



# SVAS

## newsletter

Sacramento Valley Astronomical Society | founded in 1945

Vol. 57 no. 4 | April, 2000

## North to Alaska!

Auroras will be the subject of the April meeting. William Hooper, an early polar explorer, wrote, “*Language is vain in the attempt to describe its ever varying and gorgeous phases; no pen or pencil can portray its fickle hues, its radiance, its grandeur*”. Auroras are one of the most spectacular sights in the skies and difficult to describe to those who have not witnessed the sight. My first (and only previous) aurora was a basic red glow seen from North Dakota in 1962. A trip to Alaska was planned by Astronomy magazine to view the aurora and my wife and I signed on early. (The trip later sold out).

Auroras have been observed for centuries by many different cultures. Legends and writings describing the aurora abound in ancient stories. Auroras were known by many ancient people – they are in the mythology of the Lapps, the Eskimos, and American Indians, and were described in Medieval European literature as well as the old testament. Various cultures had their own legends and stories of the aurora, passed down for generations. These stories were often associated with life after death. In medieval times, the aurora caused pilgrimages to be organized to “*avert the wrath of heaven, manifested by these terrible signs*”.

The scientific explanation of the aurora has to do with the interaction of the solar wind on the earth’s magnetic field. The light itself is caused by electron transitions in atoms making up the atmosphere (principally oxygen). The aurora is particularly active during periods of solar activity (the general tendency is to trail the solar activity about a year for reasons not clear). Because this is a year of solar activity, the aurora is particularly active now, hence the trip to Alaska.



Photos: Dave Buchla

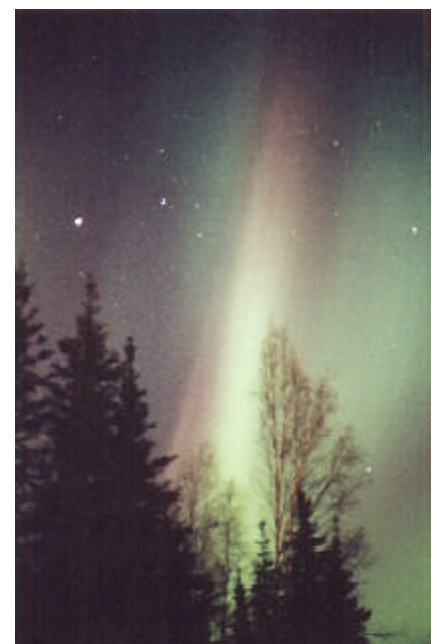
Our flight from Seattle to Fairbanks was cancelled after we arrived in Seattle, leaving us stranded for a few extra hours in the Seattle airport. The silver lining behind this cloud came out as we traveled by bus to Chena Hot Springs. At about 2 a.m., a beautiful aurora started and the bus stopped to let us observe outside. I still had my California clothes on (boy was it cold!!) but I was entranced by the site and gratified to see the sight. Our driver (a real character who wore no coat despite the temperature of about 0° F) said “You ain’t seen nothin’ yet”. He was right – over the next week we saw even more spectacular auroras and I suffered major sleep deprivation but I figured that I could sleep the week after the trip. We had clear skies every night we were there (except a few scattered clouds rolled in on our last night but a beautiful aurora could be seen through the clouds).

On those few occasions when the aurora was not active, I did a bit of binocular astronomy. Talk about your dark skies! It was interesting to note that at

66° N latitude, Vega is circumpolar! The ring nebula can be observed all year! (Of course the trade off is they don’t see the magnificent Sagittarius or Scorpius). It seemed a bit strange seeing Polaris so high in the sky – I guess the earth really is a globe. I talked to a Fairbanks amateur astronomer – he told me sometimes the aurora is a nuisance because it blocks deep sky objects like a cloudy night. But when the sky is clear and dark, it is dark all the way to the horizon!

I returned home tired but exhilarated from the beautiful sights we had seen. The trip was wonderful – I saw an aurora every night but one (that I decided to catch up on needed sleep). I understand Astronomy magazine plans to do the trip again next year. It’s a great way to see another astronomical sight that is rare at our latitude and to enjoy the company of fellow enthusiasts. I’ll have a video, pictures, and discussion of the scientific basis for auroras and more at the April meeting.

David Buchla





## President's Perspective

The votes have been counted and the results are confirmed. You have elected me by a landslide. Hey, wait a minute! The election to the position of your President was by acclamation. No campaign funds, no campaign speeches, no campaign anything. Well, that is how it goes sometimes for the Officers and Board Members. I am happy to be surrounded by such a talented group of folks. My hope is to bring our Society into this millennium with modern techniques and ideas. I have been working with several Presidents over the years as your Vice President. I helped form and mold the current ideas and trends we have been setting. Cary Chleboard and I have spent countless hours discussing how this organization needs to go. Plans for regional starparties has always been our dream. With the help of Jack Sales (Cal IDA - Pres.) and Kris Koenig (North Valley Astronomers - Chico) and all of you, we may finally realize this dream. Also remember, RJMO is just over the horizon.

Susan Strosahl, Starparty Chairperson, reached a staggering 2175 adults and children with the help of Melanie Smith, Volunteer Coordinator. Their effort and dedication, along with all the volunteers, carried Astronomy to those people who would have gone through life never learning about the *Wonders of the Universe*. Thanks to them, more Astronomers may have been sparked awake and now want to learn more. Somewhere in each of your lives, someone took that extra step and brought you closer to the stars. I still remember my first glimpse into the past. It came from my mother when I was a wee youngin.

Dawn Baird demonstrated how many volunteers it takes to reach out to all those hungry minds. Countless names were called to pick up their "Certificates of Recognition". Dawn, herself preparing for an addition to her family, still found time in her busy life to design and print all those certificates. It is participation like hers and

many others who make us the success we are. We are what Astronomy must be about!

There are far too many names to name and too many thanks to be said. I want to assure everyone of the continuity between Cary and myself. I have become a good friend with Cary and Dawn. I believe we have had the good of the Society foremost in our minds. Many times we are on the same track. We have worked side-by-side on many problems and projects over the past two years. Cary will never be far away and I am sure I can always call on Dawn for that special task to make it all come together. She is a great organizer and I can only hope this new baby doesn't keep her TOO busy. Let's prepare for the next year together and set even higher goals for ourselves. See you all at the next General Meeting.

Walt Heiges

## Junior Astronomer's Club Revived!

Charlie Coburn was installed as Director of the Junior Astronomer's Club at the March Annual Meeting of the SVAS. His plan is to hold meetings for children of SVAS members at the monthly HGO star parties.

Membership is open to school age children of SVAS members (K-12). Kindergarten through second grade students *must* be accompanied by a parent. Adults are encouraged to participate with their children.

Meetings will start at sunset and last until 10:00pm. We will meet inside the Observatory at Sunset (unless someone else needs it) for a one hour class then move outside to use the 16" Dobsonian telescope and any other scopes members bring.

There will be an award system for star-hopping proficiency. Awards will be given for being able to find the sun, moon, planets and each Messier Object. There will be a progress chart on the bulletin board of the observatory for everyone to see.

Please contact Charlie Coburn at [ccoburn@snader.com](mailto:ccoburn@snader.com) (530) 677-3214 to sign up for the Junior Astronomer's Club.

As an example of the type of observations we will be doing, try this assignment on April 6<sup>th</sup>:

## JAC Assignment #401

### Jupiter & Saturn going out in style

On the evening of April 6, 2000 go out between 8:00pm and 9:00pm and sketch or photograph the locations of Mars, Jupiter, Saturn, and the Moon. (They will be in a cool grouping!)

To find them look west toward where the sun just went down, and look for the Moon. The three other bright objects near by are Jupiter (really bright), Saturn (pretty bright), and Mars (a little less bright than Saturn).

Use the chart (you may request one from Charlie) to plot the locations, then draw your own sketch of the sky to include these objects. Remember to include the horizon, nearby stars and any obstacles (trees etc.) in your area.

Note the Date (4/6/2000), time, and location of observation on your papers.

If you go out right at 8:00, the twilight may make it hard to see everything, get started and wait until it gets a little darker before finishing your sketch. If you wait until 9:00, you may miss Jupiter and Mars unless you have a very flat clear view to the West. (8:30 should be perfect.)

For added fun, continue plotting Jupiter, Mars, and Saturn nightly until April 15<sup>th</sup> or until you can't see them from your location any more.

### Astronomer's Note

This is the last time we will see Jupiter and Saturn until they become "morning stars" in June. We will not be able to see them again at night until our meeting on September 30, 2000.

If you do this assignment, please bring it to HGO as an example for the others to see.

The Junior Astronomers thank you for your support!

Charlie Coburn

# PERIGEE

by Jim Varney

## Deorbiting Iridium

As of March 23, the status of the Iridium satellite constellation is one of near-certain doom and gloom. The Iridium consortium went into bankruptcy in August, 1999, after failing to draw enough paying subscribers to the satellite telephone system. A press release by Motorola, the lead investor, indicated that no acceptable purchase offers were made by the deadline of March 17 and that deorbiting operations were going to commence. Deorbiting, according to Motorola, will take 1 to 2 years and consists of gradually lowering the satellites by using its station-keeping thrusters as miniature retro-burn engines.

The purpose of deorbiting is to comply with NASA and U.N. policies on the reduction of space junk. Motorola is to be commended for being a responsible owner/operator.

## What Needs to Come Down

Looking at the available orbital elements, it appears that a number of the satellites may not be deorbiting according to Motorola's plans. Some of the satellites flash due to tumbling or are known to be unresponsive and have been replaced.

Here's a summary of what needs to be burned up in the fire sale:

- 13 satellites spaced along an orbit plane whose ascending node is 6 degrees east of the vernal equinox.
- 11 satellites at 38 degrees east.
- 12 satellites at 70 degrees east.
- 13 satellites at 101 degrees east.
- 13 satellites at 133 degrees east.
- 14 satellites at 335 degrees east.
- 11 satellites at various positions whose visual characteristics suggest tumbling (source: element sets published by Mike McCants at <ftp://ftp.fc.net/users/mikem>)
- A straggler at 26 degrees east.

That's a total of 88 satellites to be burned up. What's interesting is to consider how they will burn up as a group. If there are 12 satellites spaced along an orbital plane, and the orbit is, say, an 84-minute orbit right before decay, it raises the possibility of having Iridiums decaying on 7-minute intervals. Now that would be a visual finale worthy of the flashy Iridiums!

## Flares to Become Unpredictable?

Iridium flares were predictable because the satellites were maintained to have a fixed "flight path angle." Or you can think of it as always flying "straight and level." With fixed orientations, it's a straightforward but tedious exercise to figure out if the angle between the Sun, the satellite and the observer were right to make a flare.

If all onboard fuel will now be devoted to deorbiting and telephone operations are shut down, it's a reasonable assumption that the telephone antennae that cause the flares will no longer be held in a precise position. Therefore, the flare prediction algorithms will no longer work.

Not only will flares become unpredictable, they will become brighter as the satellites drop into successively lower orbits.

If you see an unpredicted flare, you could try and wait several minutes to see if the next satellite in the orbital plane will show the same behavior.

**Your SVAS membership  
renewal is due.**

**Please consider renewing  
your SVAS membership. See  
page 7 for the Membership  
Renewal Form.**

**Visit the SVAS website!  
Check it out at  
[http://www.  
skywatchers.org](http://www.skywatchers.org)  
You can also download  
our newsletter and be  
able to see it in color.**

# S.V.A.S. 55<sup>th</sup> Annual Meeting – March 17, 2000

President Cary Chleborad called the 65<sup>2nd</sup> meeting to order at 7:53PM. The meeting opened with a roll call of officers and directors. There were a total of 38 members present.

Officers/Directors Present: Cary Chleborad, Walt Heiges, Bud Bafia, Chris Hulbe, Melanie Smith, Alysse Rocha, and Susan Strosahl.

Officers/Directors Absent: Ray Gray, Mark Bonitata, Joe Bafia, Dave Buchla, Frank Dann, Ross Gorman, Sheri McFarland, and Joe Riddle.

## Reports

### Treasurer Report

Cary presented the annual treasury report.

### Resource Report

None

### Newsletter Report

Anne-Marie, now teamed up with Dave Buchla on publishing the newsletter, reminded everyone she really needs more articles for the newsletter. Any article or information for publication must be submitted to Anne-Marie or Dave by Wednesday following the general meetings.

### School Star Parties

Susan Strosahl started with presenting thank you gifts (flowers) to Dawn Baird and Sandra Winter for their help during the past year. She then showed an excellent presentation on the past year's star parties. The society did a total of 20 parties, with a total of 40 volunteers, 13 out of those 40 did 4 or more and will be receiving free T-shirts as a thank you for their participation in the star parties, (which is one of the main purposes of the SVAS). We did a total of 448 volunteer hours, and reached a total of 2175 people. So keep up the good work and come on out and join in on the fun at school and public star parties. Susan then presented a very special thank you gift of flowers to Melanie Smith for her exceptional work as volunteer coordinator.

## Annual Minutes – 3/ 1999

Copies of last years annual meeting were handed out for the membership to approve. The membership unanimously approved the minutes.

## Awards

Alysse and Cary presented this year's awards to members for their outstanding work and contributions to the SVAS: Chris and Claudia Hulbe for their fine work on maintaining the membership roster and distribution of the newsletter. Claudia reminded everyone how important it is to notify them of any changes in address, phone number or e-mail address. Anne-Marie Wheatley for all her hard work in getting the newsletter published. Please, lets start writing some articles for the newsletter. Susan Strosahl for her excellent efforts in making the school star parties such a great success this past year. Sheri McFarland for her exceptional work with the web site. Visit the newly revised and update web site to find out dates for upcoming star parties.

Dawn and Melanie surprised everyone with some beautifully made volunteer certificates. The certificates for Extraordinary Volunteer Efforts were handed out to a long list of members who have contributed their time and energy throughout the year.

## Astronomy Day – 2000

Walt and Bud displayed a preview of the presentation that is going to be given to the Citrus Heights City Council before and after Astronomy Day. Walt stressed that we are running out of time for this major event. Please come forward now with ideas and any displays or booths you are planning to have or want to have set up. We will need many volunteers in order to make this year's better than last year's. So please contact any of the following if you can volunteer or are going to have a display. Walt Heiges, Dave Buchla, Bud Bafia or Melanie Smith. And don't forget about the photo contest for Astronomy Day. Also the May 19<sup>th</sup> general meeting will be held at Rusch Park to start setting up displays.

## Review of By-Laws

Copies of the by-laws with purposed changes where handed out for review. The board reviewed and recommended these changes at the last board meeting. After giving a short history of the society and

why changes were made to the by-laws back in 1991, Cary explained that the purpose of the changes are to get the by-laws more in line with the constitution and to prevent from being in violation of the by-laws and constitution. Several items in the by-laws are dynamic and ever changing and therefore would be better suited to be board policy and not be in the by-laws. These items will be moved out of the by-laws and changed to a board policy. After some lengthy discussions more changes and corrections were made. The changes will be voted on by the membership at the next general meeting, April 21<sup>st</sup>. Cary agreed to under take the project of putting together the board policy documents.

## Board Elections

The following members were running for the office indicated and for directorships: Walt Heiges (President), Alysse Rocha (Vice President), Bud Bafia (Secretary), Mark Bonitata (Treasurer). Directors: Joe Bafia, Charlie Coburn, Dave Buchla, Frank Dunn, Ross Gorman, Chris Hulbe, Sheri McFarland, Melanie Smith, Joe Riddle, and Susan Strosahl. There were no opposing or write-in candidates running for the board. A motion was made to sustain from using the write-in ballots. The motion was seconded and passed. By acclamation the above members were sworn into office.

## Closing Comments

Walt stepped in as the new president with some reminders. First, Marsville will be Saturday May 6<sup>th</sup> and is a worthwhile event. Judges are needed for this event being held at McClellan AFB. SVAS vouchers are available for members to get reimbursed for expenses associated with SVAS events. He will see about getting the voucher put on the web site. Star parties are very important, and is what the society is all about. So join in and help promote astronomical education. Astronomy Day is the society's biggest annual event and many volunteers are needed. So please help and let us know as soon as possible. There are speakers already lined up for our next six meetings. Star B-Q will be July 29<sup>th</sup> and a coordinator is needed to start organizing this, our second largest annual event.

A motion was made to end the meeting, seconded and passed. Walt adjourned the meeting at 10:00 P.M.

*Bud Bafia*

# COMET COMMENTS

by Don Machholz

Greetings cometeers,

This is to inform you that the next issue of Comet Comments, the one you will receive via this e-mail network around April 10, will be my last one. I am telling you this now so that all of you, especially newsletter editors, will have time to assemble your own way of reporting comet news and positions after Comet Comments is gone.

There are several reasons why I'm retiring after twenty-one years of writing a monthly column. About a year ago I began to show symptoms of disorder which appears to be inherited; my brother has it too. It is not fatal and not contagious. Medication sometimes helps. But the lack of concentration, poor coordination and fatigue now makes it difficult to produce an accurate, interesting comet article in a timely manner.

There's other reasons too. I used to do the whole thing in three nights—research, write and distribute. Then the Internet became involved in this. I can reach more people, but the Web page had difficulties and finally crashed (mine is now frozen on the Web, I cannot change or delete it), “fatal delivery” messages and re-sends, and writing/formatting two versions each month (electronic and paper)—all adds to the time the column now takes. Moreover, with the Internet, amateurs now have easy access to nearly all the information I publish. Finally, in the old days when amateurs found many of the comets, it was important to distribute the ephemerides information early because the comets were already bright enough to be seen in our telescopes. Now, when LINEAR finds a faint comet, it is months before the comet will be bright enough for the readers.

For the record: I got nearly all my news and orbital elements from the Smithsonian and use David Chandler's Deep Space program to generate the comet positions. Before I write each issue I visit Charles Morris' Web page to see if there is anything I'm missing. For the Comet Hunting Notes I use information from some comet hunting databases I've assembled over the years. As for the words in the “Subject” box at the top of this letter: “1/2, or 3/4 or 5/6 or 7/9” mean that you are on these mailing lists. I have nine mailing lists for the 100 or so copies I send out and this helps me track which ones are sent and which are delayed by “fatal errors” in the addresses. It also helped me to change your addresses easily.

Now for those who wish to continue hunting comets. Steve Smith's “Comet Rapid Announcement Service” will be stopping soon, otherwise I would have suggested that as a resource. Some Web Pages provide tons of comet info: The IAU <http://cfa-www.harvard.edu/cfa/ps/cbat.html>, Charles Morris (<http://encke.jpl.nasa.gov/>) and one from Yoshida ([aerith.net/](http://aerith.net/)). Here's a index of hundred of astronomy sites: <http://www.atm.dal.ca/~andromeda>.

Thanks for everything. You have been a grateful audience. I have enjoyed your newsletters you have sent to me on an ex-

change basis, but don't feel any further obligation from now on. I expect to continue comet hunting, but LINEAR et al, will limit the areas I'll cover.

Keep looking up. Take care and the very best to you.

Images from the solar-observing SOHO satellite have been searched for comets recently, yielding many comets. The LINEAR and the CATALINA programs found a few comets too. Meanwhile, Comet LINEAR (1999 S4) is at magnitude 13, if it stays on this magnitude curve it should reach the brightness of the Andromeda Galaxy in July.

SOHO images five comets during Feb. 3-9. Three more were found a few weeks later. Searching through the SOHO archives brought out ten more comets. These 18 comets were found by T. Lovejoy, D. Biesecker, M Meyer, M. Oates, D. Lewis, K Cernis, M. Boschet, T. Harincor, D. Lewis and K. Schenk. Discoverers who found these comets on these SOHO images do not get their name on the comets, nor are they eligible for the Wilson Comet award since they were not using amateur equipment.

The LINEAR and CATALINA search programs found four comets, all of them were first thought to be asteroids until further investigation found they were tiny comets. Three showed tails from 10 to 16 arcseconds. One was declared a comet based upon it showing a “soft” image, “slightly larger than star images” through a 72-inch telescope with a CCD. Many LINEAR comets are first thought to be asteroids.

## COMET HUNTING NOTES:

Unlike the LINEAR comets, visually-found comets show a definite size. The average comet found visually by amateurs is about three arcminutes in size. They range from two to ten arcminutes.

**Don Machholz (530) 346-8963 DonM353259@aol.com.**  
**Web Page: <http://members@aol.com/cometcom/index.html>**

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# Star Parties

The star party season 2000 is upon us and we have already received several requests from the community. The good word about all you wonderful star party astronomers is out and we are off to a great start! Please check the calendar below and let me know if you can volunteer with your telescope. Remember that no experience is necessary! Contact me at susan\_strosahl@hp.com or 785-5556. Directions supplies upon request.

## 1. Friday, April 7, 2000

Group: Cub Scouts (Dave Buchla's grandson)  
Location: Quail Glen Elementary School  
1250 Cane Vari, Roseville, CA  
People: 40  
Telescopes: 4  
Setup: 6:30 pm - Sunset: 7:35 pm  
Moonset: 11:00 pm

## 2. Friday, April 14, 2000

Group: 5th Graders, Auburn Elementary School  
Location: Auburn Area  
People: 90 - Telescopes: 6  
Setup: 6:45 pm - Sunset: 7:42 pm  
Moon transit: 10:32 pm

## 3. Saturday, May 20, 2000

Group: SVAS Astronomy Day  
Location: Rusch Park, Citrus Heights  
People: General Public  
Telescopes: 20  
Setup: 7:15 pm - Sunset: 8:16 pm  
Moonrise: 10:34 pm

## 4. Saturday, June 3, 2000

Group: Girl Scouts  
Location: Sacramento Area  
People: 150 - Telescopes: 12  
Setup: 7:30 pm - Sunset: 8:26 pm  
Moonset: 10:01 pm

## 5. Saturday, June 17, 2000

Group: WrapAround Sacramento  
Location: Sacramento Area  
People: 60 - Telescopes: 5  
Setup: 7:30 pm - Sunset: 8:33 pm  
Moonrise : 9:20 pm

## 6. Friday, June 30, 2000

Group: Girl Scouts  
Location: Einstein Middle School  
Rancho Cordova, Rosemont Area  
People: 100 - Telescopes: 6  
Setup: 8:00pm - Sunset: 8:34 pm  
Moonset : 7:38 pm

## 7. Friday and Saturday Aug 4 & 5, 2000

Group: Davis Sky Show  
Location: Davis Area  
People: General Public  
Telescopes: 10 each day  
Setup: 7:15 pm - Sunset: 8:11 pm  
Moonset: 11:57 pm

## 8. Saturday, Sept. 9, 2000

Group: Chico Star Fest  
Location: Chico Observatory  
People: General Public  
Telescopes: 10  
Setup: 6:30 pm - Sunset: 7:23 pm  
Moon transit: 10:28 pm

## 9. Saturday, Sept. 23, 2000

Group: Girl Scouts  
Location: Sacramento Area  
People: 150 - Telescopes: 12  
Setup: 6:00 pm - Sunset: 7:00 pm  
Moonset: 4:49 pm

## 10. Thursday, Oct 5, 2000

Group: Spanger Elementary School - 3rd Graders  
Location: Spanger Elementary School  
People: 180 - Telescopes: 13  
Setup: 5:45 pm - Sunset: 6:42 pm  
Moon transit: 7:33 pm

# Classifieds

**For Sale:** Mead LX 50 10" F/10 SCT  
**Goodies:** tripod with equatorial super wedge, dual axis motors and hand controller keypad, variable power source AC/DC, 8x50 view finder and 1x orion Ezfinder, 24.5 super wide angle eyepiece, 1.25" eyepiece holder and 1.25" star diagonal, Meade heavy duty carrying case (foam lined), SCT viewing chair (handcrafted) and mini chair, dew shield.  
**Astrophotography goodies:** Pentax ME camera body (needs work), lenses 28 mm, 50mm, 135 mm; illuminated reticule eyepiece 9mm, T-mount (Pentax) and T adapter, piggyback mount and adjustable camera mount, shutter trigger cable, tele-extender, counterweight system. \$2,500.00 FIRM. Contact Lloyd Townsend Home (530)756-5618 or niclSH@SOLISYS.COM

**For Sale:** Celestron C-8 Computerized. Purchased 12/15/98 for \$1929.43, will sell for \$1000 or best offer. Contact: Bill Hollister  
Home: 916-652-2349 after 5PM  
Work: 916-785-0827

**For Sale:** Orion 2 inch Skyglow broadband filter \$75.00. New condition. Contact George Storm at 916-731-4036.

If you love books and astronomy and have a few hours to spare, the Astronomical Society of the Pacific, located in San Francisco, has great need of a volunteer to help maintain our library. Contact Marilyn Delgado @415.337.1100 x100 or write to the Society at 390 Ashton Avenue, San Francisco, CA 94112.

**For Sale:** Edmund Scientific Astroscan 2001 telescope with base. Two RKE eyepieces. Cases for eyepieces and telescope. Good condition. Asking \$175. Contact Jim Wurschmidt at (916) 961-3402.

**Astronomy Day on May 20 is approaching fast. This is an event that can not possibly be successful without volunteers. It is a great opportunity to volunteer for SVAS, meet your fellow club members and show the community what Astronomy is all about. And as if that weren't enough, you'll be fed as well! We'll need all the helping hands we can get.**

**To volunteer simply call or e-mail Melanie Smith; (916) 689-3137 or Mmerj@aol.com**

## WHOM TO CALL

(916) SVAS-111 To save time, press:

- 1-Last minute changes & updates for SVAS events
- 4-General Meeting information & location
- 5-Star party information & location

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

### 2000 SVAS OFFICERS:

#### President

Walt Heiges 684-3421

#### Past President

Cary Chleborad 457-9115

#### Vice President

Alysse Rocha 985-4825

#### Secretary

Bud Bafia 991-6545

#### Treasurer

Mark Bonitata (530) 889-0889

### DIRECTORS

Joe Bafia 992-1933

Dave Buchla 530-432-3359

Charlie Coburn 530-677-3214

Frank Dann 332-8769

Ross Gorman 721-6955

Chris Hulbe 967-3794

Dave Kenyon 632-8350

Joe Riddle 488-5634

Melanie Smith 689-3137

Susan Strosahl 920-0247

#### Observatory Director

Stuart Schulz 736-0449

#### Public Star Parties

Susan Strosahl 785-5556

#### Newsletter

Anne-Marie Wheatley 530-676-0566

#### Welcome Chairman

Stosh Groner 989-9281

#### Telescope Making

Cary Chleborad 457-9115

#### Junior Astronomy Club

Charlie Coburn 530-677-3214

### WHERE TO MEET (See below for directions)

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.**

#### Visitors Welcome!

To Subscribe to the SVAS email list, send an empty message to [svas-subscribe@makelist.com](mailto:svas-subscribe@makelist.com). Once subscribed, emails can be sent to [svas@makelist.com](mailto:svas@makelist.com).

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Articles—Manuscripts and letters are welcome preferably via email or 3.5" diskette, in Word or text format. Items may be mailed to *Anne-Marie Wheatley, 2320 Sanford Ct, Rescue, CA 95672*, or emailed to [amwheat@ix.netcom.com](mailto:amwheat@ix.netcom.com). **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 Sheri McFarland at 961-9667 for information.

Classified advertising is free to members of SVAS. Submit ads monthly to the SVAS Newsletter at the above address.

### 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 call Vice President **Walt Heiges** at **684-3421**

### 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.



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

Renewal                       New Membership

**General, \$25** — Enjoy monthly meetings, informative monthly newsletters, and awe inspiring views of the universe at monthly star parties.

**Observatory, \$75** — Enjoy all the benefits of a general membership plus private use of the Henry Grieb Observatory (HGO). Must be a member for 6 months or longer, and must be approved by the Board of Directors.

1 year     2 years     3 years

**Tell us about yourself...**

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

Address \_\_\_\_\_

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

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

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

Yes, I would like to be contacted about volunteering.

I agree to abide to the terms and conditions\* governing use of the Henry Grieb Observatory property. I understand that failure to abide can result in revocation of use privileges and SVAS membership.

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

\*A copy of the HGO Rules of Operation and Regulations will be available upon request to all members.

**Note:** The term of annual membership is March-to-March. Dues for persons joining in September to December will be pro-rated. New members joining in January or February will be advanced to March.



Enclose payment and mail to:  
**Sacramento Valley  
 Astronomical Society**  
 P. O. Box 15274  
 Sacramento, CA 95851-0274



**Sacramento Valley  
Astronomical Society**  
P. O. Box 15274  
Sacramento, CA 95851-0274

Postage  
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## SVAS Calendar of Events

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

### April

- 1 — **Star Party**, Latrobe (open only to members and their guests).
- 20 — 7:00 pm. **Board Meeting**, Denny's at Watt & Auburn.
- 21 — 7:30 pm. **653rd General Meeting** at CSUS Mendocino Hall, Room 1015. Speaker: Dave Buchla "Auroras"

### May

- 6 — **Star Party**, HGO (open only to members and their guests).
- 18 — 7:00 pm. **Board Meeting**, Denny's at Watt & Auburn.
- 19 — 7:30 pm. **654thrd General Meeting** at Rusch Park at 7801 Auburn Boulevard, Citrus Heights. This month's meeting will be a special Astronomy Day "Work Party." Please come prepared to help set up for Astronomy Day.
- 20 — **Astronomy Day** Noon-10:00 pm, Rush Park, 7801 Auburn Blvd. Citrus Heights

### June

- 3 — **Star Party**, HGO (open only to members and their guests).
- 15 — 7:00 pm. **Board Meeting**, Denny's at Watt & Auburn.
- 16 — 7:30 pm. **655th General Meeting** at CSUS Mendocino Hall, Room 1015. Speaker: Dr Carezani "Faster than light"

**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) or at Miller's Hill School (Latrobe) and are open only to SVAS members and their guests.**