

SJAA EPHEMERIS

Observing Comet Tempel 1

Jane Houston Jones

Mojo and I wanted to be part of the community of worldwide eyes observing Comet 9P Tempel 1 last night, and we also hoped to share the view, if possible, with others. We

showed the comet each night during the Grand Canyon Star party June 4 - 10 in the high altitude dark skies of northern Arizona when the comet was brighter and higher in the sky. But where could

we observe it near our home in Monrovia, CA? A glance out the window of our guest room provided the answer. Mount Wilson Observatory!

We belong to the Mount Wilson Observatory Association and have been wanting to volunteer at the 60-inch (152.4 cm) for some time. So I asked if the telescope would be available on the nights of the 3rd and 4th. The answer? Nope, the telescope isn't designed to be operated that low in the sky, plus high surface brightness objects look best, not faint comets, through this historic instrument.

So I offered to give a short talk about the Deep Impact Mission and which observatories, space telescopes and amateur astronomer networks would observe the comet before, during and after impact. I suggested we bring our portable 17.5 (44.5 cm) and 14.5 (36.8 cm) inchers and set them up someplace with a view to the southwest at 10:52 p.m. PDT (05:52 UT July 4) last night. Last night was the first night of the annual two-week CUREA program on Mt. Wilson (<http://www.curea.org/>) so we had a ready-made audience of enthusiasts to hear about Deep Impact and hopefully view the comet.

While waiting for the marine layer to swallow some of Los Angeles nearly 6,000 feet below and to the south of us, we first observed Mercury and Venus low in the west. Farewell Saturn, it was already below the horizon at 8:30 p.m. when we began observing. Jupiter was our next target, then we aimed at a few deep sky objects such as the supernova

SJAA Activities Calendar

Jim Van Nuland

August

- 6** Dark sky weekend. Sunset 8:10 p.m., 4% moon sets 9:21 p.m. DST
- 11** Perseid Meteor / Star Party at Villa Montalvo. Contact Mike Koop. No drop-ins.
- 11** Perseid Meteor / Star Party at Calero County Park. Contact Jim Van Nuland. No drop-ins.
- 12** Perseid Meteor / Star Party at Calero County Park. Contact Jim Van Nuland. No drop-ins.
- 12** Houge Park star party. Sunset 8:03 p.m., 51% moon sets 11:48 p.m. Star party hours: 9:00 p.m. to midnight.
- 13** ATM Class at Houge Park. 7:30 p.m.
- 20** **General meeting** at Houge Park. 8 p.m. Marian Chuang to speak on planning for manned lunar missions.
- 25** ATM Class at Houge Park. 7:30 p.m.
- 26** Astronomy Class at Houge Park. 7:30 p.m.
- 26** Houge Park star party. Sunset 7:45 p.m., 44% moon rise 11:55 p.m. Star party hours: 9:00 p.m. to midnight.

- 27** Public star party at Coyote Lake Park. Sunset 7:43 p.m., 34% moon rise 0:40 a.m. Starts at 9:00

September

- 3** Dark sky weekend. Sunset 7:33 p.m., 0% moon sets 7:49 p.m.
- 9** Houge Park star party. Sunset 7:24 p.m., 36% moon sets 10:25 p.m. Star party hours: 8:30 to 11:30.
- 10** ATM class at Houge Park. 7:30 p.m.
- 17** **General meeting** at Houge Park. Slide / Equipment Night.
- 22** ATM class at Houge Park. 7:30 p.m.
- 23** Houge Park star party. Sunset 7:03 p.m., 60% moon rise 10:33 p.m. Star party hours: 8:00 to 11:00
- 23** Astronomy Class at Houge Park. 7:30 p.m.
- 24** Public star party at Coyote Lake Park. Sunset 7:01 p.m., 50% moon rises 11:23 p.m. Starts at 8:00
- 29** CalStar Regional Star Party starts. Lake San Antonio.

The Board of Directors meets at 6:00 p.m. preceding each general meeting. All are welcome.

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

<http://www.sjaa.net>

Continued on page 2

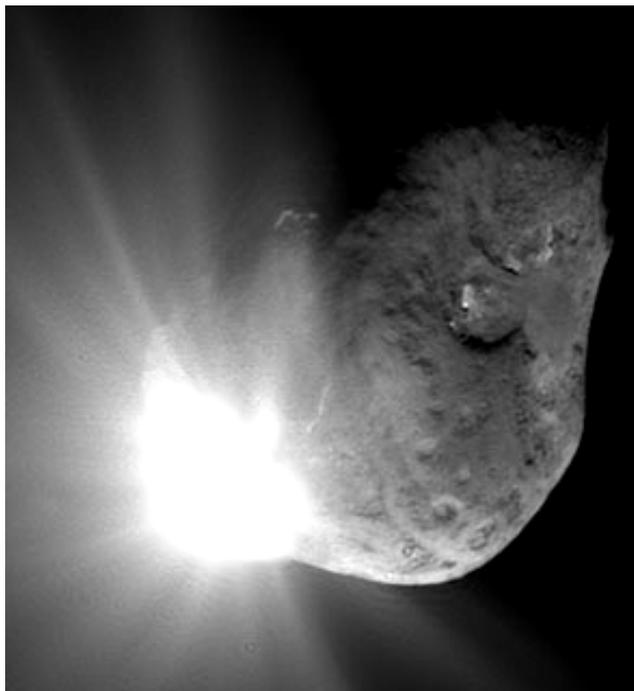
2005cs in M51. We each started to prepare for Comet Tempel 1. We brought printed charts using Skytools for the comet's position in Telrad, 80mm finder and eyepieces.

It was easy to star hop to the comet's general vicinity as it was framed nicely by two magnitude 5 stars, 76 and 82 Virginis. Whenever I got lost, or let the object drift out of my 223x field of view, it wasn't hard to get back as the eyepiece view also contained two nice asterisms. Southeast (up in my reflector view) was a little Sagitta-shaped wedge which pointed right to the comet.

Although neither of the software programs we used indicate a double star here I think magnitude 10.74 TYC 55486-782-1 (BD-0803601 on Skytools) is a double star, or there was another similar magnitude star right next to it that is not charted on Skymap or Skytools. Just southwest (up in my view) of these two stars was a mag 12.22 star, TYC 05546-15581 completing the duncecap or Sagitta wedge. On the northeast side of the comet (down in my eyepiece) was another asterism, another triangle comprised of three mag 11 stars, TYC 05546: 0882-1, 1397-1 and 1273-1. There were lots of other roadsigns too, for example a "V" as in Virgo asterism with magnitude 8 TYC 5546-067-1 masquerading as a faint Vindemiatrix imposter.

Did we ever see the comet? I thought I did several times with averted vision, and I made a rough sketch on my

eyepiece chart, showing where I thought the comet was moving and which direction (if any) the tail was. Maybe I was using averted imagination, but I did think I saw the wedge shaped glow several times, and I confirmed the motion this morning. Some of the 15



Comet Tempel 1 shortly after impact. Photo courtesy NASA/JPL-Caltech.

or so viewers thought they saw the comet, but some did not. Mojo, using his 14.5 (36.8 cm) reflector, 19mm Panoptic and 2x Barlow (about 200x) felt the same way, unsure but suspecting a glimpse at the comet. But at a little after 11:00 p.m. Mojo announced to the group that he detected a faint star in the comet position, or what looked like a barely detectable faint grouping of stars -- one star with a faint compact glow around it. We all had a look. We felt sure we had seen the comet brighten, but then again, the marine layer was seething below. Our view seems to match other reports from similar instruments.

Driving home, we heard radio reports of the mission success. What a thrill to view Comet Tempel 1.

Observers: Jane and Morris Jones and

CUREA staff and instructors

Date: July 3/4, 2005

Location: Mount Wilson, San Gabriel Mountains 34 13.6N 118 3.4W

Altitude: 5,715 feet (1742 meters)

Instrument: 17.5 inch f/4.5 (44.5 cm) and 14.5 (36.8) inch f/4.8 Litebox Reflectors up to 223x

Oculars 9 Nagler for 223x (Jane), and 19 Panoptic plus 2X barlow for 200x (Mojo)

Seeing: good

Transparency: LM 3-4, depending on marine layer obscuring some of LA.

New Discounts for Club Members

Rob Hawley

There are many reasons people join this club. It is always nice when one of the reasons is to save money! I was recently informed of two new discount programs for club members.

Oceanside Photo and Telescope (www.optcorp.com) is a large telescope and eyepiece dealer based in Southern California. They have just informed the club that our members qualify for a discount of up to 10% on all of their merchandise. Enter 70079 in the OPTAS Rewards field during checkout to obtain the discount. The offer did not specify which type of merchandise qualified for what discount, but I shop at OPT anyway so this is just a way to reduce my costs.

In addition, Sam Sweiss of Scope City in San Francisco reminds club members that he also offers discounts on items at his store. He can be more generous on high margin items, but has less room to discount low margin items. He offers local, high quality customer service. Sam has also been a long time benefactor of this club and many other clubs and activities in Northern California.

Beyond The Terminator

Dave North

The night before this month's deadline found me at the Fremont Peak Starbecue. Bob Garfinkle and Craig Wandke were among the lunar notables present.

Bob apologized for not raising any controversy this month, leaving me without an easy topic. Not a problem.

Turned out to be a surprisingly good night to observe the dark side.

Earthshine was very bright and transparency was quite good while the Moon was still up.

We could make out most major craters, and quite a bit of detail on the ray systems of Tycho and Copernicus. Aristarchus was almost bright!

Great fun.

It reminded me of another night over eight years ago, when my C8 ended up next to deepsky legend Jack Zeiders and his 17-inch dob (now a part of the SJAA Loaner Arsenal).

Jack can navigate around a surprising number of NCG and other objects just from memory -- he's played this trick more than once, and it's impressive. But at that time, the Moon was mostly terra incognita to him.

He got a bit infected by my enthusiasm, and we spent a couple of hours looking at all manner of fine detail. Both scopes did nicely, though his 17 was kicking buns on my C8 "Thumper."

Not too many months prior I had taken over from Lew Kurtz as editor of the Ephemeris. I hadn't written much, and was avoiding it so there would be no heavy-handedness.

But this was just too much.

I wrote a small article about our Houge experience, printed it, and basically forgot it.

In context: eight years ago was perhaps the apex of Aperture Fever, and deep sky was everything. This was true though the founder of the Big Cheap Telescope, John Dobson, was still showing the Moon more commonly than anything else. Most dob owners didn't know that.

Planetary observing was kind of okay, if a bit weird. But lunar observing was only for newbies and dorks. Like me.

Truth is, in those days I spent far more time on deep sky observation than on either planets or the Moon. My 12.5-inch was modest for the time, and still is, but you can have a lot of deep sky fun with a scope that size. Especially if you had already seen thousands of objects using a 4-1/4" reflector and a six-inch dob.

But I didn't like shunning the planets and Moon. The whole attitude seemed dumb, frankly.

Anyway, that first July 1997 article triggered something. The next month, Craig Wandke sent in a report about lunar observing from Yosemite. The month after, there was something about planets (extrasolar) from SF Chronicle columnist Jon Carroll.

In the background, various people were lobbying me to start a column about Lunar & Planetary observing -- mostly because I was the only SJAA member who would admit to doing it at all. Well, other than Rich Neuschaefer and his Great Big Refractor.

So finally for the October 1997 issue, I started a column called The Shallow Sky.

The name may be familiar. It covered the action on the planets and, of course, the Moon. When I wrote it, I thought it stunk.

I still do.

Two months later Akkana Peck started a mailing list of the same name.

Four months on she started writing the "planets" column, absorbing the name "Shallow Sky" completely.

So I needed a new moniker for the column: Lunacy, as it turns out. It was just me and the Moon.

At that time, "Mrs. Crazy Ed" Carol Erbeck doing the layout. She kept at it until July of 1998, when the task fell back in my lap.

For whatever reason, at that time I changed the name of the column to "Mooning," which first appeared in the August 1998 issue.

Seven years ago.

Some confessions:

I have no particular expertise about the Moon; that task falls to people like Bob Garfinkle. I haven't memorized all the crater names or anything like that.

I have still probably spent more time doing deep sky observation than lunar. Toss in planetary and it's likely still true.

My favorite single target is Mars, which I consider the most interesting and most difficult object in the sky. This year should be a humdinger.

Things have changed in the last seven or

Mooning continued on page 5

Is Mars as Large as the Moon? You Bet!

Akkana Peck

Mars, rising a bit before 11pm, is starting to brighten and grow noticeably. It's still small (13 arc-seconds at month's end, about 2/3 the size of Saturn's disk without the rings) but dedicated late-night Mars observers should be able to pick out some detail on the planet.

There's been some misinformation about Mars floating around the internet for the past few months about the amazing close pass Mars is supposedly making this August. Usually, they begin with THE RED PLANET IS ABOUT TO BE

SPECTACULAR, and end NOONE ALIVE TOADY (sic) WILL EVER SEE THIS AGAIN!!!

Longtime Mars observers will immediately see what's going on. The LAST Mars opposition, in August 2003, was in fact the closest opposition in 73,000 years, or 59,604 years, or various other big intervals depending on who ran the numbers. It was also problematical because Mars was quite far south and therefore low in the sky unless you took a trip south to see it. Those factors combined to make a Mars opposition which was quite good, and a lot of fun, but really nothing that special. This year's (at the end of October) may well be better even though Mars isn't that close.

But apparently a few months ago someone stumbled on a two-year-old announcement, failed to notice the year, forwarded it, and now garbled versions are all over the net.

The really interesting part is that there's

much more misinformation about the 2003 opposition this time than there was in 2003 when it was actually happening.

The latest variant is along these lines:



A really good Mars opposition. Photo courtesy of Akkana Peck and NASA/STSci.

Subject: IS MARS GOING TO BE AS BIG AS THE MOON THIS AUGUST?

I puzzled over that one for some time. Of course Mars is quite a bit bigger than our moon: about twice as big in diameter, in fact. But the query was obviously about apparent size as viewed from earth. Why would anyone claim Mars' apparent size would ever be comparable to the moon's? As I got more inquiries quoting different versions of the message, I gradually saw what had happened.

It turns out that one version of the email had a sentence like this:

[blah blah] *At a modest 75 power magnification, Mars will look as large as the moon to the naked eye.* [blah blah]

But somewhere along the way, the message got garbled, and became:

[blah blah] *At a modest 75 power*

magnification.

Mars will look as large as the moon to the naked eye. [blah blah]

The second half of the sentence, out of context, became the beginning of a new paragraph, and suddenly people are imagining a huge Mars looming over their local cityscape.

It's an interesting lesson in information diffusion. And also a lesson in, "Don't believe everything you read on the

internet." Including this column. Unless you're reading this on paper, in which case you should take every word as gospel.

So. If a huge moon-sized Mars isn't going to be in our sky this August, what WILL there be to look at?

Mercury gradually moves into the morning sky as August progresses, and should be observable for all but the first week of the month, showing a waxing crescent phase.

Venus, in the early evening sky, is drawing closer to the sun and will become more difficult to observe later in the month. On the evening of the 7th, it makes a very close pass with a slim crescent moon. We'll miss the occultation here (you'd have to go to Alaska or the Yukon to see that), but the close pass should be a lovely sight here. Try to catch them as early in twilight as you can — is it easier to find

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bright Venus, or the larger but much dimmer crescent moon? Then watch them as they set: they'll draw closer together as they sink lower in the sky.

Jupiter is very low in the western sky. Going ... going ... gone! Catch ya next time! Meanwhile, Saturn begins to emerge out of the sun's glare into the morning sky.

Neptune is at opposition on August 8, relatively low in the southern sky in Capricornus. At magnitude 7.8 it's visible in binoculars, but you'll probably need fairly good star hopping skills. It's easier in a telescope, with enough magnification to distinguish its small 2.3 arc-second blue-green disk from the stars around it. Try star hopping at 75-100x if you don't find it searching with lower powers.

Uranus, in Aquarius, won't reach opposition until next month, but its larger 3.7" disk and brighter 5.7 magnitude make it a much easier target, theoretically visible to the naked eye and a relatively easy binocular target. A telescope will show a nice disk.

Pluto, in Ophiuchus, is still fairly well placed for evening observing. It's already past the meridian by the time the sky gets completely dark, and since it's fairly far south it's only 40 degrees up, but that should still be enough for ambitious Plutocrats.

Around midnight on the night of August 25-26, the third quarter moon skims past the southern edge of the Pleiades, M45. Most star clusters would probably disappear next to a moon this bright, but the Pleiades are bright enough that I bet they'll hold their own. Check it out!

Perseid Meteor Parties

More details about the Perseid Meteor Shower Star Parties are on the SJAA schedule webpage at <http://www.svpa.org/~jvn/year2005.htm>

AstroCon 2005

Richard Ozer

The AANC board is pleased to announce "AANC-CON 2005", the AANC Conference and Workshops to be held at the Randall Museum, San Francisco, on August 27th, 2005. The conference will be hosted by the San Francisco Sidewalk Astronomers, and sponsored by both AANC and the Western Amateur Astronomers.

This year's theme is "Celebrating Bay Area Astronomy" and we have an impressive lineup of speakers and activities. We will also be celebrating John Dobson's 90th birthday!

Our speakers include Timothy Ferris, Lynette Cook, Steve Gottlieb and Richard Crisp; with additional presentations by Bob Schalk and ASP's Marni Berendsen. The \$25 registration fee will include all speakers and workshops plus lunch. That evening, we'll have a star party at the Randall and deliver our 2005 awards. If you have not received your awards ballot, please contact me as soon as possible. In addition, we hope to have a workshop on astronomy clubs and land use issues; focusing on the relationships (good and bad) between the park systems and amateur astronomers.

We need your help in a couple of ways. First, visit the conference web site. (http://www.planitarium.net/aanc/aanc-con2005/program_guide/) Second, register for the event. Currently, you can register online via PayPal, or contact <kennethfrank@planitarium.net> if you wish to mail your registration or pay on site. We need to know how many attendees to expect and we're hoping that each club will send five people.

AANC has acted as a forum for communication in the Astronomy Community, funded public outreach events, seeded money for educational programs, and is once again holding its annual conference and awards.

eight years. Planetary observation, and in particular CCD imaging, has undergone a renaissance. There has been a good Lunar Observing column in Sky'n'Tel for some years.

Solar system observers have made it back into the mainstream, and everything is respectable once again.

Much of what annoyed me about the amateur astronomy scene has faded away – I doubt because of anything I did, though it would be nice to think so.

But it's time to take a look at all that stuff on the other side of the terminator, just as we did last night at Fremont Peak.

Out of the glare.

Which is of course just another way of saying, time to wind this column down and make room for something better in the Ephemeris.

There's always a terminator.

Here it is.

SJAA August General Meeting

Marian Chuang – August 20

David Smith

Our speaker for the August 20 general meeting will be Marian Chuang, systems engineer specialist for Lockheed Martin. She was involved in great projects such as Gravity Probe-B (Einstein's Theory of Relativity experiment) with Stanford University and SIRTf (Space Infrared Telescope Facility), which is now called Spitzer Space Telescope. Marian's topic is her current project: advanced planning to take us back to the Moon, and on to Mars. This involves the field of bioastronautics, which addresses the physiological effects of space flight, including microgravity, and the psychological considerations of long duration space missions.

Music of the Spheres Program at Lick

There are still plenty of tickets available for the Lick Observatory Music of the Spheres Concert Series. Lick Observatory presents a summer concert series which benefits the Lick Observatory Visitors Program. Seating begins one half hour before the concert.

Talks by our famous research astronomers begin right after the music. Weather permitting, viewing through the 36-inch telescope follows. Amateur astronomer volunteers

provide additional outside viewing and informal talks. Attendance not advisable for children under ten years old.

Ticket Availability

Tickets may be purchased from the UCSC Ticket Office by phone, by fax, in person, or via the webform which will be linked at the UCO Lick website.

Prices

Standard: \$40.00

Preferred: \$100.00 (includes reserved seating at concert)

VIP: \$150.00 (includes private tour of the 120" telescope, buffet, and reserved seating at concert)

A handling fee of \$1 per ticket, up to a maximum of \$6 per order, will be charged. Tickets are non-refundable.

Only 160 seats are available each night. Concerts sell out quickly and ticket requests are filled in the order received.

Complete information including concert performers and ticket ordering can be found at: <http://www.ucolick.org/public/music.html>

Finding the Planet Mercury in Daylight Skies

Ernie Piini

Currently 76 years of age, with eyesight not as good as years ago, seeing the planet Mercury with the unaided eye even in the evening sky had become not viable for me. That's why I enjoy looking at Venus which is three or more magnitudes brighter.

Then I read an article in the June issue of Astronomy magazine pertaining to the June 27, 2005 conjunction of the planets Venus and Mercury. The event took place around 9:00 a.m. on a Monday when the planets were separated by about 4.8 arc-minutes (Moon diameter approximately 30 arc-minutes). Encouraged, the possibility of seeing Mercury during the daytime gave me an idea and a challenge. I have seen Venus and Jupiter many times during daylight hours but never Mercury. I thought if I can easily find the planet Venus I should be able to see or photograph Mercury along side during this conjunction.

I brought out my 8-inch Newtonian telescope, home built in 1970, and mounted a Canon "Rebel"

digital camera at the prime focus. The "Rebel" SLR camera can be attached to any telescope with a readily available T-Mount. It is also ideal in that the ISO



The author with his telescope that he built back in 1970. Photo courtesy of Ernie Piini.

film speed can be quickly changed. Each digital photo registers the date and time

to within a second, records the exposure used, provides a photo ident number, and each photo is instantly reviewable as a thumbnail view. Unwanted photos are easily deleted to make room for more exposures.

To begin, I pointed my telescope at the sun, the input protected with a Baader Density-5 solar filter. I then set my setting circles to the sun's current Right Ascension (RA) and Declination positions. The telescope is then repositioned to Venus' RA and Dec settings (removing the solar filter in between). Finding Venus was fast but I could not see Mercury in my 1.25 x 0.82 degree field-of-view. I photographed Venus anyway and down loaded my results to my eMac computer. With the use of my iPhoto software, which has a tremendous enhancement capability, I found that my photo included the planet Mercury too!

MISSION ACCOMPLISHED!

Editor's Note: The Solar System Stats for August can be found in the HTML version of this newsletter.

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Publication Statement

SJAA Ephemeris, newsletter of the San Jose
Astronomical Association, is published monthly.

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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
6	8" Celestron S/C	Karthik Ramamurthy
7	12.5" Dobson	Tom Fredrickson
10	Star Spectroscope	Jim Albers
14	8" f/8.5 Dob	Colm McGinley
15	8" f/9 Dobson	Mike Koop
19	6" Newt/P Mount	Daryn Baker
23	6" Newt/P Mount	Wei Cheng
24	60mm Refractor	Al Kestler
26	11" Dobson	Vivek Kumar
27	13" Dobson	Steve Houlihan
28	13" Dobson	Anupam Dalal
29	C8, Astrophotography	Mark Ziebarth
32	6" f/7 Dobson	Sandy Mohan
34	Dynamax 8" S/C	Yuan-Tung Chin
36	Celestron 8" f/6 Skyhopper	Dana Crum
38	Meade 4.5" Digital Newt	Tej Kohli
40	Super C8+	Mike Macedo
41	18" Sky Designs Dob	Len Bradley
42	11x80 Binoculars	Ritesh Vishwakarma

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
8	14" Dobson	Colm McGinley	8/01/05
11	Orion XT6 Dob	Ravi Shankar Erram	9/10/05
12	Orion XT8 Dob	Kevin Roberts	7/16/05
16	Solar Scope	Gary Mitchell	8/23/05
33	10" Deep Space Explorer	Jack Zeiders	8/23/05
37	4" Fluorite Refractor	Bob Leitch	10/1/05
39	17" Dobson	Steve Nelson	10/2/05

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	?
9	C-11 Compustar	Bill Maney	Indefinite
13	Orion XT6 Dob	Ravinder Pal Singh	7/14/05
21	10" Dobson	Michael Dajewski	Repair
35	Meade 8" Equatorial	Ethan Romander	9/6/05

Waiting list:

16	Solar Scope	Ken Frank
36	Celestron 8" f/6 Skyhopper	Shinji Wakamatsu
37	4" Fluorite Refractor	Carl Ching

San Jose Astronomical Association Membership Form

You can join or renew with the SJAA online at <http://www.sjaa.net/SJAAMembership.html>

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

Membership Type:

- Regular — \$20
- Regular with Sky & Telescope — \$53
- Junior (under 18) — \$10
- Junior with Sky & Telescope — \$43

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.)

Bring this form to any SJAA Meeting or send (with your check) to

**San Jose Astronomical Association
P.O. Box 28243
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Make your check payable to "SJAA"
(not Sky Publishing)

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