



SJAA EPHEMERIS

Auction XXII

Mike Koop

It's spring and time for the annual migration of astronomical paraphernalia from one garage to another! On Sunday, April 28, 2002, an astronomical auction and swap meet will be conducted at Hough Park in San Jose sponsored by the San Jose Astronomical Association. For a second year, we will have the auction first followed by a swap to allow people some additional haggling time for those items which were optimistically priced by the seller in the auction or to sell those odds and ends items which were better off being in a swap. It's an even year, so Kevin Medlock will be our auctioneer. Those who have observed Kevin's performance in previous auctions have learned to appreciate his merciless evaluation of classical astronomical items on the spot. Great entertainment for all!

Doors open at 12:00 p.m. (or only slightly before) to register material for the auction, and view the auction material. The club reserves the right to accept only appropriate material for the auction so that the auction will run smoothly. A \$1 donation is required to obtain an auction bidder/seller number. The auction will begin at 1 p.m., and will run as long as needed. Seller may specify a minimum bid, which if not met, will return the item back to the seller with no commission applied. After the auction, buyers and sellers settle up using one check to (or from) SJAA and claim their items. Seller pays 10% commission, with a cap of \$50 for any one item. We do not handle charge cards.

After the auction, material for the swap meet will be allowed into the hall, about 3 p.m. or perhaps earlier. Each buyer pays the seller. Sellers are to keep track of their sales, and pay a

10% commission, as for the auction. There are no table fees. All commissions from the auction and the swap are tax-deductible, as SJAA is a 501(c)(3) educational organization.

Do you have a large item to sell such as a telescope? Please email Bill Arnett at auction@sjaa.net with a description and a photo of the item or a

link to your own website for some pre-auction publicity. We suggest pre-registering as much as possible to avoid a crush at the registration table.

Directions: From Hwy. 17, take the Camden Avenue exit. Go east 0.4 miles, and turn right at the light, onto

Continued on next page

SJAA Activities Calendar

Jim Van Nuland

April

- 4 ATM Class V — Hough Park, 8 p.m.
- 5 Astronomy Class IV — Hough Park, 7:30 p.m.
- 5 Hough Park star party. Sunset 6:34 p.m., 35% moon rises 3:04 a.m.
- 6 Deep-Sky weekend. Sunset 6:33 p.m., 26% moon rises 3:38 a.m.
- 7 Daylight Savings Time starts. 1 a.m. becomes 2 a.m.
- 13 Deep-Sky weekend. Sunset 7:39 p.m., 2% moon sets 8:43 p.m.
- 15 TAX day
- 19 Astronomy Day; Hough Park star party Sunset 7:46 p.m., 46% moon sets 2:37 a.m.
- 20 ATM Class VI — Hough Park, 7:30 p.m.
- 28 **SUNDAY:** General Meeting: Auction XXII

May

- 2 ATM Class VII — Hough Park, 8 p.m.
- 3 Astronomy Class V — Hough Park, 7:30 p.m.

May (Continued)

- 3 Hough Park star party. Sunset 7:59 p.m., 51% moon rises 2:40 a.m.
- 4 Deep-Sky weekend. Sunset 7:58 p.m., 42% moon rises 3:12 a.m.
- 9 ATM Class VIII — Hough Park, 8:00 p.m.
- 11 Deep-Sky weekend. Sunset 8:04 p.m. No visible moon tonight.
- 17 Hough Park star party. Sunset 8:11 p.m., 32% moon sets 1:22 a.m.
- 18 General Meeting: Tim Castellano, Planet Transit Search Project
- 18 AANC Conference, College of San Mateo, 9:00 a.m. - 5:00 p.m., followed by spaghetti feed and star party
- 24 RTMC to May 27. Full Moon on Sunday
- 30 ATM Class IX. Hough Park, 8:00 p.m.
- 31 Astronomy Class VI — Hough Park, 7:30 p.m.
- 31 Hough Park star party. Sunset 8:22 p.m., 68% moon rises 1:13 a.m.

24 Hour News and Information Hotline: (408) 559-1221

www.sjaa.net

Auction XXII

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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 about 0.2 miles, and turn right at the first traffic light, onto White Oaks Road. At the first stop sign (another 0.2), turn left onto Twilight Drive. You will now be passing the park. Turn right at the first driveway, into the parking lot.

For more about SJAA, questions on the auction, or to view preregistered auction items, visit our web site at <http://www.sjaa.net> or email auction@sjaa.net.

Silicon Valley Astronomy

Lecture Series

Andrew Fraknoi

Wednesday, April 10, 2002, 7 p.m.

Dr. Alex Filippenko (University of California, Berkeley) will speak on "Why I Believe in the Big Bang: Evidence about the Origin of the Universe" in the Smithwick Theater, Foothill College, El Monte Road and Freeway 280, in Los Altos Hills, California

Lectures are free, non-technical, and open to the public.

Call the series hotline at 650-949-7888 for more information.

Co-sponsored by: NASA Ames Research Center, Foothill College Astronomy Program, SETI Institute, and Astronomical Society of the Pacific.

Dr. Filippenko is part of a team of astronomers measuring the long-term fate of the universe (using exploding stars as guideposts). He will discuss the evidence in favor of a "Big Bang" origin for the cosmos, and explain how recent results are deepening our understanding of the beginning and end of the universe.

Crisium at Lunar Sunset

Jane Houston Jones

Sunrise on Mare Crisium occurs when the waxing moon is new and the morning light washes over its features. But sunset is happy hour on Crisium. The waning moon phase, high overhead in the late evening and early morning hours, is when Mare Crisium takes on a life of its own. It rivals some of the other "Oh Gosh" lunar features.

Mare Crisium transited well after midnight on the morning of March 1, 2002. Mojo and I wanted to spend a while observing lunar features including the amazing Crisium tonight, while the moon was high overhead. We set up our Astro-Physics 105mm f/6 Traveler on the back deck at dusk and settled in for a long nights journey through the solar system. A few feet away from the Traveler sat a telescope of a different color. It was my clunky, red 10 inch f/7.3 homemade reflector, with a six foot cardboard tube and a hunk of drainpipe which serves as a focuser. There aren't many more different telescopes than these two.

While waiting for the moon to transit (and thus clear the trees and roof top) we observed Jupiter, the red spot, then a large red barge in the NEB in both telescopes. The colors were much more vivid in the larger aperture telescope. The red barge was really a bright red through the 10 inch. We looked at Saturn, too, but it is getting low, and the views were not anything to write home about tonight. Seeing conditions were soft, but heck, we have a new Zeiss binoviewer and matching sets of Zeiss Abbe Orthos and we were happy to have some decent weather for a change to try them out.

The set of six ZAOs range from 4mm to 34mm, offering a range of magnification from a low of 17x to a high of 152x in the Traveler and 54x to 463x in the reflector, without barlow. We tried many of them in the Traveler, and settled for a pair of 6's, yielding a satisfactory magnification of 101 times. I used the 10mm for 185x in the reflector. They are truly amazing eyepieces.

There were so many fascinating lunar features to view, and at 2:00 a.m. we started observing the moon in earnest. Mojo really enjoyed the bright twin rays of Messier A, and the Tycho, Copernicus and Kepler splats. Then we both concentrated on the shores of Lake Crisium. The wrinkle ridges of Dorsa Tetyaev and Dorsa Harker on the eastern shore were sinewy and prominent, even though the sunset terminator was lapping at the shores like a receding low tide on the beaches of earth's own ocean.

On the north-western side of Mare Crisium we noted the wrinkle ridges Dorsum Oppel. These ridges inside Mare Crisium really do appear to resemble a continental shelf or ledge surrounding the sunken sea. The few craters on the floor of Mare Crisium were brilliant in the unfamiliar light. The craters which nestle up near the sea wall, such as the partially sunken or flooded Yerkes and Lick (kciL in the refractor) caught our attention, and I know I'll want to return here and view these features again with a sketchpad handy.

It was a lot of fun to observe this familiar lunar feature in a totally unfamiliar light.

Annual SJAA Yosemite Trip

Jim Van Nuland

The annual SJAA Yosemite star party will be held on July 5 and 6, at Glacier Point. 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.

This year we will share the space with the Central Valley Astronomers, from Fresno.

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

Clear Skies!

Considering Copernicus

Dave North

Copernicus, Copernicus,
Copernicus. All Dave talks about is
Copernicus.

Big honking crater in the middle of
the Moon. So what?

So look for yourself.

No better time. In April, the Moon
will be highest in the sky near First
Quarter (this year, the 19th).
Copernicus appears just after, in this
case the 21st.

Gumby has to look up to see the
Moon, and he'll have a pretty good
chance since the weather is getting
better.

And for convenience freaks, the
Moon will be darn near zenith (best
time to view) right at sunset. With
darkness squandering time now in
effect, you should be able to squeek
through the rat race, stuff down some
food pellets and get out into the back
yard just about in time — then see the
whole show before Sixty Minutes starts
(is that still on?)

Some months, you only get half
of Copernicus one night, then you have
to wait until the next night to see the
rest (usually such things happen on an
every-other-month basis, because the
Moon circles us — from our point of
view — about every 29-1/2 days. Do the
math).

But no April Fools this month: the
whole thing will be nicely placed near
the terminator when you start observ-
ing.

If you don't have a map, don't
worry: you'll have no problem finding it.
Look for the great big showy crater just
a hair above center top to bottom.

Yeah, that's it all right.

Next you'll want to take up the
magnification about as far as the sky
will bear. If we're lucky, that will be
quite a bit. Sometimes we get incred-
ible seeing in April, and there is that
elevation (less air) thing going for us
too.

But if it doesn't turn out that way,

don't despair. Even a mere 125x is
enough to give a satisfying (if not overly
detailed) view of what we're hunting.

What, by the way, are we hunt-
ing? Everything.

If there's something interesting on
the Moon, a good example of it can be
found in the area of Copernicus.

Reasonably, let's start with ...
Copernicus! It's a hair shy of 60 miles
across (93km), which (if my map
reading is at all good) means you could
comfortably fit the San Francisco Bay
Area into it (say, San Jose to Vallejo or
so).

To get some idea of what you'll be
looking at, I seriously suggest perusing
[http://www.lpi.usra.edu/expmoon/
Apollo17/A17_CopernicusFS.gif](http://www.lpi.usra.edu/expmoon/Apollo17/A17_CopernicusFS.gif) and

Gumby has to look up to see the Moon, and he'll have a pretty good chance since the weather is getting better.

fooling around at [http://
www.lpi.usra.edu/expmoon/orbiter/
orbiter-craters.html](http://www.lpi.usra.edu/expmoon/orbiter/orbiter-craters.html) for a few minutes.
Photo of the Century! May well be.

Once you get to the eyepiece, I
think you'll be surprised how much of
this you can see yourself, and how
much better the contrast will look.
You'll never get the same level of detail
Lunar Orbiter did, but you can get a
prettier view.

For fun, compare your memory of
those digital images to what you see.
Then go back and look again. I think
you'll be surprised.

But the crater itself is just the
beginning.

Next, travel about one crater
diameter antiterminatorward and look
for a sprinkling of little dots. They
should be quite distinct.

Those are a cluster of secondary

impacts, the landing zone of junk
thrown out of the crater when the big
bang happened. This is probably the
finest secondary field on the Moon.

Next, look north of the crater
about one diameter (a bit less) and just
before you get to Montes Carpatus (the
Carpathians) you should see a little
dark line pointing to a flattish crater in
the mountains.

The crater is Gay Lussac, and the
line is a rille (rima) named after the
crater (which is in turn named after a
French physical chemist of some
renown).

Good mountains, no?

Then if you wander south nearly
two Copernicus diameters and start
heading toward the terminator, you'll
see a very distinct crater about half the
diameter of our subject (this smaller
crater is named Reinhold, after a
German astronomer) and continue to
the terminator, you might catch sight of
a little dome.

If my terminator numbers are
right, the astounding dome field sur-
rounding Hortensius is probably just
over the line into the dark — bleeding
into view around 10pm and pretty much
good by 11. However, the Moon will be
sinking by then, and the seeing likely
feeble.

But don't despair: I usually get
these numbers wrong and maybe
they'll show in time. (Domes are
basically shield volcanos, like Maunas
Loa or Kea that principally form Ha-
waii).

So, what did we have, mountains,
detailed craters, secondaries, rilles,
domes ... oh I forgot rays! Copernicus
has a very distinct and crowded ray
system, but that won't really start to
show for another few days.

Darn. If you really want to see it
all, you'll have to look tomorrow night,
and a few nights more.

And that's just for one crater.

Old Smokey is back on Patrol

Dan Wright

"Old Smokey" is a worthy old orange tube Celestron 8" SCT that's been in the SJAA loaner program for years. It received its nickname, so the story goes, one fine evening when its anti-dew heating system caught fire (or at least got a little too hot). Vestiges of that heating system can still be seen, like archeological artifacts, clinging inside the OTA.

I took possession of it on loan from SJAA some weeks ago. It was in bad shape.

It had apparently been left out in the rain; water was sloshing around inside the OTA. I set it up indoors and left the back cap off for a week trying to dry it, but eventually had to finish the job by directing a blow drier on "low" into the back for an hour.

Both the corrector plate and primary mirror were filthy with dust and water spots, and the scope apparently wouldn't track. I posted to TAC asking the help of an expert, with the idea I'd overhaul Old Smokey to compensate SJAA for having been nice enough to loan it. More than one friendly TAC person responded, and on the advice of Mike Koop (leader of SJAA), I took Mr. Phil Chambers up on his offer of help.

One Saturday I was guest in P. T. Chamber's magic workshop as he expertly dismantled Old Smokey. First, using an electric multi-meter, we determined there was nothing wrong with the power supply. Those old RA tracking motors run on AC, so the power supply inverts 12v DC into AC. Also, with a twist of a knob, this power supply can change the base 60hz frequency smoothly up and down across a wide range to control the scope's tracking speed. I was impressed to see this 20-something year old circuit board faithfully modifying alternating current like that.

The reason I originally thought the scope wasn't tracking is I hadn't been locking down the RA, or during times I did lock it down, a period of gear backlash made me assume nothing was happening. Later I learned to take the slack out of the gears with a left-

wise push before centering the object and locking. Using this trick, the scope tracks "like a champ."

Phil removed the corrector plate and did his best to clean its hard water stains using the recommended mostly-alcohol/one-drop-of-dishwashing-liquid solution with distilled water for a chaser. But he didn't make satisfactory progress until he broke out his secret bottle — methanol. Using that and Q-tips, the hard water stains were nearly vanquished.

Next he started to pull out the primary mirror. At this point I learned a secret of the master engineer or mechanic — the importance of the proper grimace during crucial tasks. My accustomed grimace is a slight scowl with perhaps a tongue sticking out, but Phil demonstrated that by baring one's teeth as in a growl, and squinting one's eyes and knitting one's brows tightly, the most stubborn C-ring can be coaxed loose and the most delicate primary mirror can be safely extracted.

He commented that it was dirtiest primary he'd ever seen. We took some digital pictures of it, and then cleaned it with methanol too.

He also pulled and cleaned the secondary mirror. He found the serial numbers on all three components showing how they'd originally been aligned at the factory, and it turned out the secondary needed to be rotated 120 degrees to match the original factory alignment.

In feats worthy of the best-provisioned shopkeeper, he produced odd and valuable implements such as: grease for the mirror axis (having just the right viscosity and guaranteed not to out-gas), flat black spray paint (for covering shiny bolt-heads inside the OTA), and three screws of precisely the right size and shape to replace the rusted old collimation screws.

Using a laser bounced off a spherical Christmas ornament at the end of the driveway, we collimated Old Smokey, and pronounced the scope good to go.

On a following weekend, we met

up at Montebello. That was the night Paul Sterngold forgot his laptop and was limited to visual observing. He didn't even cuss or swear about it either. Paul, Phil, and I had fun watching a transit of Io under skies that stood up to high magnification. The orange tube C8 was tracking and delivering remarkable images. Phil put the finishing touches on its collimation.

Celestron optics are legendary. Old Smokey is a great scope, still worth its salt even 20 years later. On the SJAA web page (in the scope loaner program) Old Smokey is shown as number 6. It is not shown as currently available, and I think the page even shows Pat Whalen as currently having it — however, it's in my garage, and I'm done with it, so somebody else ought to borrow it!

I'll happily store it for SJAA in the mean time. It comes with a Rigel quick finder (with a fresh battery), and a nice wide-field eyepiece as well as a high-power eyepiece and Barlow.

I'm done with it because I drove up to say hello to Sam at Scope City and incidentally bought a birthday present for myself — a shiny new 10" LX200 GPS (Yee-Haww!!). But that's another story.

Here's hoping to meet some fine dark night and recognize each other by voice or by vehicle!

Loaner Notes

Mike Koop

The SJAA would like to thank Peggy Bernard for the generous donation of her 10" Orion Deep Space Explorer. For those who didn't know, Peggy is member of the SJAA and one of our professional amateur astronomers. After an injury she received while working at Lick Observatory and the subsequent knee surgery she was unable to handle the "Big Dob". She is now recovering from her surgery and we all hope to see her soon at SJAA events.

Planets in April

Akkana Peck

Jupiter continues an excellent apparition, visible from dusk to midnight and showing a wide variety of detail in its cloud bands. The famous white oval designated "BA" in the south equatorial band (SEB) has overtaken the great red spot (GRS), without much of the interaction between the two features that some observers thought would happen. The split in the SEB remains prominent, and the long white diagonal rift in the NEB is growing, if anything, more prominent as time goes on. Festoons this year are mostly faint and subtle, the equatorial band is sometimes visible, and there's plenty of turbulence to see in the wake of the GRS.

Europa makes a nice transit on the 4th — it will already be in progress as dark falls, and its shadow should start to appear around dusk. By 9pm, Europa (though not its shadow) has exited the disk of Jupiter, and makes a close pass with Io, moving the other way. This is a good chance to compare the two moons when they are side by side. Io makes a similar transit on the 21st around 9-11 p.m., with the GRS rotating in to make an appearance just

as Io is exiting the disk and passing close to Ganymede.

Saturn, too, is very prominent and a wonderful sight for observers. The rings remain wide open, at an inclination of 25 degrees to us (a degree less than last month, but who's counting?) and it's a perfect time to look for details in the ring system, such as gaps in the rings, and the ever elusive "spokes" which satellite images show but few earthbound observers have seen visually.

Both Saturn and Jupiter travel through star-laden fields, and often have stars visible nearby which are similar in

reaches superior conjunction on April 7, but becomes visible in the latter half of the month, the best evening apparition it will have this year. It joins its brighter sibling Venus, which lies below Mercury in the evening twilight sky, and dimmer but higher Mars, which gets quite close to Saturn by month's end. It should be fun to compare the color of the red planet to the nearby reddish star Aldebaran. Not much detail will be visible on any of these planets (though Mercury should be around half phase, moving into crescent phase at month's end) but they should make a very nice naked-eye or binocular grouping.

The outer planets — Uranus, Neptune, and Pluto — are very late evening or morning objects. Pluto, in Ophiuchus, rises a bit before midnight, while Uranus and Neptune, in Capricornus, rise a few hours later.

... It's a perfect time to look for details in the ring system, such as gaps in the rings, and the ever elusive "spokes"

magnitude to the planet's moons. Can you tell them apart? I often can — stars, being point sources, "twinkle" (vary in brightness or position as our turbulent atmosphere changes) much more than planetary moons do, and the color of the moons seems different, a yellowed hue that I never see in stars. It's a fun challenge, especially with Saturn — make a sketch of the objects you see near the planet, and try to guess which ones are moons and which aren't, then check your work later to see how well you did. With Jupiter, extra credit if you can tell the moons apart without looking them up first. Ganymede is easy — most good telescopes will show a disk which is clearly bigger than that of the other three Galilean moons — but the others are more difficult. See if you can tell by color differences, or by the distance from the planet.

The other three naked-eye planets are also visible in the evening sky, and by the end of the month they're all grouped fairly closely together. Mercury



Shallow sky aficionado Akkana Peck conducts a session of the observational astronomy class at Hough Park. For future class times, see the SJAA Activities Calendar on the front page.

AANC Conference May 18, 2002

Jane Houston Jones

The AANC Conference will be held at and co-sponsored by the College of San Mateo this year. Registration, agenda, box lunch selection forms and directions can be found on the AANC website, www.aanc-astronomy.org.

Talks will range from the Kepler Mission, to study terrestrial planets orbiting stars, to a talk on the black hole in our own galaxy, to the DART membrane telescope to yet another presentation featuring a representative from Coronado Filters.

At lunch view the sun through various solar filters, while enjoying your selection of box lunches.

After the day of talks, stick around for a social hour and planetarium shows (also at lunchtime) followed by an old fashioned spaghetti feed brought to you by the San Mateo County Astronomical Society, followed by a star party.

The Red, White, and Blue Star

Bob Brauer

As Orion slips into the western evening sky, you can find a rather patriotic sight: Iota Orionis. This multiple star system displays an impressive amount of color with red, white, and blue components.

Start with Orion's belt and star-hop your way south down the Hunter's sword. (Make sure you pause to view the great Orion Nebula), then continue south to the brightest "star" at the south end of the sword, bright third magnitude (2.77) Na'ir al Saif, Arabic for "the Bright One in the Sword."

This star is a brilliant, white, O class star estimated to be roughly 15 solar masses. A close companion, 11

arcseconds distant, is a bluish 7th magnitude B class star. The third component visible in small telescopes is 50 arcseconds away from Iota Orionis, an 11th magnitude class A or F dwarf. A very close companion has been detected spectroscopically with an orbital period of 29 days and is the subject of current research projects on strong solar winds which collide producing powerful X-rays.

The three components we see visually are described in Burnham's as "white, pale blue, and grape red." I need a 6-inch or larger telescope to see color in the dim red dwarf, but it is clearly seen with an 8-inch.



In keeping with SJAA Ephemeris tradition of being prepared regardless of the physical location of the editors, the April edition is seen being prepared in Fort Davis, TX, 16 miles from McDonald Observatory. At left is the occasion for the road trip, a new telescope, getting first light at a Spring Break Star Party hosted by McDonald Observatory.



Upcoming Speakers:

June 22, Robert Naeye, The Pluto

Debate

July 27, Ken Lum, Bernhard V.
Schmidt talk

Upcoming School Star Party:

April 23, Bachrodt School, mid-San
Jose

Celestial Calendar

April 2002

Richard Stanton

Lunar Phases:	Date	Rise	Trans	Set
LQ	07:28 PST	04	02:30	06:03 09:36
NM	12:21 PDT	12	06:44	13:05 19:41
FQ	05:48 PDT	20	10:59	19:43 03:34
FM	19:59 PDT	26	19:42	00:13 05:57

Nearer Planets:	R. A.	Dec.
Mercury, 1.22 A.U., Mag. -2.2		
07 06:49 13:13 19:39	01:40.0	+10:13
17 06:56 13:50 20:46	02:21.2	+14:56
27 07:03 14:20 21:38	03:31.6	+21:28

Venus, 1.53 A.U., Mag. -4.1		
07 07:38 14:27 21:17	02:42.7	+15:41
17 07:33 14:36 21:40	03:08.6	+17:47
27 07:31 14:47 22:03	03:58.5	+21:07

Mars, 2.26 A. U., Mag. -1.3		
07 08:28 15:38 22:48	03:45.4	+20:33
17 08:11 15:27 22:43	04:00.7	+21:21
27 07:56 15:16 22:37	04:29.4	+22:37

Jupiter, 5.43 A. U., Mag. -2.1		
07 11:14 18:37 02:03	06:35.8	+23:22
17 10:41 18:03 01:29	06:38.8	+23:20
27 10:08 17:30 00:55	06:45.0	+23:15

Saturn, 9.73 A. U., Mag. -0.7		
07 09:30 16:42 23:54	04:40.3	+20:45
17 08:54 16:07 23:20	04:42.6	+20:50
27 08:19 15:32 22:46	04:47.3	+21:00

Sol Star Type G2V Intelligent Life in System ?		
Hours of Darkness		
07:53 07 06:43 13:10 19:37 01:20.7	+08:30	
07:36 17 06:28 13:07 19:47 01:40.5	+10:26	
07:06 27 06:15 13:05 19:56 02:17.9	+13:47	

Astronomical Twilight:	Begin	End
JD 2,452,371	07	05:06 21:12
381	17	04:56 21:20
391	27	04:39 21:22

Sidereal Time:

Transit Right Ascension at local midnight		
07 00:00 = 11:53		
17 00:00 = 12:33		
27 00:00 = 13:12		

Darkest Saturday Night: 13 April 2002		
Sunset	19:43	
Twilight	21:15	
Moon Set	20:19	
Dawn Begin	05:02	
Hours Dark	07:48	

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Telescope Loaner Program
 Mike Koop (408) 446-0310

Web Page
 Bill Arnett bill@nineplanets.org

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
7	12.5" Dobson	Bruce Horton
8	14" Dobson	Jack D. Kellythorne
10	Star Spectroscope	Steven Nelson
14	8" f/8.5 Dob	Dennis Hong
15	8" Dobson	Daron Darr
19	6" Newt/P Mount	Iikka Kallio
24	60mm Refractor	Al Kestler
27	13" Dobson	Gene Schmidt
32	6" f/7 Dobson	Sandy Mohan

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
1	4.5" Newt/ P Mount	Annette Reyes	4/18/02
3	4" Quantum S/C	Tobias Giles	4/4/02
6	8" Celestron S/C	Dan Wright	4/4/02
12	Orion XT8 Dob	Barry Sorenson	4/18/02
13	Orion XT6 Dob	Peter Yoon	4/4/02
29	C8, Astrophotography	Kevin Roberts	4/18/02
33	10" Deep Space Explorer	Sandy Mohan	4/18/02

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	Paul Barton	Indefinite
11	Orion XT6 Dob	Wai Tuck-Low	1/27/02
16	Solar Scope	James Turley	4/13/02
21	10" Dobson	Ralph Seguin	Repair
23	6" Newt/P Mount	Wensheng Hua	4/27/02
26	11" Dobson	Tajinder Singh	4/12/02
28	13" Dobson	Michael Dajewski	3/31/02
31	8" f/8 Dobson	Jan Lynch	4/27/02

Waiting List: 4" Quantum S/C - Eric Anderson; 14" Dobson - Doug Hendrix; Orion XT8 - Tajinder Singh, Mike Macedo, Andrew Pierce

Publication Statement

SJAA Ephemeris, newsletter of the San Jose Astronomical Association, is published monthly, 12 times a year, January through December.

San Jose Astronomical Association,
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 San Jose, CA 95159-8243

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