



SJAA EPHEMERIS

Lunar eclipse extravaganza, November 8th at Hogue Park

Mike Koop

By popular demand, the SJAA will be hosting a lunar eclipse party at Hogue Park on Saturday, November 8th, beginning at 5 p.m.

This is not a favored eclipse for the west coast of the U.S. since the Moon rises in mid-eclipse, just like the one we had on May 15th of this year. However, this is November, so the Moon will appear to gain elevation quicker than May's eclipse since the ecliptic angle is steeper. The horizons

at Hogue are 4 degrees at best in select sections of the sidewalk near the tennis courts. Using a compass, set up your scope in a spot so that a tall tree does not block your view as the moon climbs up. Bring binoculars and move around the park to find a view with a lower horizon to see the moon as it first rises above the Diablo range. Who will win the challenge to see the Moon first? It is difficult to see because the Moon rises in twilight in totality.

In May, eagle-eyed Gary Mitchell picked up the Moon first when it was 4 degrees above the horizon in the hazy skies that day using binoculars. Hopefully, sky conditions will be better this month so that we can see the eclipsed Moon lower. Check out the lunar eclipse website at sjaa.net for local ephemeris and simulations of the eclipse.

The eclipse also happens to fall on the night of the general meeting. After all the years of trying to get the meeting on a full Moon night we have finally hit the bull's-eye!

In honor of that we will have two speakers. The Moon leaves the umbra at 7:04 p.m., so after putting your telescope away join us in building one to hear lunar expert Bob Garfinkle present a short lecture on the history of lunar eclipses starting at 7:30 p.m..

After Bob's talk, Jane Houston Jones will give her scheduled talk *Observing with Caroline, Williamina, Jocelyn, Annie and friends*. Since the eclipse happens at dinnertime for most people, we will host a "bring your own food and drink" barbeque (we supply the flame, you bring the food). Please bring a dessert, salad or your favorite dish you would like to share. The barbeque will be ready at 4 p.m. Join us for this lunar eclipse observing extravaganza!

— Mike Koop, president@sjaa.net

[See table of lunar eclipse events on the following page. — ed.]

SJAA Activities Calendar

Jim Van Nuland

November

- 1 ATM class. Hogue Park, 7:30 p.m.
- 8 **General meeting** and lunar eclipse extravaganza, Hogue Park. Barbeque 4:00 p.m., Moon rises in eclipse 5:00 p.m. Speakers begin at 7:30 p.m., Bob Garfinkle *History of Lunar Eclipses*, and Jane Houston Jones *Observing with Caroline, Williamina, Jocelyn, Annie and friends*
- 9 Fall swap meet, Hogue Park, **Sunday**. Open for setup about 12:30 p.m., selling starts at 1:00 p.m. 'til roughly 4:00 p.m.
- 13 ATM class. Hogue Park, 7:30 p.m.
- 14 Hogue Park star party. Sunset 4:58 p.m., 70% Moon rises 9:22 p.m. Star party hours 7:00 p.m. to 10:00 p.m.
- 15 Deep sky weekend. Sunset 4:58 p.m., 60% moon rises 11:29 p.m.
- 22 Deep sky weekend. Sunset 4:54 p.m., 1% moon rises 6:37 a.m.

November (continued)

- 28 Astronomy class. Hogue Park, 7:30 p.m., subject TBA
- 28 Hogue Park star party. Sunset 4:51 p.m., 34% moon sets 10:01 p.m. Star party hours 7:00 p.m. to 10:00 p.m.
- 29 ATM class. Hogue Park, 7:30 p.m.

December

- 6 **General meeting** at Hogue Park 8:00 p.m. Dr. Jeff Moore, NASA, on the Pluto mission
- 18 ATM class. Hogue Park, 7:30 p.m.
- 19 Hogue Park star party. Sunset 4:53 p.m., 15% moon rises 4:08 a.m.
- 20 Deep sky weekend. Sunset 4:53 p.m., 5% moon rises 5:25 a.m.
- 27 Deep sky weekend. Sunset 4:57 p.m., 29% moon sets 10:00 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>

SJAA Membership

*SJAA has 347 members as of
October, 2003*

Lunar eclipse details from the USNO site

Total eclipse of the Moon from Houge Park,
West 121 deg 56 min, North 37 deg 15 min
Zone: 8h West of Greenwich
Total lunar eclipse of November 8

Event	Time	Moon's azimuth	Moon's altitude
Penumbral Eclipse Begins	2:15:00 p.m.	Not Visible	Not Visible
Partial Eclipse Begins	3:32:21 p.m.	Not Visible	Not Visible
Moonrise	5:01 p.m.	69.5	-0.8
Sunset	5:03 p.m.	-	-
Total Eclipse Begins	5:06:07 p.m.	70.2	0.6
Greatest Eclipse	5:18:23 p.m.	71.9	2.6
Total Eclipse Ends	5:30:38 p.m.	73.6	4.8
Civil Twilight	5:31 p.m.	(sun 6 degrees below Horizon)	
Nautical Twilight	6:02 p.m.	(sun 12 degrees below Horizon)	
Astronomical Twilight	6:32 p.m.	(sun 18 degrees below Horizon)	
Partial Eclipse Ends	7:04:24 p.m.	86.5	22.7
Penumbral Eclipse Ends	8:21:48 p.m.	98	37.8

Slide and equipment night, September 2003

Dave North

First up was Gary Mitchell with an LED box for testing dark adaption with various colors of light. It had red, amber, blue, white and green LEDs, all of which could be adjusted for brightness.

He tested the light level required to read a chart, then how long it took his dark adaption to return.

Result? No color was any better than any other.

One experiment doesn't establish a fact, but it does imply strongly that as long as you use the minimum intensity required to read a chart, it doesn't matter at all what color light you're exposed to as regards your dark adaption.

Address (e and postal) and phone number updates

Since e-mail addresses change frequently, our master file is soon out of date. Please let us know when you have a new e-address, phone number, or postal address. Write to secretary@sjaa.org or to the post-office box number on the Ephemeris. Thanks!

This being Mars season, Akkana Peck showed up with some JPL and ALPO Mars maps she reworked to include accurate captions (and mentioned her new 'marslet' java applet to render them as spherical "globes"). All this stuff is available on shallowsky.com.

She also recommended the book *A Traveller's Guide To Mars* by William K. Hartmann, which has some nice maps and quite a bit of useful information.

But the crowd pleaser was her \$6 inflatable Mars globe from astro2go@aol.com. Not only is it a reasonably well-labelled (and large) globe, but in the dark you can shine a red flashlight into the translucent plastic and get a really cool Red Mars — and read the labels!

Daniel Stefanescu brought the green laser pointer he's making to sell for \$120, considerably less than competing models. It's very comfortable in the hand and has a very nice switch and case. It uses AAA batteries like the others, which many people thought unfortunate as they all run out of power too soon.

Daniel pointed out that such a case would be very expensive to tool up, but he may consider it if demand warrants.



Craig Scull shows the wood pier for their 8-inch refractor at slide and equipment night.

He thought the killer feature was a convenient around-the-neck strap, which is nice, but the handy control button was terrific.

Terry Kahl had a nice daylight running light 'blanket' to keep from annoying others when leaving (or showing up). There's something called taillight tape that lets a little bit of light through so folks can see you coming, but aren't bothered by the mild glow.

The 'blanket' was made from very heavy plastic surgical bags and attaches with a bungee cord.

She also showed her astronomy coin and token collection, and a Canyon Diablo meteorite in a plastic box (very nice specimen).

Craig and Elena Scull are building a wood pier for their eight inch refractor, trying to save some weight. They showed off progress so far and asked for opinions and advice, of which they got about a ton, as you can imagine.

The refractor has approximately an eight foot tube and weighs a bit, so this is a tricky project. It will be interesting to watch the progress.

Mark Wagner brought an "origami" dob base built for an eight inch scope, designed to collapse down flat for transport. He used three hinges and

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Slide and equipment

Continued from previous page

four clamping knobs (with cutaways) for a very elegant solution.

It takes just under 30 seconds to break down, and not much longer to set up. Collapsed, it fits in very little space and leaves enough room in his trunk for the telescope, too (which ... telescopes almost to half size).

Another consideration was weight, so there are cutaways that also make the unit look nicer.

Mark also brought a Tom Osypowski equatorial platform so people could inspect it "in the light." These units are excellent for tracking with a dob, and in many respects result in the "best of all possible worlds."

If you're interested in an under-100 dollar two-inch eyepiece with an 80 degree field, Dana Crom recently got one from Anacortes.

He says it is a bit soft at the edges, but workable over about 70 percent of the field and not "seagulled" (or cometary) until about the last five percent of the field.

He thought it pretty darn good at an outstanding price.

— Dave North, north@znet.com



Mark Wagner shows his folding dobsonian rocker box at Slide and Equipment night in September. Photo by Dave North.

Mooning

Shoot the Moon

Dave North

I'll begin with a quote from last month's column: "Everybody knows I'm not a shooter."

Things change.

I think Bill Maney's nifty 3D Moon shots last month had some kind of subliminal effect. Then there's my birthday and getting a new camera to replace my old Sony, which died an ugly death at Loch Lomond (no, I didn't drop it in the water).

When I get a new toy, I just have to play around with it.

This one (a Canon Elph, which I have long been tempted by because they're so small) has a little lens housing that pops out of the camera when you start it up.

I noticed something odd about it — the size reminded me of something. But what?

The weird eyepiece hood on my 30mm Tak eyepiece! And sure enough, I can just plop it in there and the camera will stay in proper relationship to the eye lens as long as I don't aim the scope too high.

This time of year, the first quarter Moon is very low, meaning just about the right angle.

So I had to try it.

I'm assuming Mojane will run a pic for me, but you can check <http://timocharis.com/photos/moon/index.html> for a perhaps more resolute look. Besides, who knows what will show up between now and then?

I was surprised how easy it was.

I've been encouraged to try this kind of thing before, in particular by John Gleason in his comments about piggy-back photography, composition and ideas being critical ingredients — not just equipment.

But digital cameras are helping too. They're cheap, and perhaps even more important, so are bits. I can waste shot after shot at virtually no cost and with very little effort.

And of course darkroom equipment is pennies too — or in my case, outright free. Since I run primarily Linux, I can use The Gimp to make any

adjustments I want, and it is completely free.

Wonder what they have in the way of stacking software? After seeing the stacked drawings the planet ladies did...

So why the Moon? What makes it so special?

It's bright, it's big, and there's hard-edged detail. All the things that



Dave North's first attempt at a moon photo.

make it such a great backyard target, and make it so friendly to all kinds of telescopes, also make it an ideal photographic target.

And easy.

Here's how easy it gets.

I came home from a hike one Sunday and noticed the Moon looked kind of nice not too long before sunset.

I didn't really feel any interest in setting up a scope before cleaning off (it was a dirty, sweaty kind of climb) so I just grabbed the camera and took some handheld full zoom (2x) shots. Most cameras have a more aggressive

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Shoot the Moon

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zoom, but oh well.

Later I offloaded the pictures and blew them up with xzoom, and it was possible to pick out all the major maria in the result.

Presto!

But there must have been something in the air. Maybe Bill's shot, maybe just karma, but a few days after that Jim Turley posted *his* first Moon photo.

I couldn't resist, so I responded with mine, and this led to subsequent postings of first or recent cheapo experiments by Bill Arnett, Jeff Crilly, John Pierce and Stephen Migol.

If you'd like to peruse them (almost all better than mine) see the table nearby.

I hope they all leave them up. John Pierce's was an actual film shot, and his one try at the game — but very nice!

So if you have a digital camera and a little time on your hands, don't make the same mistake I did with my old Sony. Don't assume you can't get a fairly nice, fun picture without expensive equipment or a lot of time.

Heck, this camera will let me do a fifteen second exposure, and that will

probably be good enough to get some very crude shots of other objects too.

But I doubt any of them will work out as good as the Moon. NASA kind of forgot to send a camera on their last Moon mission, though it would have hardly been a problem to do so. Perhaps we should avoid making the same boner in our

The shallow sky

Mars is getting smaller as we speed away from it, but it's still plenty big enough to see surface detail throughout November. Sure, we're all spoiled by the amazing views we've gotten throughout this excellent opposition; but you don't have to stop looking at Mars yet.

The south polar cap has shrunk quite a bit, to nearly its minimum size. It's interesting to watch the polar cap as Mars rotates: the SPC is actually not centered on the south pole, so there's much more polar cap visible on one side of the planet than on the other. As you observe over successive nights, you may think that the polar cap has completely disappeared, only to see it appear, just as bright as before, a week or two later.

Take a look in the north, too. Observers are starting to see hints of the hazes around the north polar cap, though the cap itself probably won't be visible.

The weather is changing: Mars' southern hemisphere is past summer solstice now, and dust storms may be kicking up. As I write this, some observers have reported light-colored dust storms in Hellas, making that basin much lighter than it was earlier this year, but not all observers agree with the dust storm theory. This may

Notable Moon photography

James Turley

<http://www.xai.com/images/astro/jrt-first-moon.jpg>

Jeff Crilly

<http://fototime.com/50C5FDAE46D3748/standard.jpg>

Bill Arnett

http://mercury.nineplanets.org:8011/astro/IMG_3135a2.jpg

John Pierce

<http://www.hogranh.com/files/Bitmaps/astropix/halfmoon.jpg>

Stephen Migol

<http://migol.com/images/moon/PA040171.jpg>

own back yards.

Give it a shot!

— *Dave North*, north@znet.com

Another moonrise eclipse

Akkana Peck

also be a particularly good time to look for orographic clouds over the Tharsis volcanoes: if you haven't seen Olympus Mons yet, keep trying, despite Mars' small angular size, and try a blue or green filter if you have one.

Saturn is rising early enough to be well placed for observing most of the evening. With the rings tilted at about 25 degrees to us (not as much as last year, but still plenty to see structure in the rings) and its usual assortment of moons, Saturn is a visual treat in any size telescope. Jupiter rises around 1 a.m., so it's getting to the point where it's observable too. There's no dead time for planet lovers this year!

Uranus and Neptune are still visible in the evening skies. Try for them early, before they get too low. Uranus is in Aquarius, and Neptune is nearby in Capricornus. You'll have to wait a while for Pluto, though: it's lost in twilight.

Venus offers a nice evening apparition this month, staying up (albeit never very high) for more than an hour and a half past sunset by month's end. Mercury is too close to the sun to be observable.

On the evening of November 8, we have another moonrise lunar eclipse.

Continued on next page

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.

The shallow sky

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The moon rises at 5 p.m., in deep partial eclipse, and totality begins six minutes later and lasts until 5:30. Here's the bad news: sunset is 5:03. So all this happens in full twilight, and the eclipse will be very difficult to see. It may be slightly easier than the moonrise eclipse we had in May: like that one, the Moon rises just before sunset, but unlike that one, totality hasn't quite set in by the time the moon rises, so the moon may be a bit easier to see.

Where's the best place to watch a moonrise eclipse? Good question! In May, seeking good horizons and clear weather, I went to a low spot by the bay. It was pleasant and scenic, but had the disadvantage that the horizon was murky. We thought at the time that

a higher spot might have been better, offering less murk, but comparing "first sighting" times with observers all over the bay area offered no obvious answers. Of course, if you can get yourself to a high mountaintop with clear air and good seeing, you're always better off. Otherwise — it probably doesn't matter that much. The 8th is a Saturday night, which makes it a lot easier to find that perfect spot than it was in May when many of us had to skip out of work and rush off to see the eclipse.

Don't forget your binoculars, with a tripod mount if you have one, or a very low powered scope. Tripod mounted binoculars turned out to be the big winner in spotting the moon before any of the telescopes found it.

— *Akkana Peck*,
observer@shallowsky.com

Annual swap meet, Sunday, November 9

Mike Koop

The SJAA Fall Astronomical swap meet will be conducted at Houge Park in San Jose Sunday November 9th, 2003, at 1:00 p.m.

Telescopes, eyepieces, mountings, mirrors, lenses, clock drives, books, camera equipment, star charts, finders, tubes, diagonals, photographs, space art — everything you need to make your hobby more enjoyable. You name it, it's likely to be there. Check your garage and closets for anything astronomical you would like to sell. Anyone can buy and sell, it's fun and easy!

This is the third year for the swap, which is a follow on to the spring auction that has been run for twenty-three years. There is no auction, just the swap sale. Get your holiday shopping done early this year!

Some of the people and items expected to be there include: Joe Sunseri of Earth and Sky Adventure Products with many fine new and used items; James Turley of Sky Image Lab providing quality astronomy prints; Dan Stefanescu selling Starpoint Green Lasers.

You also will get to see and order the SJAA logo wear from Fairview

Embroidery. A donation of *Sky & Telescope* with issues from 1969-73, 80-81, 85-2002 will be available. Check the website at <http://www.sjaa.net/swap> for more items as they become registered.

Doors open at 12:30 p.m. to set up tables and bring in material for sale. Selling will begin at 1 p.m., and will run as long as needed (probably 3 p.m.). Each buyer pays the seller. Sellers are to keep track of their sales and pay 10% commission for used items, 5% for new items, with a cap of \$50 for any one item, \$500 maximum per seller. The commission is fully tax deductible. There are no table fees. Please bring items that would interest the astronomical audience such as astronomical, science, or tech items. The SJAA reserves the right to turn away inappropriate items for the swap.

Do you have a large item to sell such as a telescope? Please email swap@sjaa.net with a description and a photo of the item or a link to your own website for some pre-swap publicity.

For more information and directions, visit our web site at <http://www.sjaa.net>.

— *Mike Koop*, koopm@best.com



Steve Houlihan of Santa Cruz took this picture at CalStar, and suggests that you might want to write your own caption.

Handbooks and Calendars

The 2004 RASC Observer Handbooks and astronomy calendars have just arrived and will be available at the next SJAA meeting, (and future meetings until they're gone).

This is a minor fund raiser for the SJAA. The proceeds go to the equipment fund, which supplies our telescope loaner program.

The book is \$15, the calendar is \$10. The SJAA buys them in bulk, that's how we're able to give you these low prices. The retail price for the book is \$23.95 and \$13.95 for the calendar.

We purchased a few extra this year, but when they're gone, they're gone. First come, first served.

— *Gary Mitchell*, treasurer@sjaa.net



Group picture from CalStar 2003. Photo by Mike Koop using Steve Houlihan's camera.

San Francisco amateurs bid farewell to the Morrison Planetarium

Wednesday, November 19, 7:00 p.m.
Morrison Planetarium, California
Academy of Sciences
Golden Gate Park, San Francisco
Monthly meeting of the San Francisco
Amateur Astronomers.
Free admission.

The Morrison Planetarium will be closing its doors forever at the end of this year, as the California Academy of Sciences builds new facilities in Golden Gate Park. The one-of-a-kind, hand built Morrison Planetarium projector will be retired forever.

Help the San Francisco Amateur Astronomers say farewell to this institution of bay area astronomy for the past 50 years, by attending a special show sponsored by the planetarium and the SFAA. Admission is free. Steve Craig, the planetarium director, will be on-hand to present the show.

We will see the sky show *Stars over San Francisco*. Celebrate 50 years under the stars of Morrison Planetarium and find out how the planetarium and our knowledge of the universe itself have changed since the planetarium opened its doors November 8, 1952.

California Academy of Sciences
rebuilding, directions and more <http://www.calacademy.org>

San Francisco Amateur Astronomers events, directions and more:
<http://www.sfaa-astronomy.org/sfaa/>

Alan Dressler explains black holes at Foothill

Andrew Fraknoi

On Wednesday, Nov. 12, 2003, 7 p.m., Dr. Alan Dressler, of the Carnegie Institution, will give a non-technical illustrated talk on *The Mystery of Black Holes* in the Smithwick Theater, Foothill College, El Monte Road and Freeway 280, in Los Altos Hills, California

The event is free and open to the public. Parking on campus costs \$2. Call the series hotline at 650-949-7888 for more information.

The Silicon Valley Astronomy Lecture Series is co-sponsored by NASA Ames Research Center, the Foothill College Astronomy Program, the SETI Institute, and the Astronomical Society of the Pacific.

Dr. Dressler will discuss what black holes are, how they are formed, and how astronomers have suspected, and then proven, that black holes — from the relatively small mass of a single star to the colossal size of billion stars — actually exist.

Dr. Dressler is well known for his ability to discuss astronomical topics in non-technical terms. He is one of the leading scientists investigating the birth of galaxies and their evolution through time, and is the author of the popular book *Voyage to the Great Attractor*, which describes his work finding the largest structures in the universe.

This talk is also part of the Second Century Lecture Program of the American Astronomical Society, celebrating that Society's 100th anniversary.

Celestial calendar November 2003 Richard Stanton

Lunar phases:	Date	Rise	Trans	Set
FM 17:13 PST	08	18:01	00:21	07:16
LQ 20:15 PST	16	23:56	06:50	14:07
NM 14:59 PST	23	07:36	12:44	17:46
FQ 09:16 PST	30	14:04	19:34	00:10

Nearer planets: R. A. Dec.
Mercury, 1.35 A.U., Mag. -0.5

07	08:24	13:25	18:26	15:20	-19:15
17	09:03	13:49	18:35	16:23	-23:24
27	09:36	14:13	18:51	17:27	-25:36

Venus, 1.51 A.U., Mag. -3.9

07	09:28	14:20	19:12	16:15	-21:45
17	09:49	14:34	19:18	17:08	-23:49
27	10:08	14:49	19:30	18:02	-24:43

Mars, 0.74 A.U., Mag. -0.5

07	15:20	20:54	02:27	22:48	-09:40
17	14:50	20:30	02:10	22:53	-07:28
27	14:21	20:09	01:56	23:22	-05:06

Jupiter, 5.66 A.U., Mag. -2.0

07	02:43	09:08	15:33	11:02	+07:10
17	02:10	08:34	14:57	11:08	+06:39
27	01:37	07:59	14:21	11:12	+06:13

Saturn, 8.34 A.U., Mag. +0.6

07	21:46	05:01	12:16	06:56	+22:04
17	21:05	04:20	11:36	06:54	+22:06
27	20:23	03:39	10:54	06:52	+22:06

SOL star type G2V Intelligent life in system ?

Hours of Darkness						
10:37	07	07:41	12:54	18:07	14:48	-16:14
10:53	17	07:51	12:55	17:59	15:29	-18:57
11:06	27	08:01	12:58	17:54	16:11	-21:06

Astronomical twilight:	Begin	End
JD 2,452,950	07	05:13 18:35
960	17	05:22 18:28
970	27	05:31 18:25

Sidereal time:

Transit right ascension at local midnight	
07	00:00 = 02:56
17	00:00 = 03:36
27	00:00 = 04:15

Darkest Saturday night: 22 Nov 2003

Sunset	16:53
Twilight	18:24
Moon Rise	05:19
Dawn Begin	05:24
Hours Dark	11:00

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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 (loaner@sjaa.net) or by phone at work (408) 473-6315 or home (408) 446-0310 (Leave message).

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
7	12.5" Dobson	Tom Fredrickson
10	Star Spectroscope	Keng Teh
16	Solar Scope	Bob Havner
19	6" Newt/P Mount	Daryn Baker
24	60mm Refractor	Al Kestler
26	11" Dobson	John Bunyan
28	13" Dobson	Jim Albers
34	Dynamax 8" S/C	Mike Macedo
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
3	4" Quantum S/C	Hsin I. Huang	12/19/03
11	Orion XT6 Dob	Harshavardhan Kuntur	11/22/03
12	Orion XT8 Dob	Jan Lynch / Jason Yoon	11/17/04
13	Orion XT6 Dob	Kosha Ganatra	11/1/03
29	C8, Astrophotography	Tajinder Singh	11/22/03
33	10" Deep Space Explorer	Glen White	12/19/03
36	Celestron 8" f/6 Skyhopper	Ion Coman	11/19/03
37	4" Fluorite Refractor	Jeff Crilly / Gary Hansen	11/3/03
39	17" Dobson	Ron Gross	11/3/03

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	Carl Ching	11/9/03
8	14" Dobson	Craig Colvin	11/17/03
9	C-11 Compustar	Paul Barton	Indefinite
14	8" f/8.5 Dob	E. Clay Buchanan	11/23/03
15	8" Dobson	Mike Koop	Repair
21	10" Dobson	Michael Dajewski	Repair
23	6" Newt/P Mount	Wei Cheng	11/9/03
27	13" Dobson	Steve Houlihan	1/5/04
32	6" f/7 Dobson	Lia Klofas	12/6/03
35	Meade 8" Equatorial	Patrick Lewis	11/9/03

Waiting list:

1	4.5" Newt/P. Mount	Prashanth Krishnamurthy
13	Orion XT6 Dob	Michael Hewett
	8" Dob	Vinod Nagarajan
	6" Dob	Sandy Mohan
	Any telescope	Choi Vo, Luen Lin
		Mike Van Meter, Al Garcia

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