

# SJAA EPHEMERIS

## ADS: Own Your Own Astronomical Library

Peter Jenniskens

Monday, April 19, 2004, saw the 25th anniversary of the Dutch Meteor Society (DMS). During the first 24 of those years, DMS rallied around the journal "Radiant", resulting in hundreds of great accounts of meteor observing campaigns, results from observations, and discussions of ongoing work in the field of meteor science. More than that, the journal has the best contemporary pictures of meteors and fireballs anywhere, including some published in Sky & Telescope, permitting for the fact that "Radiant" was printed in black-and-

white. After 24 years of editing "Radiant", Hans Betlem last year issued what appears to have been the final copy and now DMS rallies around the direct reporting of observing results on the Internet ([www.dmsweb.org](http://www.dmsweb.org)). The modern times have doomed the printed journal, which had some 150+ copies per issue, to the fate of the Dodo. If we are lucky, some rare specimens will be preserved in some dusty library until the paper yellows and fades and there are but memories. Nobody will care about the enthusiasm of amateur astronomers at the end of the 20th century, laboring

with love to pave a tiny section of the road to ethereal wisdom.

All of this may be of no interest to you, were it not that "Radiant" will soon be read by millions. That is, the fraction of those millions that does not mind that the journal's leading language is Dutch (with English abstracts provided). That is because "Radiant, the journal of the Dutch Meteor Society" will soon be accessible on-line on the NASA Astrophysics Data System. The article names have already been added, and PDF files of the articles will soon follow. Not only "Radiant" is there, but also "Sky & Telescope", professional journals like the "Astrophysical Journal", and some good oldies such as early issues of "Monthly Notices of the Royal Astronomical Society". Your own astronomical library at the tip of your hands.

Go to "Google" and search for "ADS". One of the first few entries that shows up is "NASA ADS: ADS Home Page". The first page has a big blue button that says "Search References". Click on that to get to a page that provides a few choice databases (this page is in desperate need for improvement). Choose the first database "Astronomy and Astrophysics" (which at this time has 992,809 records!) to get to the query page. This somewhat chaotic looking page has several search options. Start with typing in your name in the top left box where it says "Authors". I typed in "Betlem, H.". Then click on "Send Query". An astounding 381 publications are returned, most of those are the contributions (sweat and tears) that Hans Betlem made for the journal

*Continued on next page*

### SJAA Activities Calendar

Jim Van Nuland

#### June

- 5** General meeting, 8 p.m.
- 10** ATM class at Houge Park. 7:30 p.m.
- 11** Astronomy class at Houge Park. 7:30 p.m.
- 11** Houge Park star party. Sunset 8:28 p.m., 25% moon rise 2:46 a.m. Star party hours: 9:30 p.m. to midnight.
- 12** Deep sky weekend. Sunset 8:29 p.m., 17% moon rise 3:10 a.m.
- 19** Deep sky weekend. Sunset 8:31 p.m., 2% moon sets 10:32 p.m.
- 25** Houge Park star party. Sunset 8:32 p.m., 56% moon sets 1:28 a.m. Star party hours: 9:30 p.m. to midnight.
- 26** ATM Class at Houge Park. 7:30 p.m.

#### July

- 8** ATM class at Houge Park. 7:30 p.m.
- 9** Astronomy class at Houge Park. 7:30 p.m. Rob Hawley speaks on weather's impact on observing.
- 9** Houge Park star party. Sunset 8:30 p.m., 40% moon rise 1:14 a.m. Star party hours: 9:30 to midnight.
- 10** Deep sky weekend. Sunset 8:30 p.m., 30% moon rise 1:40 a.m.
- 16-17** Yosemite Public Star Party (see page 2)
- 17** Deep sky weekend. Sunset 8:26 p.m., 0% moon sets 9:11 a.m.
- 23** Houge Park star party. Sunset 8:22 p.m., 31% moon sets 11:56 p.m. Star party hours: 9:00 to midnight.
- 24** ATM Class at Houge Park. 7:30 p.m.
- 31** General meeting 8 p.m.

The Board of Directors meets at 6:30 p.m. preceding each general meeting. All are welcome.

**24 hour news and information hotline: (408) 559-1221**

**<http://www.sjaa.net>**

“Radiant.” Type in “Jenniskens, P,” and you will get only 282. Hans has been an outstanding author. Try your own name to see if you took enough time to report about your observing activities. If no entries show up, then you may not have done your share, or you simply have to wait (a year or so?) until the San Jose Astronomical Society’s Ephemeris Newsletter has been included in the database.

Even if you are not an author in search of a fair overview of references yourself, this library of publications can be a great asset. Most publications that are a few years old are freely accessible. A PDF file is often provided, either converted from text or from scanned documents. Once you see the query results and click on one of the references, you will see that it says on the top “Electronic Refereed Journal Article” or “Full Refereed Journal Article” or something along those lines. Click on those to get access to the paper. Recent publications are often protected by journal publishers, in which case you will have to subscribe to get more than the mere abstract of a publication. Some journals have a policy to extend this to more than just a few years back, which is a very sad state of affairs, forcing a restriction on author’s chances to be fairly included in the scientific debate.

For fun, I looked for publications between 1600 and 1700 A.D. (the set of small boxes in the second row of the query page) and found 334. Sadly, many of the papers by Flamsteed, Newton, Halley, Huygens, and Kepler are in a protected database. I entered the word “meteor” in the third row box on the query page where it asks for words given in the paper’s title, but got no papers found. That far back, the word “meteor” was not commonly used. I tried “shooting star”. This time 14 references come up, including one from Tycho Brahe, but those refer mostly to stars, not meteors. By setting the buttons above the query box to “AND” rather than “OR”, you can only select

those abstracts that have both “shooting” and “star”: The result: zippo. Selecting for “lights” (in a desperate attempt), I stumbled upon “Mr. Newtons Answer to the Foregoing Letter Further Explaining His Theory of Light and Colors, and Particularly That of Whiteness; together with His Continued Hopes of Perfecting Telescopes by Reflections Rather than Refractions.” Those were the days.

Of course, meteor astronomy started with the meteor storm of 1833. I set the dates to go from 1800 until 1840 and looked for “meteor” to find 13 abstracts, one of the oldest by Mr. Haggard who reported “A large Meteor seen at Blackheath, October 20, 1833.” That was just prior to the famous November 1833 Leonid storm. Clicking on the reference brings up the page with “Full refereed scanned article”. And yes: there are the words that Mr. Haggard spoke back in 1833, as communicated by Mr. Riddle: “Mr. Haggard describes it as resembling a ball from a Roman candle in colour.” I clicked on “Next page” below the scanned page as well, hoping to read more, but only found a table of transits of the Moon and an enjoyable narrative about Edmund Halley’s travels to the southern hemisphere island of St. Helena.

Another use of the library is clear when leaving all query boxes open, but typing “McNeil” in the lowest box for “Abstract Words”. It immediately brings up the IAU Circular announcement of the McNeil Nebula. Go and read it yourself. The next entry that pops up is at least as interesting: an abstract of meteor trail observations during the 1996 and 1998 Leonids using Lidar.

Finally, I hit “Clear” and added your president’s name in the “Author” box. “Koop, M.”, bringing up the important paper “On the unusual activity of the Perseid meteor shower (1989-

96) and the dust trail of comet 109P/ Swift-Tuttle.” This paper reports on results of several years of Perseid observations from Fremont Peak Observatory. It is all there. Enjoy.

## SJAA Yosemite Public Star Party 2004

Jim Van Nuland

The annual SJAA Yosemite star party will be held on July 16 and 17, at Glacier Point in Yosemite National Park. Up to 30 people will be given free admission and camping, in exchange for two public events on Friday and Saturday evenings. We are expected to have at least 1 scope per 2 people.

Detailed information may be found on my Yosemite page, <<http://www.svpal.org/~jvn/yosemite.htm>>.

The camping is rough by modern standards: no dining room, no showers, no hot water. Read about it (above), or contact me with questions. To reserve space, tell me the number of people you’ll have, and the number of scopes that will be set up for the public. E-mail <[jvn@svpal.org](mailto:jvn@svpal.org)>, or phone 408-371-1307 10 am to 10 pm.

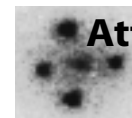


Image credit: NASA and ESA

### Attend A Conjunction!

#### AstroCon 2004

July 20-24, 2004

San Francisco Bay Area

**H**ere’s a conjunction you can actually attend—not just observe: a truly once-in-a-lifetime conjunction of the Astronomical League, the American Association of Variable Star Observers, the Association of Lunar and Planetary Observers, and the Astronomical Society of the Pacific.

#### Highlights :

- AAVSO and ALPO member sessions open to all attendees
- Top professional astronomers
- Great new public outreach tips and techniques
- Field trip to the world-famous Lick Observatory

AstroCon 2004—the Astronomical League’s annual convention—is co-hosted by the Astronomical Association of Northern California, the Eastbay Astronomical Society, and the San Jose Astronomical Association.

[www.astrocon2004.org](http://www.astrocon2004.org)  
visit the website for complete details, including secure on-line registration and payment

1-415-337-1100 x 109  
leave us a message to request a printed registration form, or to ask a question

## Rates

Dave North

The subject of equatorial drives and moon rates came up this month. I more or less automatically poo-poo the whole idea: the Moon does not sweep out the same number of degrees each day (remember Kepler and the basic laws? Is that a good name for a rock band?)

But I haven't been keeping track. With a good sense of date and time and a decent processor (all of which are becoming more popular these days), do any of the new trackers have a moon rate that actually keeps the Moon centered all month? I don't know; I'm asking.

In other news, Venus will not be transiting the Moon this month from anywhere on earth. (It can't, but you knew that, right?) Of course, it will be transiting the sun if you're just about anywhere in the world but right here where we are.

### *June General Meeting*

As you may, or may not know, the SJAA is a member of the Night Sky Network. The Night Sky Network is a nationwide coalition of amateur astronomy clubs bringing the science, technology and inspiration of NASA's missions to the general public.

To that end NASA and the ASP have developed an outreach toolkit called the Planet Quest Activity Toolkit. The toolkit contains instruction and materials for four activities.

√ The Telescope Treasure Hunt, an activity where participants "hunt" for objects on telescope row.

Sigh. Again.

Early in the month we'll have the annual Biggest Full Moon Of The Year, a complete non-event. Trust me, you won't be able to tell the difference between it and last month's unless you have some fairly good measuring devices.

***"...if the Moon reaches its highest point on the ecliptic at "new," it means it will be lower for all other phases."***

However, right after that inspiring full Moon (okay, so take a look around full. You might see some

interesting stuff on the limb) you get a chance to try for an early Moon sighting.

This isn't a record opportunity, but it is fun just how soon you can spot it. Because the sun will be at its highest point in the sky later this month, you can pretty much bone out that means the ecliptic near the sun is about at its highest elevation, and the Moon more or less follows the ecliptic.

So you have a new Moon at just about its maximum height. Ta da, look for it in your sky soon!

Other than that, welcome to the overall worst month for elevation. Same reason: if the Moon reaches its highest point on the ecliptic at "new," it means it will be lower for all other phases. That also means, of course, it will be a Very Low full Moon. This is always kind of fun, because more people will see it (it will more or less wander along the horizon, never getting all that high. And that's where the average terrestrial looks, especially when they're driving and not dialing their phone).

If we're really lucky one of the newspapers will print a story about the Really Big Full Moon.

If someone asks, tell them it's because the full Moon is especially close this month, but it *probably* won't hit us.

At least we're pretty sure.

That's always good for a laugh...

## Planet Quest / Night Sky Network Introduction

Bob Havner

√ Where are the Distant Worlds, an activity that teaches the use of star maps and points out stars where planets have been discovered.

√ Why we put Telescopes in Space. This activity demonstrates the effects that our atmosphere has on observing from the ground.

√ How we find Planets Around Other Stars. A hands-on activity that demonstrates the radial velocity method of planet detection.

All these materials are available for any SJAA members to use. It is a very useful

tool for introducing the public to astronomy. They can also be used at Scout meetings and classroom settings like Project Astro.

We will have demonstrations of the activities at the meeting. It will be fun for all ages, so come to the meeting and learn a little about how we will find other worlds.

For info about the Night Sky Network: <http://nightsky.jpl.nasa.gov/>

NASA Planet Quest Website: <http://planetquest.jpl.nasa.gov/>

## Two Nights on Kitt Peak

Rob Hawley

Yes Virginia, Arizona does have weather in the spring - BAD weather. But that is getting ahead of the story.

Last year I visited Kitt Peak as a part of a Sky and Telescope Arizona trip (Ephemeris June 2003). We participated in the Nightly Observing Program which spends about an hour looking through one of the two scopes; a 16" Meade SCT or a 20" Ritchy-Chretien (RC). I was on the Meade along with the editors of this paper. The views were impressive and the guide was knowledgeable. As they pulled us from the dome we learned that the scope was being handed over to an observer in the Advanced

Observers Program who would get to use it the rest of the night. That sounded good to me.

Why come all the way to Kitt Peak to do observing? I must admit that I was asked that question multiple times (one friend even offered to rent me his 20" scope). If you are an intermediate level observer, cannot travel to a dark sky site, or have modest equipment, then this is an opportunity to do some serious observing at a world class site with excellent equipment and assistance.

For a more experienced visual observer who has access to large aperture equipment, then the question is harder to answer. While on the peak you are literally one of the astronomers. So you could go for just the experience. You over-day in a nice hotel style room on the Peak and eat in the same cafeteria as the astronomers. I had a chance to talk with astronomers or operators of many of the research instruments.

The reason I went was galaxies. I had an (overly) ambitious list of targets that were a mix of Abell galaxy clusters and showy galaxies. My goal was to see

objects that were dimmer or smaller than I could see at home. The 16" Meade is 6" larger than the largest scope I own.

The 7000' elevation and steady desert skies make this an ideal site. I landed in Tucson the night before my observing time. Kitt Peak was clearly visible in the distance under crystal clear skies. Alas that would not last. The next evening the sky was about 1/2 covered. I got some sleep while the nightly program ran and joined my guide about 10 PM. The first night I was assigned the

Meade. Initially every place we wanted to look was cloud covered. Finally about 11 PM the clouds

broke enough so I could start the main viewing list - Abell 1367. We initially positioned the scope to center NGC 3862. From there I manually slewed the scope to explore the other galaxies in the cluster. I finally ended up confirming 8 others. Unfortunately high winds robbed us of good seeing and less than normal transparency meant that I saw far fewer dim and small objects than intended. By 1 AM the clouds had returned and we were done for the night.

This was the first time I tried sketching what I saw. I am not an artist, but making a crude sketch allowed me to more easily communicate with the guide. Comparing the sketch to the laptop prevented biasing the object identification that may have happened if I had worked directly from the laptop.

The next night the weather was VERY windy. One of the domes clocked a gust to 140+ MPH, but at the Visitor Center they were only 70-80 MPH. The entire mountain shut down due to a combination of wind, dust, and fog. About 3 AM the skies cleared and steadied enough to do some binocular

work. The Milky Way glowed brightly to the south. We quickly found M51, M11, M8, M6&7, and several other M objects in Sagittarius. Finally about 4 it was safe enough to use the 20" RC scope. That spectacular instrument is usually reserved for CCD work.

The AOP staff was outstanding both days. They really tried to do everything they could to work around the weather problems. They were nice enough to prorate the viewing time. One thing I noted to them (and would warn any other experienced observers) is that the Peak uses poor light etiquette when compared to most star parties. I took an eye patch to protect my vision.

Even with the weather I enjoyed the experience enough to schedule some additional time in November. This time I plan to do some CCD work - something I have not done before. That way I am not fighting the culture of the mountain AND I will get some one-on-one CCD training.

### errata

In the May Issue we misspelled the name of Sam Sweiss from Scope City. We apologize for the error.

### Directions to Houge Park

Houge (rhymes with "Yogi") Park is in San Jose, near Campbell and Los Gatos. From Hwy. 17, take the Camden Avenue exit. Go east 0.4 miles, and turn right at the light, onto Bascom Avenue. At the next light, turn left onto Woodard Road. At the first stop sign, turn right onto Twilight Drive. Go three blocks, cross Sunrise Drive, then turn left into the park.

From Hwy. 85, take the Bascom Avenue exit. Go north, and turn right at the first traffic light, onto White Oaks Road. At the first stop sign, turn left onto Twilight Drive. You will now be passing the park. Turn right at the first driveway, into the parking lot.

## Domes Near Vallis Schroteri

Jane Houston Jones

The 12 day old waxing Moon brings sunrise to western Oceanus Procellarum, the ocean of storms. That means Aristarchus and Vallis Schroteri are near their visible best on this night, a night that Mojo and I set up our two sidewalk telescopes on a Monrovia corner sidewalk. We were soon joined by Mark and Lisa Rooney, fellow members of the Los Angeles Astronomical Society (LAAS) and the Sidewalk Astronomers who we met just the week before at a Griffith Park star party. Mark set up his Meade LX200 next to our two scopes. Soon we were joined by LAAS members Dave Nakamoto and Tim Thompson, who provided telescope nudging relief and astronomical interpretation to the nearly 200 visitors to our eyepieces over the next 2 hours. Mojo aimed at Jupiter. Mark aimed at Saturn, and I got dibs on the Moon.

If you are a lunatic like me, the Vallis Schroteri region is an area of never ending awe. This part of Oceanus Procellarum is rich in volcanic structures. Selected as a landing site for the Apollo missions, it lost out to Hadley Rille as Apollo 15th's landing site. Among the many interesting features in this area is the bright young crater, Aristarchus. You've all seen a bright white crater north west of Copernicus. That's Aristarchus! It almost looks like someone put a dab of whiteout on a crater. Aristarchus is even visible on the night side of the moon during Earthshine!

Telescopes of all sizes can pick out Vallis Schroteri, the largest sinuous valley on the moon. At the beginning of the snakelike valley is the cobra head feature, a 10 km widening just north of a tiny crater. The valley meanders in a "U" shape for 160 kilometers from the crater Herodotus to the

south. At some points the valley narrows to only 500 meters wide. It terminates at a 1,000 meter high precipice on the edge of an uplifted tetragonal shaped continent called the Aristarchus Plateau. David Nakamoto commented that the plateau really did appear elevated with respect to the surrounding lunar landscape when he took a look. That's the beauty of frequent lunar observing. You really see amazing details when the sun angle is just right, and hour by hour, the angle shows old favorite features in a new light, literally.

Another unusual landscape that was starkly lit by sunrise was the Marius Hills. This area, like all the features I mention in this write up, looks best at sunrise (4 days after first quarter) or at sunset (4 days after last quarter). This is an area of 300 small steep-sided hills and domes. The best way for me to describe it in words is that it looked like shadows over a piece of pebbly laminate, like the ebony star or Wilsonart pebble sand laminate on the sides of my telescope. If I pretend a piece of laminate is the surface of moon near the terminator, and I shine a flashlight across it at a low angle, mimicking a rising sun over the laminate, the raised "bumps" look like the Marius Hills with shadows pointing away from the flashlight or away from

the sunrise. That's what the Marius Hills looked like to me. Like hundreds of small bumps, each with a shadow facing the terminator. It was quite an amazing sight!

There are many interesting studies of lunar domes. C. Weitz and J. Head of JPL studied the volcanic features of the Marius Hills complex using multispectral data from the Clementine UV- visible camera, and compared them to other lunar domes and cones. An abstract of their work is provided below, as are some images and observing notes. I hope this article encourages you to observe familiar areas of the moon and look for some of the amazing lunar domes.

### References

Spectral Properties of the Marius Hills – <http://www.agu.org/pubs/abs/je/1998JE000630/1998JE000630.html>

The Hitchhiker Guide to the Moon – <http://www.shallowky.com/moon/hitchhiker.html> - click on the numbered sections for observing notes of the areas. These sections correspond to the Rukl Atlas of the Moon maps. Aristarchus Map 18, Marius Hills Map 29.

Lunar Photo of the Day images of the Procellarum Volcanic Group – <http://www.lpod.org/LPOD-2004-04-12.htm>

More on lunar domes – [http://www.uai.it/sez\\_lun/domes.htm](http://www.uai.it/sez_lun/domes.htm)

Lunar links galore – <http://www.shallowky.com/moon/moonlinks.html>

Prospective Apollo landing sites, including the Marius Hills – <http://www.lpi.usra.edu/expmoon/orbiter/orbiter-sites.html>



*Tim Thompson and Dave Nakamoto point out some lunar domes. Photo courtesy of Morris Jones.*

## The Shadow of Venus

Akkana Peck

The shadow of Venus will fall on the earth this month, on Tuesday, June 8, as Venus passes directly across the face of the sun.

Unfortunately, San Jose won't be covered by that shadow: you'll have to travel at least as far as the east coast of the US, and preferably to another continent, to view the transit.

So why talk about it? Mostly because it's an extremely rare event: no living human has seen a Venus transit.

The last Venus transit took place in 1882. They come in pairs, for reasons buried in the arcana of celestial mechanics, so there will be another one this century, on June 6, 2012; that one will be visible from San Jose, where the sun will set with the transit still in progress.

Get more information on times and locations at this NASA site: <http://sunearth.gsfc.nasa.gov/eclipse/transit/TV2004.html>

When an inner planet (meaning Venus or Mercury) transits the sun, the planet's shadow is visible as a sharp black spot against the sun's disk. Of course, this means that you need a safe solar filter to view it; the sun is just as bright as ever during a transit, and just as damaging to the unfiltered eye.

Some of you may remember the Mercury transit of a few years back, which was visible from San Jose. The Venus transit should be more impressive -- Venus is both bigger, and closer, than Mercury. In fact, Venus' silhouette is big enough that it should be easily visible without magnification, using only a solar filter held up to the eye.

There's not much else going on in the system that's visible from our corner of

it. Of course, the sun is always visible: use your newly purchased solar filter, or that old one gathering dust in the garage, to take a look at this month's collection of sunspots. The sun isn't as active this year (so far) as the phenomenal activity we saw last year, but there still should be sunspots visible on most days.

Jupiter stands in the western sky at dusk, setting about midnight. It's much lower than it was last month, and it will be more difficult to see detail in its cloud layers, but its moons and moon shadows should be just as visible as ever.

Pluto, still in Ophiuchus, is at opposition on the 11th at magnitude 13.8. It's within reach of amateur telescopes; a practiced observer from dark skies should be able to locate it with a 10" or 12" telescope, though first-time Plutocrats may have better luck starting with more aperture. The important thing is to use a good finder chart; the chart in the RASC handbook has proved very reliable.

Uranus, in Aquarius, and Neptune, in Capricornus, trail Pluto by several hours, and are visible in the morning sky.

Mercury is too close to the sun this month for good observation; Venus, of course, is even closer early in the month, but moves into the morning sky during the latter half of June. The summer solstice falls on June 20th.

If you can't watch the transit in person, try catching it on one of the live webcasts. The Exploratorium in San Francisco will be showing live video from the event. For home viewers, it's hard to predict which web sites will have the best webcast; big events like this may overwhelm some sites, so try a few different sites.

## Venus Transit at the Exploratorium

Julie Suh

Join us for an enchanted night of astronomy, science, Greek culture, and fun! The Exploratorium hosts a special evening engagement to honor the Transit of Venus, the rarest of all eclipses. Come to the Exploratorium and watch the transit LIVE from Greece in the Phyllis C. Wattis Webcast Studio on Monday, June 7, 2004 8:30 p.m.-11:00 p.m. PDT

Highlights:

- \* Participate in a live Webcast from Greece, from 10:00 p.m. to 10:45 p.m. PDT.
- \* Watch Venus begin its path across the Sun.
- \* Hear Exploratorium Senior Scientist Paul Doherty explain the science behind the transit.
- \* Take a Transit of Venus walkabout with Exploratorium teacher Tory Brady.
- \* Engage in hands-on, astronomy-related activities with the Physics of Toys and Exploratorium Outreach staff.
- \* Watch a live performance by the Minoan Dancers Greek Folklore Dance Ensemble.
- \* Enjoy Greek treats and refreshments.

The entire museum will also be open for you to explore.

Since the Transit is not viewable from the West Coast, the Webcast provides a perfect opportunity to savor this rare event.

For more information about the event and to RSVP\*, please call: 415-353-0448. (\*RSVP recommended, but not required to attend.)

For more information about the Transit of Venus, check out our Web site: <http://www.exploratorium.edu/venus>

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#### Submit

Submit articles for publication in the  
SJAA Ephemeris. Send articles to  
the editors via e-mail to  
ephemeris@sjaa.net. **Deadline,**  
**10th of previous month.**

## SJAA loaner scope status

All scopes are available to any SJAA member; contact Mike Koop by email (koopm@best.com) or by phone at work (408) 473-6315 or home (408) 446-0310 (Please leave message, phone screened).

### Available scopes

These are scopes that are available for immediate loan, stored at other SJAA members homes. If you are interested in borrowing one of these scopes, please contact Mike Koop for a scope pick up at any of the listed SJAA events.

# Scope	Description	Stored by
1	4.5" Newt/ P Mount	Annette Reyes
3	4" Quantum S/C	Hsin I. Huang
7	12.5" Dobson	Tom Fredrickson
8	14" Dobson	Craig Colvin
10	Star Spectroscope	Keng Teh
14	8" f/8.5 Dob	E. Clay Buchanan
16	Solar Scope	Bob Havner
19	6" Newt/P Mount	Daryn Baker
23	6" Newt/P Mount	Wei Cheng
24	60mm Refractor	Al Kestler
26	11" Dobson	John Bunyan
27	13" Dobson	Steve Houlihan
28	13" Dobson	Jim Albers
33	10" Deep Space Explorer	Glen White
35	Meade 8" Equatorial	Patrick Lewis
38	Meade 4.5" Digital Newt	Tej Kohli

### Scope loans

These are scopes that have been recently loaned out. If you are interested in borrowing one of these scopes, you will be placed on the waiting list until the scope becomes available after the due date.

# Scope	Description	Borrower	Due Date
12	Orion XT8 Dob	Sean McCauliff	5/6/04
29	C8, Astrophotography	Joe Huber	6/6/04
36	Celestron 8" f/6 Skyhopper	Peter Young	5/12/04

### Extended scope loans

These are scopes that have had their loan period extended. If you are interested in borrowing one of these scopes, we will contact the current borrower and try to work out a reasonable transfer time for both parties.

# Scope	Description	Borrower	Due Date
2	6" f/9 Dob	John Paul De Silva	?
6	8" Celestron S/C	Richard Savage	4/24/04
9	C-11 Compustar	Bill Maney	Indefinite
11	Orion XT6 Dob	Steve Codraro	4/4/04
13	Orion XT6 Dob	Michael Hewitt	4/2/04
15	8" Dobson	Mike Koop	Repair
21	10" Dobson	Michael Dajewski	Repair
32	6" f/7 Dobson	Sandy Mohan	4/28/04
34	Dynamax 8" S/C	Yuan-Tung Chin	4/24/04
37	4" Fluorite Refractor	Gary Hansen	4/15/04
39	17" Dobson	Ron Gross	4/3/04

### Waiting list:

39	17" Dobsonian	Frank Williamson
	8" Dob	Vinod Nagarajan
	Any telescope	Mike Van Meter, Al Garcia

## San Jose Astronomical Association Membership Form

**New**    **Renewal** (Name only, plus corrections below)

### Membership Type:

- Regular — \$15  
 Regular with Sky & Telescope — \$48  
 Junior (under 18) — \$6  
 Junior with Sky & Telescope — \$39

Subscribing to Sky & Telescope magazine through the SJAA saves you \$10 off the regular rate. (S&T will not accept multi-year subscriptions through the club program. Allow 2 months lead time.)

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Make your check payable to "SJAA"  
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