope.



When you enter the world of 12.5-inch and larger telescopes, you enter the world of the light-buckets. Modern Dobsonians are available in apertures up to 40-inches and more. At these apertures, the number of celestial objects within reach is mind staggering. Today, amateurs like you are observing faint, distant objects that twenty-five years ago were within reach of only the largest professional telescopes. With modern CCD-imaging technology available it is now possible for amateur astronomers to record objects that were beyond the grasp of all but the 200-inch Hale Telescope at Mt. Palomar a generation ago.

*Prof. Scopé*

**Upcoming Events**  
**Lunar Eclipse 2-20-2008**  
**Astronomy Day 5-31-2008**

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 SVAS Observatory Member Since 1990

**SVAS Website**  
 Our current website address  
 is [www.svas.org](http://www.svas.org)

## President's Perspective

First thing to remember during this time of the year, the weather is changing and the conditions at HGO are very unpredictable. That is why we have established a winter site for those times when the roads and access to Blue Canyon become impassable. So, if you are looking for directions to Cronan Ranch, just post a message on the Yahoo Groups at [svas-members@yahoo.com](mailto:svas-members@yahoo.com) and simply ask the question – How do I get there? I believe you can search through the past messages and find the directions somewhere. You can always call one of the Board members for directions.

If you did not attend the AANC AstroCon 2007 at the College of San Mateo, you missed a terrific event. I spent the entire day meeting and making many new friends. The day was beautiful and the event was well attended. The new planetarium was amazing and the technology was mind-boggling. We were treated to live feeds via SKYPE as well as local presentations. Because the

entire side of the dome was used to show audio/video displays, it was like being in an IMAX theater. At one point during a planetarium show by Professor Stanford, we were shown where M31 appears in the night sky. It was nothing more than a mere smudge until he boosted the size up to the entire dome's 40' girth. You were literally surrounded by the images and it was truly awesome. You could find him popping up everywhere. The official event photographer was Morris Jones (Jane's husband) and he has provided lots of pictures of the event at <http://photo.whiteoaks.com/2007-09-29-aanc/>, so have a look.

Jane Houston Jones gave a wonderful talk about the Saturn Cassini-Huygens mission. Her presentation provided great images directly from NASA/JPL. I was very fortunate to obtain one of her DVD presentations and I am planning to show everyone this DVD recap of the mission during our December general meeting. The presentation is only about 20 minutes but loaded with great pictures. Plan to attend because we will also have a Show 'N' Tell of various member telescopes. You may even be able to view through a scope if the weather cooperates.

The Outreach Committee, led by Outreach Director Lynda Hall, met recently at Margaret Minnick's home. Thanks to Margaret's hospitality, we were able to conduct a productive meeting in a comfortable environment. Many future plans were developed during the meeting. I am very excited with the direction the Committee is heading. I look forward to seeing the many ideas unfold in the coming months. Also, the membership should see more InReach activities in the near future.

Astronomy Day 2008 will be on May 31st at Orangevale Park. We've had the event at this location in the past and I understand it is a very nice venue. Be sure to contact Lynda Hall immediately so you can add your name to the volunteer list. We are planning a big event with speakers and possibly vendors. SVAS material assets, tee shirts etc., will be available for everyone to donate \$\$ in exchange for these great SVAS items. We will also have the monthly scheduled star party at the site. HGO is still available for those seeking darker skies.

There are bright horizons and dark skies ahead so stay tuned folks,

*Walt Heiges*

## AANC-CON 9/29/07

Linda and I attended the Astronomical Association of Northern California held at the College of San Mateo. I wasn't expecting to much from the meeting since we had just flown down to San Diego to check out the OPT meeting and it was a bust. This time excellent planning, outstanding speakers and a great facility to boot pleasantly surprised us! We had pre-registered on-line and ordered all of the extras which included a T-shirt, dinner and priority seating for the planetarium show. We had a blast!

We arrived just after lunch and registered at the front desk. There we were given our complimentary bag of astro-swig (mainly good bathroom reading material). From there, we made a quick stop to see Vivian White and her Pacific Project Family Astro Activities. We demonstrated our total lack of moon knowledge and had a few good laughs. We then made our way to Richard Crisp's talk on Two New Astronomical Imaging

Techniques. Rick must have 5 different telescope/camera setups he uses to take deep space photos and they are all top notch. Linda and I were amazed with the quality of his photos. I don't think I can actually remember what he was saying, but I can remember the detail he captured from the horse head nebula which rivaled the Hubble. Rick has a great collection of deep space images, some of which take weeks to capture and several more weeks to process. Jane Houston, from the JPL, gave a stellar talk about the Cassini Mission and Imke de Pater talked to us about Dusty Rings. All right, I'll admit that I snored myself awake during her talk, but she is from UC Berkeley. GO BEARS! We ended the day with Chris Go and his Secrets of High Resolution Planetary Imaging. Chris's secret was to do things right and use good equipment. In between talks, we hit the planetarium for 2 shows, The Sky Tonight and Black Holes.

Now you would think that we were exhausted, and we were, but the raffle was just getting started. Yep, we bought 13 tickets for ten bucks and guess what. That's right, Linda won the 2nd best prize. A copy of The Sky Six Professional. However, the

best winner was a little boy who won a telescope that was bigger than he was. The expression on his face was priceless and he got his photo taken with the host. His mom had to carry the telescope for him and I'm sure they lived happily ever after.... Hold on, I'm not ending this story like that. We had a nice dinner after the raffle and about a dozen telescopes were set up in the quad and on the roof. It was a clear night and viewing was pretty good for the city. On the way home, we stopped just short of the San Mateo bridge and witnessed a red moon rising over the well light bridge. It was very romantic and a perfect end to a fun filled day.

*Joe Tkach*



## Help Wanted

Are you interested in volunteering for SVAS, but hesitant to raise your hand because you're not sure what you would be getting yourself into?

If that sounds like you, here's the information you've been looking for. We are currently recruiting for the following positions. If one of them sounds like something you'd like to do, please let one of our board members know at the next General Meeting or via email at [board@svas.org](mailto:board@svas.org).

### Membership Director/Chair

- Receive the updated membership database from the Secretary.
- Determine who has lapsed and contact them for renewal.
- Determine who will lapse at the end of the month (and perhaps the next month) and contact them for renewal.
- Issue Membership Cards or Nametags to new members.
- Send SVAS Welcome Packets to all new members.
- Develop membership recruitment strategies.
- Organize membership drives and lead all recruitment efforts.

### Volunteer Coordinator

- Keep master list of volunteers.
- Recruit and coordinate volunteers for SVAS events.

### Secretary

- Keep a register of the memberships.
- Keep the minutes of the Annual Meeting and all Board meetings.
- Perform such other duties as may be required by the Board.
- In general, perform all duties incident to the office of Secretary and such other duties as may be required by law, or by the Bylaws.

### Director (aka Board Member)

- Go to board meetings; discuss and vote on proposals regarding the activities and assets of the SVAS.
- Supervise all Officers and any agents and employees of the SVAS to assure that their duties are performed properly.

*Margaret Minnick*



**Doug Reynolds**  
(916)480-3309 (916)494-8441  
[www.BuyWithDoug.com](http://www.BuyWithDoug.com)

## HGO

CONTINUED FROM PAGE 1

Major) 11.0, NGC 4026 (Ursa Major) 10.8 cluster, NGC 4111 (Canes Venatici) cluster, NGC 4256 (Draco) 11.9, NGC 5308 (Ursa Major) 11.4 near NGC5322 10.2, NGC 5866 (Draco) false-M102 9.9 near group NGC5907 10.3, NGC 7332 (Pegasus) 11.1 near NGC 7339 (Pegasus) 12.2. Abell cluster 194 (Cetus), Abell cluster

2666 13.8 near 2634 13.8 (Pegasus), Abell cluster 347 13.0 near NGC891.

Other news: The Observatory Steering Committee will not meet this year. I have sent my proposed steering budget from last year to Walt, our President. The Board of Directors will handle the HGO steering duties this year. Please attend a Board meeting or get on the agenda if you want to make comments. HGO is Open and the Coffee is On.

*Davin Enigl, Observatory Director*



## Community Star Party Update

On September 26, a handful of SVAS members traveled to Grass Valley Charter School to show their fifth graders some of the astronomical objects they have been learning about in their astronomy unit this fall. First, Peter Rogers gave the class a presentation on the night sky. Then, the kids came out onto the playground to look through the telescopes brought by Jack Russell, Jay Schudel, Peter Rogers, Lynda Hall and me.

The teacher and her class were very impressed and appreciative, and they thanked us each individually. Within a few days, I received a package with a letter from the teacher and hand-drawn thank-you cards from each of the students. Let me extend a big "thanks" to the volunteers who made it to this somewhat distant event!

On October 26, SVAS's biggest school star party of the year was held at Heritage Oak Elementary School in Roseville. The Astronomy Night event was attended by

approximately 350 students and their families, and featured a costume contest and Larry Harrison's inflatable planetarium in addition to our volunteers' scopes.

Speaking of which, we had an excellent volunteer turnout for the event, with over a dozen telescopes available for the public to peek through. Many thanks to the volunteers: Ray Brown, Lynda Hall, John Hundley, Forrest and Sandy Lockhart, Wayne Lord, David Macho, Ron Olson, Nick Poppelreiter, Peter Rogers, and Theresa Roseberry. (As always, I apologize if I forgot to mention anyone!)

If you are interested in volunteering at an upcoming community star party, please let me know at a General Meeting or by email at [outreach@svas.org](mailto:outreach@svas.org). Upcoming events are:

- 12/14/07 - Thomas Jefferson Elementary School, Sacramento
- 02/28/08 - Phoebe Hearst Elementary School, Sacramento
- 03/05/08 - Antelope Meadows Elementary School, Antelope

*Margaret Minnick*

## WHOM TO CALL

(916) SVAS-111

SVAS Web Page: <http://www.svas.org>

### 2007 SVAS OFFICERS:

#### President

Walt Heiges (916-684-3421)

#### Vice President

Ross Gorman (916-543-7383)

#### Secretary

Doug Williams (916-944-8203)

#### Treasurer

Kirk Alexander (530-753-4430)

#### Past President

Cary Chleborad (916-628-8673)

### DIRECTORS

Andrew Gallagher (916-718-8412)

Lynda Hall (916-712-6247)

Chris Hulbe (916-967-3794)

Bob Lea (530-367-5211)

Forrest Lockhart (530-676-2155)

Liam McDaid (916-558-2005)

Margaret Minnick (916-834-0675)

### Newsletter

Chris Hulbe (916-967-3794)

David Larzelere (916-457-7655)

Dave Buchla (530-478-1333)

### Outreach Director

Lynda Hall (916-712-6247)

### Observatory Director

Davin Enigl (916-989-8264)

## WHERE TO MEET

General meetings are held on the third Friday of each month, 7:30 p.m. at **Sacramento State University (CSUS), Mendocino Hall, Room 1015, 6000 J Street, Sacramento, CA.**

Subscribe to the SVAS email list by going to the Yahoo group at <http://groups.yahoo.com/group/svas-members> and sending a request to join the group.

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**Articles**—Manuscripts and letters are welcome via email in Word or text format. Items may be e-mailed to *Chris Hulbe* at [chulbe@comcast.net](mailto:chulbe@comcast.net). **Deadline for the following month's newsletter is the Wednesday following the SVAS General Meeting.**

**Advertising**—Commercial non-personal advertising, business card through full page, is available. Contact Chris Hulbe at 967-3794 for information.

**Classified** advertising is free to members of SVAS. Submit ads to Chris Hulbe at 967-3794, [chulbe@comcast.net](mailto:chulbe@comcast.net).

## HGO

SVAS maintains the Henry Grieb Observatory (HGO) in the Sierras for members only.

Monthly star parties are also held at the site.

For directions and regulations, please see [www.svas.org](http://www.svas.org).

## DIRECTIONS TO CSUS MENDOCINO HALL

From Hwy 50, take the Howe/Power Inn exit. At stop light, go straight across Howe. Go down two lights and turn right to enter the CSUS campus. Park in the parking lot across from the Hornet Bookstore. Mendocino Hall is located next to the Hornet Bookstore.

# Membership Renewal/ New Member Application

**Yes! Please renew my membership, or make me a new member of the Sacramento Valley Astronomical Society.**

1-year Renewal       1-year New Membership

**General, \$35** — Enjoy monthly meetings, informative bi-monthly newsletters, and awe inspiring views of the universe at monthly star parties.

**Student, \$20**

**Supporting, \$75**

**Contributing, \$150**

**Observatory, an additional \$40** — Enjoy all the benefits of a general membership plus use of the Henry Grieb Observatory (HGO). You must be a general member for 6 months or longer, and must be approved by the Board of Directors.

**Additional Tax Deductible Donation: \$** \_\_\_\_\_

### Tell us about yourself...

Name(s) \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Telephone ( \_\_\_\_\_ ) \_\_\_\_\_

E-Mail Address \_\_\_\_\_

Please tell us where you obtained this form:

A star party at

A daytime event at

From a member.

Yes, I would like to be contacted about volunteering.

Yes, I would like to have my contact information listed on the SVAS Members Only Web Page.

No, I do not want the SVAS to contact me via email.

I wish to read the SVAS Newsletter on the web, and I opt out of receiving the printed newsletter.

I agree to abide by the terms and conditions\* governing the use of the SVAS Special Use Permit Property and the SVAS constitution and bylaws. I understand that failure to abide can result in revocation of use privileges and SVAS membership.

Signed \_\_\_\_\_ Date \_\_\_\_\_

\*A copy of the SVAS Rules of Operation and Regulations will be provided upon request to all new members. The rules are also available at [www.svas.org](http://www.svas.org)



Enclose payment and mail to:

**Sacramento Valley  
Astronomical Society**  
P. O. Box 15274  
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# SVAS Calendar of Events

Please call SVAS-111 to verify event locations, dates, and times.

## November

- 2 — **School Star Party** in Natomas.  
Email outreach@svas.org to volunteer.
- 10 — **Member Star Party**
- 16 — **SVAS Board Meeting** (6:30 pm)  
CSUS Mendocino Hall (held just prior to the general meeting).  
  
**General Meeting** (8 pm) CSUS Mendocino Hall, Room 1015.  
Speaker Margo Schulter, Finding a Planet, an Alternate Approach.

## December

- 8 — **Member Star Party**
- 14 — **School Star Party** in Sacramento. Email outreach@svas.org to volunteer.
- 20 — **SVAS Board Meeting** - Budget Workshop (6:30 pm); SMUD.
- 21 — **General Meeting** (8 pm) CSUS Mendocino Hall, Room 1015.  
Telescope Show and Tell and The Latest on the Saturn Mission, a DVD by Jane Houston Jones.

## January

- 18 — **SVAS Board Meeting** (6:30 pm)  
CSUS Mendocino Hall (held just prior to the general meeting).  
  
**General Meeting** (8 pm) CSUS Mendocino Hall, Room 1003.  
Speaker, Jill Tarter, Director of Research at the SETI Institute.
- 19 — **Member Star Party**

**General Meetings are held on the 3rd Friday of the month at CSUS Mendocino Hall (next to bookstore) Room 1015.**

**Star parties are held on the closest Saturday to the new moon at the Henry Grieb Observatory (HGO) and are open only to SVAS members and their guests.**