

SJAA EPHEMERIS

General Meeting: SJAA 50th Anniversary and Holiday Celebration

Mike Koop

On November 8th, 1954 a small article was posted in the San Jose Evening News as part of the "Share it with Barrett" Column:

Any Amateur Astronomers?

William Weller, 2548 Gerald Way, thinks there should be an amateur astronomers' club here. With Lick Observatory close at hand, and some fast growing colleges hereabouts, it seems as though there should be plenty of prospective members. Even Old Share It has a six-inch telescope project which is taking longer than the 200 inch at Palomar. Any one interested in forming a club should contact Weller at Cypress 7-1739.

* * *

One month later, the first meeting of the San Jose Amateur Astronomers was held at Herbert Hoover Jr. High (near the intersection of Park and Naglee) on December 6th, 1954. Twenty people gathered to discuss the formation of a club and to hear two speakers. Walter Krumm, a member of the Peninsula Astronomical Society, spoke about Astronomy Clubs and types of telescopes. The newly formed club then heard it's first lecture from Dr. Olin Eggen of Lick Observatory, who discussed the possible astronomical explanations of the star of Bethlehem.

Fifty years later, our club is 350 members strong. We have witnessed many revolutions in astronomy, from the creation of the affordable Schmitt-Cassegrain, to the Dobsonian Revolution, to the computer driven scope revolution. The SJAA was there and part of it. Come join us on December 18th for a 50 year celebration. We will be joined by long time members Kevin and Denni Medlock, Jack Zeiders, and others who will retell some of the stories of the SJAA. Come hear about some of our old observing sites, like on Mt. Umunhum. Find out how the Fremont Peak Observatory came to be. Here about legendary SJAA meetings like when the World's First Computer Controlled Telescope was demonstrated or how Group 70 got it's start. There will be plenty of surprises and familiar older faces.

Just after the meeting, we will be ringing in the holiday season with a Dessert Potluck. Bring your favorite dessert or appetizer to share. Last year we had many tasty "potluck" contributions. Contributions of food or drink are appreciated but not necessary. No alcohol, please.

We'll try running a "white elephant" gift drawing this year as we had done in years past. To participate, please anonymously wrap (no name tag) an astronomical

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24 hour news and information hotline: (408) 559-1221
<http://www.sjaa.net>

SJAA Activities Calendar

Jim Van Nuland

December

- 3** Houge Park star party. Sunset 4:50 p.m., 66% moon rise 11:01 p.m. Star party hours: 7:00 p.m. to 10:00 p.m.
- 3** Astronomy class at Houge Park. 7:30 p.m.
- 4** Deep sky weekend. Sunset 4:50 p.m., 47% moon rise 0:02 a.m.
- 9** ATM Class at Houge Park. 7:30 p.m.
- 11** Deep sky weekend. Sunset 4:51 p.m., 0% moon
- 17** Houge Park star party. Sunset 4:52 p.m., 36% moon sets 11:35 p.m. Star party hours: 7:00 p.m. to 10:00 p.m.
- 18** **General meeting.** SJAA 50th Anniversary Celebration and Holiday Party. 8 p.m.
- 23** ATM Class at Houge Park. 7:30 p.m.

January

- 1** Deep sky weekend. Sunset 5:00 p.m., 66% moon rise 10:53 p.m.
- 7** Astronomy class at Houge Park. 7:30 p.m.
- 7** Houge Park star party. Sunset 5:04 p.m., 6% moon rise 6:58 a.m. Star party hours: 7:00 to 10:00 p.m.
- 8** Deep sky weekend. Sunset 5:05 p.m., 1% moon rises 5:06 a.m.
- 15** ATM class at Houge Park. 7:30 p.m.
- 21** Houge Park star party. Sunset 5:18 p.m., 91% moon sets 5:41 a.m. Star party hours: 7:00 to 10:00 p.m.
- 22** **General meeting.** 8 p.m.
- 27** ATM Class at Houge Park. 7:30 p.m.

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

item of small value and/or large humor and bring it along. It can be a used item you no longer want, an inexpensive new item, and can be either useful or funny. We'll do the exchange as a "draw or steal" lottery, which is always great fun.

Happy Holidays to All!

Fremont Peak Update

The Fremont Peak State Park will be closed except for daylight hours from 12/1/04 to 3/1/05. For more info call 831-623-4526. Possibly Observer Class FPOA members may have access. Send e-mail to schedule@fpoa.net.

SJAA Member's Article in Astronomy This Month

Robert Garfinkle, SJAA member and Fellow of the Royal Astronomical Society, has a new article in the December issue of "Astronomy" magazine. "Polar Moon" (pages 84-89) is about the Sir John Franklin expedition to locate a Northwest Passage through the Arctic seas in 1845. The expedition was a total loss, but 6 men associated with Franklin or the attempts to rescue him and his men have been honored with lunar features named for them. The article recounts the expedition, the rescue attempts, and what you can see when you observe these lunar features.

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.

Advanced Imaging Conference

The first Advanced Imaging Conference was held in San Jose, CA on November 6-7, 2004 at the Doubletree Hotel near the San Jose airport. A group of volunteers put the conference together led by Steve Gelman. Approximately 140 people attended this conference. The day and a half long conference consisted of about a dozen presentations.

Attendees came from the UK, Italy, Germany and Canada as well as the U.S. Sponsors included Software Bisque, SBIG and RC Optical Systems. This was not a group of youngsters pointing their webcams toward the eyepiece of a 6 inch Dobsonian. More than 50% had access to a Ritchey-Chretien telescope. At least among the speakers, SBIG's ST10 camera is the base model. So we are talking about people who are into their "hobby" for at least \$25K.

Besides the sponsors, the big stars of this conference were Ron Wodaski and Tony Hallas. Wodaski's book on CCD astrophotography is considered the main source of information because it is highly focused on software and hardware that amateur astronomers have. Tony Hallas is famous for his fantastic photos. You can see his work

in the December '04 issue of Sky and Telescope and the October 2004 picture in the RASC calendar.

There were some interesting things I learned (other than the ubiquity of Ritchey-Chretien telescopes among alleged amateurs).

1. With mathematical formulas blazing across the screen we were shown that when taking pictures in compromised skys (say, mag 4) it is better to keep each exposure small (like 2-3 minutes) but stack up more total exposures than you would under dark skys (we are talking 30 minutes and up).

2. SBIG is developing a camera that uses a technology called Time Delay Integration or TDI. They showed a picture from the model 402 that was created with a 3 minute exposure using the Orion Star Blast. Long exposures on a Dob will be a reality. The model 402 is scheduled to be available in January but no price was announced.

3. Color is a problem that will be with us forever. For starters, infrared, ultraviolet and other "light" has to be mapped to some color other than the black that we would see. And we can't say the color is

natural because human eyes have never seen these things. It comes down to either aesthetics or science (and often both).

This conference cost \$150. It was worth it particularly when the CD containing all of the PowerPoint slides is sent to the attendees. But the focus is deliberately very narrow. Lunch and dinner were served on Saturday and the conference ran as smooth as any professionally managed conference (this effort was strictly volunteers).

The conference was set up by Steve Mandel, a Santa Cruz-based amateur astronomer. He has a very nice setup but you may wonder how he deals with being fogged in so often in Santa Cruz. Steve set up his own consortium of four fellow amateur astronomers and they set up Steve's Ritchey-Chretien (of course) at the astronomy retreat called New Mexico Skies. The group fills out a calendar with observing dates parceled out to each member.

The conference is likely to be repeated next year, possibly near the time of the October full moon. Announcements are made in the SBIG Yahoo group and similar places.

Actual Observing

Dave North

How about that October eclipse huh? Don't ask me; I didn't see it at all. The clouds were so horrid that I couldn't imagine anyplace near enough would be clear, but I was wrong wrong wrong. The intrepid observers who charged up to Montebello got a reasonably good look. And I had thought about going ... ah well.

In December's list of Things I Won't See, central and eastern US observers get a shot at the Moon occulting Jupiter. But it won't be visible here.

There will be exceptional tides on the 12th for those who follow such things (full Moon and perigee thang). And for Christmas you get an exceptionally high nearly-full Moon to cheer things up!

Just for your amusement, I recorded a sort-of-random observing run so you can see what the life of a loonie is really like. I chose this night in particular because it's near the full Moon, when most people think there's nothing to see. The Moon was over 12 days old; less than two days shy of full.

The 'random' aspect? I picked the date beforehand, and resolved to write up whatever happened. Including a washout. Sort of an experiment.

Date: August 27 (eclipse -2 months)

Equipment: Takahashi FS128 on Losmandy G11 with Televue 7mm Nagler

Q: Dave, aren't you always saying the Moon is telescope friendly and any old light bucket will do?

A: Yes, I often say that.

Q: Then why are you using a Tak?

A: Well, I have one. It's easy to set up. I'm lazy. And I like it. Gives nice views.

Q: Why a Nagler? Don't you have better

planetary eyepieces?

A: Yes, I do. But the Nagler is pretty good and on less-than-great nights it does about as well as anything. Then there's the wide field. Do as I say, not as I do!

It was one of those evenings that's warm and still, which often means the seeing will be outstanding. One of those nights when you expect to see tiny little specks of detail everywhere.

Q: So Dave, how was the seeing?

A: Not very good.

Q: Hey, you've been doing this for a while. You're supposed to know when conditions are going to shine. What's with that?

A: Apparently, I'm not that good at it.

Q: My faith is crushed. Could you see anything?

Glad you asked. In spite of the Aristarchus Plateau showing well, the first thing that caught my eye was Rumker -- the biggest "dome" up there. Well, it's really a complex of volcanic domes, but it's so weird I always enjoy getting a look at it. Looks like a giant crab attacking Mare Imbrium.

Speaking of Imbrium, the next place I lingered was on Mons Gruithuisen, also volcanic, which can show central craters in excellent conditions. Not tonight. But out of my peripheral vision I noticed in the early sunrise of Pythagoras that its central peak was just barely peeking into morning, a tiny white dot. Neat!

But one can hardly avoid Aristarchus and Schroter's Valley for long when they're in view at all. For one thing, Aristarchus is about as bright as it gets on the Moon. For another, I simply have to spot the Cobra Head and soak

in the view. Even after all these years, it's that good.

Q: Um Dave, the Cobra Head?

A: What, you don't know?

The Cobra Head is the 'source' of the 'rivulet' Schroter's Valley, which is probably a huge collapsed lava tube complex. The volcano has a sunken 'hood' around it making the whole thing look like an excited King Cobra. Really!

Then I hit paydirt. Cruising the area of Sirsalis to get a glimpse of the nearby extraordinary rille -- it's best the day before full, but what the heck -- I noticed that Schickard seemed oddly blotchy.

It was! Sunrise was pretty much complete, but the light was not yet spread evenly over the curved floor. Schickard is big enough that the curvature of the Moon becomes significant.

Q: Significant?

A: The Moon is small compared to earth. Something that big -- 227 Kilometers (about 140 miles) -- would show some curve here on Earth. On the much smaller Moon ...

In this case, significant enough that the terminatorward floor still had lots of small shadows that cumulatively gave the impression of darkness from this distance. As I watched, I could see this blotchiness fading in a matter of minutes!

Nifty. That's just the kind of Transient Lunar Phenomenon I really enjoy. And quite frankly, most nights you'll see something like that, be it a ray, something off the terminator poking into light ... lots of different things for

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the alert observer, and sometimes even me.

Since it was just Moon observing, I wrote the notes directly into my office computer. Just look for a while and wander back into the fully-lit office and type a few lines.

Moon observing suits the lazy. Trust me, I know.

SJAA Membership

In the spirit of the season it seems like this is a good time to review the benefits of being an SJAA member. Of course, you're reading one of those benefits right now. Page 7 of this newsletter shows another important benefit, the telescope loaner list.

Some vendors provide other benefits to SJAA members.

10% off any **Orion** brand product for SJAA members. Bring your most recent Ephemeris with mailing label as proof of membership. If you forget, they might believe you anyway.

Orion Telescopes
10555 S. De Anza Blvd.
Cupertino, CA
(408) 255-8770

Sky Image Labs offers SJAA members a 15% discount on everything and Free Shipping on prints at <http://www.SkyImageLab.com>. Use Coupon CODE "SJAA" at Checkout. They will hand deliver it to a regular meeting.

Scope City offers a benefit that only applies to new members, a \$25 merchandise discount. See an SJAA officer at one of the monthly meetings to receive the Scope City Discount Coupon.

Interplanetary Sleigh

Akkana Peck

December is a month for conjunctions ... all in the morning sky!

First, on the morning of the 5th, Venus passes just over a degree north of Mars. They differ drastically in brightness, Venus blazing at magnitude -4 while poor distant Mars is only 1.7 -- and also in size, with Venus' gibbous disk showing a disk more than three times the size of Mars (which is also gibbous). The reddish color of Mars may be particularly striking next to the brilliant white of Venus.

Then, two nights later on the morning of the 7th, Jupiter makes a very close pass with the late third-quarter moon. The moon will actually occult Jupiter in the midwestern and eastern US, but alas, that happens before moonrise here, and by the time the moon rises just after 2am, they're already separated by half a degree.

The Hubble Space Telescope took a shot last month of a triple moonshadow transit on Jupiter. Perhaps you saw the triple transit back in March? One of the stories I read about this new Hubble image mentioned that an eclipse viewed from Jupiter would look pretty much the same as an eclipse here. I was skeptical - I thought the coincidence of earth's moon and sun showing the same apparent size was fairly unusual in the solar system! So I wrote a little program to calculate the apparent sizes of the Sun and the four Galilean moons as seen from Jupiter's "surface" (Jupiter being made of gas, the meaning of "surface" isn't entirely clear; I used 142,984 km). Here are the apparent sizes I calculated (arcminutes):

Sun : 6.1
Io : 35.6
Europa : 18.0
Ganymede : 18.1
Callisto : 9.1

So a Callisto eclipse might actually show some of the outer corona, but the other moons would appear much, much bigger than the sun, and wouldn't look much like a solar eclipse on earth. Good news for you eclipse-chasers -- no need to start saving up for a ticket to Jupiter!

Back to conjunctions: on the morning of the 29th, Mercury passes about a degree north of Venus. The actual conjunction happens the previous evening, but the pair doesn't rise here until nearly 5:45. Their phases are both gibbous, with Mercury showing just over half a disk and

Venus closer to full.

Saturn is the only planet visible to evening observers this month, rising a bit after darkness falls. The rings are starting to close up, showing a 21-degree inclination: much less than what we've been seeing for the past few years, though still plenty to show all their features.

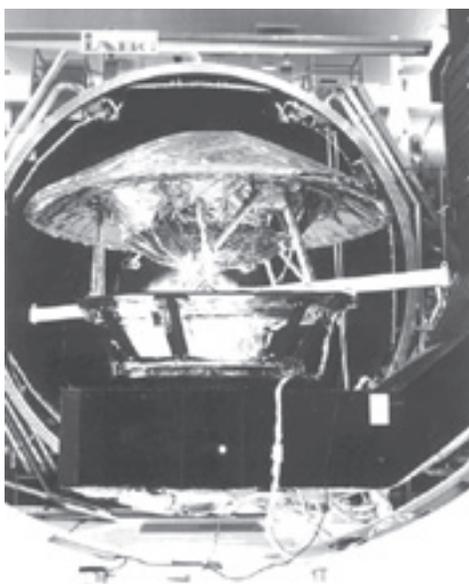
In addition to the rings, don't forget to look at the moons! You can't see Prometheus, the tiny moon which was recently discovered to be stealing material from Saturn's mysterious "braided" F ring; you can't even see the F ring from here. But you can see Titan!

Cassini has already given us some amazing images of cloud-shrouded Titan, the second largest moon in the solar system (after Ganymede), but

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there's a lot more to come! On December 24 at 6p.m., the Huygens probe will separate from the Cassini spacecraft and begin its 21 day journey to Titan, where it will plunge through the atmosphere and, with any luck, tell us what the surface is like.

Happily, unlike Prometheus, Titan is easy to spot -- it's the brightest of Saturn's extensive satellite collection, at eighth magnitude an easy target for any telescope. Why not set up a telescope on Christmas Eve, show Saturn and Titan to your friends and family, and tell them a story about this interplanetary sleigh?



The Huygens probe is shown here undergoing testing. Photo courtesy of JPL/NASA.

Cassini Lecture at Foothill College

January 26, 2005
7 P.M..

Dr. Jeff Cuzzi of NASA Ames will give a talk on the Cassini mission on January 26 at Foothill College. Since this talk occurs less than 2 weeks after the Huygens probe lands on Titan, it promises to be a very interesting discussion. More details in the January Ephemeris or call 650-949-7888.

Another Successful Night Sky Network Telecon

Dr. Massimo Stiavelli

On Tuesday November 9, 2004, the Night Sky Network (an Astronomical Society of the Pacific program) held it's latest telecon. Astronomy club members were invited to listen to a talk by Dr. Massimo Stiavelli who discussed the Hubble Ultra Deep Field pictures and what they tell us about distant galaxies. His talk was less than 30 minutes long which left a long time for questions.

Some of the younger audience members had questions that I thought would fluster Dr. Stiavelli. For example, after his talk which included items like the extent of metallicity for galaxies with a redshift greater than 6, one questioner asked "What was the earth like before the big bang?". Dr. Stiavelli calmly answered that there was no earth at that time.

Dr. Stiavelli is working on the next generation telescope which is also called the James Webb Space Telescope. He gave the following facts on this scope which are compared to the Hubble Space Telescope below:

	JWST	HST
Mirror Size	6 m	2.4 m
Mirror Type	Segmented	One Piece
Mirror Coating	Beryllium	Aluminum+Magnesium Fluoride
Spectrum Range	.6-28 microns	.11-3 microns
Location	L2	Earth Orbit
Sunshade	Tennis Court Size	Uses Earth Shadow
Lifetime	10 year goal	13 years so far

Other interesting points from this telecon:

- * The Ultra Deep Field shows items down to the 31st magnitude. That roughly corresponds to a firefly at the same distance as the moon.
- * The Ultra Deep Field required 1 million seconds of exposure time.
- * That comes out to 42 minutes per orbit for 400 orbits.
- * At some point, perhaps when the universe was 700 million years old, there had to be a reionization process.
- * This reionization was facilitated with low metallicity stars because they can burn hotter. In the early universe there were only 7% as many stars as we see today and that suggests that metallicity in the universe was also about 7% of what it is today.
- * We know that reionization had to occur because of the ionized hydrogen found in the spectra of quasars.

PowerPoint slides for this telecon are currently available at <http://www.astrosociety.org/nsntelecon/index.htm>. They may be moved elsewhere in the near future. The next telecon is not yet scheduled but you can get on the mailing list for future telecon announcements. E-mail Bob Havner at bhavner@sbcglobal.net.

The Night Sky Network, founded by the Jet Propulsion Laboratory's PlanetQuest program, is a nationwide coalition of astronomy clubs bringing the science and inspiration of NASA's missions to the public.

NOVAs Origins Series on KTEH, Dec. 2nd

Mike Koop

Citizens! The SJAA has been requested to provide volunteer support answering phones for the KTEH pledge drive on Thursday, December 2nd from 6:00 p.m.- 11:30 p.m. During this shift, all four parts of NOVA's Origins program will be shown, running from 7:00 PM to 12:00 PM. It is a program with an astronomical theme, with scientists pondering four cosmic beginnings: of planet Earth, of life, of intelligent life, and of the universe itself. Our club will receive on-air credit for their contributions of time if we provide 10 or more people.

I've done this a couple times. It is hard work, but it's fun, and it's interesting to see the inside of the studio. There will be a training session starting at 6:00, then we're on the air for under 4 hours in roughly 20 minute segments. KTEH President Tom Fanella along with another host provide the "on air" talent describing the Thank You gifts and the advantages of pledging. The volunteers will get shown on TV if we are on the phone taking a pledge. So, if you have someone at home waiting to see you, have them call in with a pledge! Food is provided for the volunteers.

I'll try arranging the volunteers in two shifts: from 6:00 to 9:00 and 8:30 to 11:30, but these times are adjustable. We can have up to 24 people. Email me at koopm@best.com (or by phone) if you would like to help out. Let me know which shift you prefer, early, late, or both and if you have any previous experience, although no experience is necessary. I'll email you back with the exact details once I get them.

For more information on the Origins program see <http://www.pbs.org/wgbh/nova/origins/>.

Solar System Stats for December 2004

Adapted from the Observer's Handbook published by The Royal Astronomical Society of Canada which in turns gets this data from the U.S. Naval Observatory's Nautical Almanac Office and Her Majesty's Nautical Almanac Office and contributions by David Lane, St. Mary's University, Halifax NS.

		Mercury	Venus	Mars	Jupiter	Saturn	Uranus	Neptune	Sun
RA	1	17 ^h 45 ^m	14 ^h 34 ^m	14 ^h 43 ^m	12 ^h 50 ^m	7 ^h 55 ^m	22 ^h 21 ^m	21 ^h 02 ^m	16 ^h 29 ^m
	11	17 ^h 07 ^m	15 ^h 23 ^m	15 ^h 10 ^m	12 ^h 56 ^m	7 ^h 53 ^m	22 ^h 22 ^m	21 ^h 03 ^m	17 ^h 13 ^m
	21	16 ^h 37 ^m	16 ^h 14 ^m	15 ^h 38 ^m	13 ^h 01 ^m	7 ^h 51 ^m	22 ^h 23 ^m	21 ^h 04 ^m	17 ^h 57 ^m
Dec.	1	-24°40'	-13°19'	-15°21'	-4°06'	+20°44'	-11°08'	-17°01'	-21°49'
	11	-21°05'	-17°03'	-17°22'	-4°40'	+20°50'	-11°03'	-16°57'	-23°00'
	21	-19°09'	-20°02'	-19°10'	-5°09'	+20°59'	-10°56'	-16°52'	-23°26'
Dist (AU)	1	0.80	1.41	2.43	5.94	8.36	20.14	30.49	0.986
	11	0.68	1.45	2.38	5.80	8.25	20.31	30.64	0.985
	21	0.82	1.50	2.32	5.65	8.16	20.47	30.77	0.984
Mag	1	0.5	-4.0	1.7	-1.8	-0.1	5.8	7.9	
	11	4.9	-4.0	1.7	-1.9	-0.1	5.9	8.0	
	21	0.3	-3.9	1.6	-2.0	-0.2	5.9	8.0	
Size	1	8.4"	11.9"	3.8"	33.1"	19.8"	3.5"	2.2"	32'26"
	11	9.9"	11.5"	3.9"	33.9"	20.1"	3.4"	2.2"	32'29"
	21	8.2"	11.1"	4.0"	34.8"	20.3"	3.4"	2.2"	32'31"

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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
11	Orion XT6 Dob	Lia Klofas
14	8" f/8.5 Dob	Colm McGinley
16	Solar Scope	Bob Havner
19	6" Newt/P Mount	Daryn Baker
23	6" Newt/P Mount	Wei Cheng
24	60mm Refractor	Al Kestler
27	13" Dobson	Steve Houlihan
32	6" f/7 Dobson	Sandy Mohan
34	Dynamax 8" S/C	Yuan-Tung Chin
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
6	8" Celestron S/C	Karthik Ramamurthy	1/8/2005
12	Orion XT8 Dob	Terry Rowe	12/8/04
29	C8, Astrophotography	Mark Ziebarth	12/10/04
37	4" Fluorite Refractor	Steve Sergeant	1/6/2005
39	17" Dobson	Rob Hawley	11/28/04

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	?
8	14" Dobson	Jan Lynch	1/9/05
9	C-11 Compustar	Bill Maney	Indefinite
10	Star Spectroscope	Bill O'Shaughnessy	1/11/05
13	Orion XT6 Dob	Eric Anderson	12/7/04
15	8" Dobson	Scott Pelger	1/5/05
21	10" Dobson	Michael Dajewski	Repair
26	11" Dobson	Vivek Kumar	1/10/05
28	13" Dobson	Anupam Dalal	11/1/04
33	10" Deep Space Explorer	Jason Yoon	1/15/2005
35	Meade 8" Equatorial	Peter Young	11/28/04
36	Celestron 8" f/6 Skyhopper	Dennis Hong	1/8/05
40	Super C8+	Mike Macedo	12/11/04
41	18" Sky Designs Dob	Len Bradley	1/12/05
42	11x80 Binoculars	Ritesh Vishwakarma	1/10/05

Waiting list:

8	14" Dobson	Jim Song
10	Star Spectroscope	Jim Albers
33	10" Deep Space Explorer	Ian Coman

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
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