



# SJAA EPHEMERIS

## Be Prepared for Summer Observing

Morris Jones

Jane and I spent our fall and winter doing mostly casual sidewalk astronomy and observing the giant planets. When the spring temperatures started to warm and the clouds parted, we were itching to spend some time alone under a dark sky hunting down the faint fuzzies we love to see.

Going out for serious observing takes a little practice. Many of us have had (or will have!) the experience of driving an hour or more to a favorite dark sky location, only to discover that some essential piece of equipment was left at home. Where is the eyepiece case? Did I really leave the drive battery plugged into the charger? How could I forget to bring pencils? Where is my favorite observing list?

Jane and I were so excited to find a good observing site near our home in the North Bay that we made four consecutive weeknight observing excursions in April. It was heavenly! But after two evenings of leaving one thing or another behind, I decided it was time to deal with the issue.

Astronomical equipment inventories grow with time spent in the hobby. Very soon the list grows beyond anyone's ability to recall on demand every piece of equipment or supplies.

Can you name the fifty states from memory? Most people can name about forty-seven on demand. It doesn't take very long before an observing session equipment list grows that large or larger. It's perfectly normal to forget one or two items on occasion!

One way to assist your preparation memory is to compartmentalize the objects being remembered. For instance, it's easier to recall the contents of one equipment case at a time, or one designated container for supplies, than to remember the con-

tents of all the containers. The typical maximum for easily remembered lists seems to be about five items. If you can remember five containers, that each have five sections, that each hold five objects, you stand an excellent chance of remembering everything. (It's much easier to remember an area code, prefix, and number, than ten random digits!)

But the best preparation tool for complex activities (like amateur astronomy away from home) is the checklist. Checklists are a time-

*Continued on next page*



*Jane and Mojo's van loaded for an evening of deep sky observing. Note the storage containers to help use vertical space. Photo by the author.*

## SJAA Activities Calendar

Jim Van Nuland

### June

- 1 Hoge Park star party, sunset 8:23 p.m., 85% moon sets 3:54 a.m.
- 2 General Meeting, Speaker Dr. Larry Lasher from the Pioneer Project. See page 6.
- 15 Astronomy Class VII, 7:30 p.m., hall, Hoge Park. Topic: Observing Stars
- 15 Hoge Park star party, sunset 8:30 p.m., 31% moon rises 2:44 a.m.
- 16 Fremont Peak star party, sunset 8:27 p.m., 22% moon rises 3:12 a.m.
- 23 Coe and Peak star party, sunset 8:31 p.m., 10% moon sets 10:56 p.m.
- 29 Hoge Park star party, sunset 8:32 p.m., 72% moon sets 2:29 a.m.

### July

- 7 General Meeting, Greg Laughlin, NASA, "The Future of the Solar System."
- 13 Astronomy Class VIII, 7:30 p.m., meeting hall, Hoge Park. Topic: Deep Sky Observing
- 13 Hoge Park star party. Sunset 8:29 p.m., 46% moon rises 1:13 a.m.
- 14 Fremont Peak star party. Sunset 8:27 p.m., 36% moon rises 1:41 a.m.
- 21 Coe and Peak star party. Sunset 8:31 p.m., 3% moon sets 9:33 p.m.
- 27 Hoge Park star party. Sunset 8:19 p.m., 58% moon sets 1:04 a.m.

**Yosemite Star Party, August 10-11  
Star-B-Q, August 18, Fremont Peak**

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

[www.sjaa.net](http://www.sjaa.net)

## **Observing Checklist**

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honored tool for all complex endeavours, from camping or hiking to flying to the moon.

Checklists have to be built and tested in an iterative process. For the same reason it's hard to remember the fifty states, it's difficult to write a perfect checklist from scratch. Once you've made a start, keep your checklist handy and be ready to add to it as you test it.

I would love to be able to publish a generic observing session checklist, but there is a huge variety in astronomical equipment and comfort needs. Everyone's list will be different. Nevertheless, I think it would be useful to read other observer's checklists, just to be able to say, "Hey, that's a good idea!"

Here are some excerpts from our checklist. The full list can be found here: <http://www.whiteoaks.com/mojo/obslst.html>

### **Telescopes**

#### **17.5" Litebox**

- Mirror (incl. digital thermometer)
- Body (incl. shroud)
- Truss poles
- Equipment box:
  - Telrad
  - Springs
  - Nut driver
  - Finder scope
  - Knob box
    - (incl. knobs, small and large collimation wrenches)

#### **A-P Traveler**

- OTA case:
  - OTA with mount adapter
  - Telrad
  - 2" Diagonal
  - Focus extender
  - Allen wrenches
- GP mount case:
  - GP mount
    - (incl. tripod, head, alignment scope covers)
  - Hand controller
    - (incl. 12V plug)
  - Polar scope light
  - Anti-vibration pads
  - 12V Battery, charged
  - Counterweight assembly

### **Common accessories**

#### **Favorite eyepieces**

- 22 Panoptic
- 16 Nagler
- [etc.]

#### **Collimation tools:**

- Laser collimator
- Cheshire eyepiece
- Red-filtered Mag-lite

#### **Filters:**

- UHC
- O-III

### **Documents**

#### *Jane's Box*

- Night Sky Observer's Guide
- Millenium Star Atlas
- Herald-Bobroff Atlas
- RASC Observer's Handbook
- Sketching supplies (incl. pad, pencils, sharpener, erasers, smudge tools)
- Clipboard
- Planet satellite finders, red spot schedule, Jupiter moon events
- Pencils
- Misc. project clippings

#### *Mojo's Box*

- Reading glasses
- Night Sky Observer's Guide
- Uranometria v. 1 & 2
- Edmund's Mag 6 Atlas
- RASC Observer's Handbook
- Steno pad observing log
- Dixon Sensematic pencils
- Satellite schedules
- Minor planet finders

### **Clothing**

#### *Jane*

- Warm hat

<b>Gloves</b>
Coat
Sweatshirt
Thermal pants
Thermal shirt
Warm boots
Scarf
<b>Mojo</b>
Thermal pants
Turtle neck warm shirt
Columbia jacket
Warm soft hat
Fingerless gloves
<b>Support Hardware</b>
2 Skylite flashlights
Yellow right-angle red light
Misc. LED flashlights
Batteries (minimum quantities):
AA cells (20)
C cells (6)
9V cells (3)
9x63 binoculars
7x50 binoculars
2 tables
Ladders for each telescope
Folding chair for chart table
Reclining chair for observing
Ground mats for telescopes
(e.g., carpet remnants)
Pocket knives
Adjustable observing chair
<b>Food &amp; Medicine</b>
Water
Coffee thermos
Non-spill coffee mugs
Rodney Strong Cabernet Sauvignon
Wine bottle opener
Wine cups
Nuts, crackers, cheese, peanut btr
Spoons, forks
Bug repellant
Sunscreen
Band-aids
Neosporin
Pepcid AC & Tums
Allegra or Claritin
Ibuprofen
Tylenol
Aspirin



Ready to go with the 17" and 14" Liteboxes packed side-by-side. Photo by the author.

## It's Time to Look at Mars!

Akkana Peck

Get out your best telescope and your shortest eyepiece — it's time to look at Mars!

This month's Mars opposition shows us the red planet in its closest approach since 1988. Opposition — the point at which Mars is opposite the sun in our skies — occurs on June 13th, but due to the planet's eccentric orbit, closest approach to us (42 million miles or .45 AU) will occur a week later, on the 21st, at which point its normally tiny disk will have grown to a size of 20.8". And although the few weeks before and after closest approach are the best time to see detail on the planet, it won't shrink much for a few months after opposition, so we'll be able to get fairly good looks from now until early August.

The catch is that Mars' orbit takes it very far south this year; here in San Jose, it will only rise to less than thirty degrees above the horizon. That's low enough that getting steady seeing will be a real problem for Northern California Mars observers. If you're planning a trip south, consider taking your telescope along. If you're not, try to find high ground; observing from a mountaintop can at least take you up out of the city smog and get you into slightly thinner air, which might help with steadiness.

What can you see on Mars? In a telescope as small as 80mm, you should be able to see at least one polar cap — probably the southern polar cap, since Mars will be very nearly at one of its equinoxes, and it's the southern hemisphere which is coming out of winter. And you can see dark and light features on the planet. Some of the most obvious features in any small telescope are Syrtis Major, a large dark triangular region, and nearby Hellas, a light-colored impact feature. These two should be well placed for evening observing in late May and early June and again in the first two weeks of July.

A bit farther east, the complex of Sinus Sabaeus and Sinus Meridiani (including the so-called "eye of Mars", an oblong feature with a dark spot in the middle which looks like a human eye) are visible when the seeing is good. Farther southeast are Mare Acidalium and Niliacus Lacus — prominent dark features with the mellifluous names so characteristic of Mars. Still farther east is the Tharsis plateau, home of the huge volcano Olympus Mons (also nearby is Valles Marineris, which dwarfs our own puny Grand Canyon), but details on Tharsis are hard to see; some observers have been able to see clouds above the Tharsis volcanos. Lowell probably saw Valles Marineris

transmission.

How do you figure out what you're looking at on Mars? Once you get oriented, if you observe it every few days, you'll recognize features as they move; but how do you get oriented the first time, or after you've gone a week or two without looking? The easiest way is to use a program which shows you an image of Mars at a particular time. If you don't already have a planetarium program that shows Mars, check my Mars Observing FAQ at <http://www.shallowsky.com> for links to where to download Mars software. (I'm working on a program of my own; stay tuned and maybe I'll get it ready in time.)

One more challenging target: the Martian moons. They're both relatively faint (10.9 for Phobos and 12.0 for Deimos), but what's worse, they're very close to their very bright parent planet. Phobos, the brighter moon, is actually more difficult to see, because it's so close to Mars (less than one Mars diameter at most) that it gets lost in the glare. To see them, get Mars out of the field (preferably with a narrow-field high power eyepiece which doesn't distort the image much at the edge of the field), or make an occulting bar which sits inside your eyepiece near the field stop and blocks the light from part of the image. Deimos has been glimpsed with apertures as small as 6", and Phobos with telescopes down to 8".

Other planets: Pluto is also at opposition this month, on the 4th (with closest approach to us a day earlier — Pluto, like Mars, has an eccentric orbit). It's in Ophiuchus, at magnitude 13.8 and a distance of 29.4 AU. Jupiter and Saturn, alas, are hidden behind the sun, and so is Mercury. Uranus and Neptune are in Capricornus, rising around midnight. Venus is in the morning sky, reaching greatest western elongation on the 8th.

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*In a telescope as small as 80mm, you should be able to see at least one polar cap.*

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himself (and thought it to be a canal built by a dying civilization), and a few other observers have been able to see it visually as well.

Mars' day is only 40 minutes longer than our own, so on two successive nights you will see close to the same features at the same time; over a week or two, the planet will rotate to give you a look at the features on the other side. And Mars' weather does change, like our own; if you watch the red planet regularly over the course of the opposition, you'll probably see times when detail is obscured (due to dust storms), areas that appear light when no light features should be there (clouds), and the shrinking of the south polar cap and, perhaps, the growing of the northern one. For some people, using colored filters can help bring out some of these details; other observers don't find filters very helpful, since they can introduce glare and cut light

## The Dark Of The Moon

Dave North

Odds are good if you're reading this you don't have a ticket to Africa for this month's total solar eclipse on the 21st.

If you do, you certainly won't need to read anything about it in this column. If you don't, it can't be that important since you won't be able to see it.

What are we to do, stuck here?

In this particular case, we get an interesting little game we can play instead, though it is not for the incautious or inexperienced.



Dave North conducts the lunar observing session of the observational astronomy class. Photo by Akkana Peck.

By a coincidence, this eclipse is happening the day before the Moon's greatest northern declination of the month.

Whazzat?

It's the day on which the Moon will ride highest in the sky that month. In this case, the day after new Moon.

So who cares? Especially after reading all the great reports from the eclipse?

Perhaps those of us left behind. For one thing, the eclipse will be over, and it's time to get on with life.

For another, that means conditions are ideal to try to spot the Moon as soon as possible after it's new (as a very, very thin young crescent).

This opportunity only comes once a year, and there are actually Moonuts

who make a big deal out of how early this can be done.

Also, this is an important event for our Islamic members, since the first sighting of the new Moon determines the beginning of the month, especially important to trigger the start of Ramadan (if I understand the issue correctly). Though there appears to be some debate as to whether the first sighting anywhere is adequate to determine this time, or the calculated first sighting using mathematics, or

local sightings must be used. I am not expert enough to offer opinions on these matters).

It stands to reason the soonest you can see such an event is that time when the post-new Moon is highest in the sky.

On the other hand, this is not always true, since it may not be in the same plane as the sun (it

varies by roughly up to five degrees from the ecliptic). This additional "bonus distance" at the time of new Moon can be helpful.

So it is probably not the best time to set a record for an early sighting, but it is the only time you can try for an early Moon sighting when the Moon is tracking roughly the same plane as the Sun (just after a total eclipse!).

Considering that this is a far more rare event than a total eclipse, I guess we can consider ourselves lucky and proceed to see how we should go about it.

First, wait until the 22nd. It will do us no good to try earlier.

Second, this game is most easily played exactly at sunset — not one whit before! (Why? Because then it is

safe. Be content with this method for now).

Make sure you have a clear western horizon. Make sure your scope is set up and your finder is aligned. If at all possible, use a tracking mount with a real polar axis. (No offense to alt-az folks, but sometimes that polar axis comes in handy.)

Do NOT point your scope at the sun.

Watch the sun set. Always spectacular. If you have nothing better to do this fine Friday night, go up to Fremont Peak and watch from either the Coulter overflow lot or the Southwest lot, on the way up to the actual Peak. These are my two favorite places to watch the sun set into the Pacific,

***Conditions are ideal to try to spot the Moon as soon as possible after it's new.***

though there is also a lot to be said for some spots along Skyline as well.

Make sure you note the exact position where the sun sets.

The second it slips below the horizon, point your telescope there and start working your way east, using only the polar axis.

A widefield eyepiece is best, and a single polarizing filter can be invaluable for cutting the skyglow at this point.

If you're lucky, you nail the Moon on the day after new, and can see both an amazingly slender crescent and some spectacular earthshine.

If you're not lucky, you get a great sunset and can proceed to do some deepsky observing.

So what's to lose?

I used to know how to find out who currently holds the record for the earliest sighting after new, but I don't seem to have the link any more.

*Continued on next page*

## **The Dark Of The Moon**

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Earlier I spoke of the Islamic calendar. Issues Arabic are forever coming up in any study of astronomy (and especially the moon) simply because so much excellent astronomical work has been of Arabic/Islamic origin, both in ancient times and modern.

My last foray into this subject brought a note from Jamie Dillon on the subject of Omar Khayaam.

He wished to embellish my remarks with some further comments:

"Besides his considerable accomplishments as an astronomer and mathematician, Khayaam was a Sufi, a genuine mystic and a great poet. The crappy poet we get exposed to with the *Rubaiyat* is Fitzgerald, a Victorian hack and drunk who thought nothing of

mistranslating and sugarizing the work of a world class mystic poet.

"Robert Graves, a really fine poet, the guy who severally wrote *The White Goddess* and *I, Claudius*, sat down with a Sufi teacher a while back and turned out a literal translation of the *Rubaiyat* from Persian."

He went on to give an example of how the well-known translation was essentially wrong due to shoddy work and omission ... further making the point that this well-known name has not been served well in modern times and popular culture.

Thanks, Jamie! I'd love to get my hands on the revised translation, and I have been gratified by the many notes I've gotten commenting on how interesting it was to find out how deeply scientific and astronomic Omar's works really were.

experienced amateur.

For all other questions email Larry Snyder at starshow@dcn.davis.ca.us, visit [www.DavisStarShow.com](http://www.DavisStarShow.com), or phone (916) 782-7111, option 8. For information about lodging, you may phone our host hotel, the Hallmark Inn, at 1-800-753-0035.

Organizations wishing to reserve exhibit space at the Davis Star Show should contact Chuck Pullen at [cpullen@pacsafe.com](mailto:cpullen@pacsafe.com), (916) 687-7993. There is no vendor fee for non-profit groups, but space will be allocated after the commercial vendors on a first come, first served basis.

The Davis Star Show represents a collaboration by many different groups, including Explorit Science Center, the Sacramento Valley Astronomical Society, UC Davis Astronomy Club, Davis High School Astronomy Club, Sacramento Sidewalk Astronomers, the American Association of Variable Star Observers, the Astronomical Association of Northern California, the Astronomical Society of the Pacific, Stellarvue, and Nightwatch Observatory, with the cooperation of the Davis Parks and Community Services department. Our major sponsors are Sky and Telescope Magazine and Agilent Technologies.

## **The Davis Star Show**

Larry Snyder

Friday, August 24, 4 p.m. - 10 p.m.  
Saturday, August 25, 9 a.m. - midnight  
Veterans Memorial Center,  
203 E 14th Street,  
Davis, California

The Davis Star Show, a festival of astronomy and related sciences, is a public outreach celebration of our universe. We will have speakers talking about exciting new discoveries in astronomy, a trade show featuring instruments and accessories appealing to a wide range of amateurs, an exhibit hall with displays and activities for all ages, daytime viewing of sunspots, flares, and other solar activity, a planetarium for the kids, astronomy club booths and demonstrations, public teacher curriculum training classes, workshops, and a public star party at night. The festival will be free to all who wish to attend.

The event will fill the Veterans' Memorial Center in the Davis Community Park, with speakers in the main Theater and the adjoining Club Room, the trade show in the large Multi-purpose Room, mixed in with exhibits by clubs and participating organizations which will spill out into the courtyard,

and with the star party filling the area between the open soccer fields behind the complex.

Speakers we've been fortunate to confirm so far include Don Yeomans of JPL, Kelly Beatty, executive editor of Sky and Telescope Magazine, Alex Filippenko of UC Berkeley, Tony Hallas of Hallas Digital Services, Mary Urquhart of NASA Ames, Robert Naeye, editor ASP Mercury journal, and Derek Buzasi, USAF Academy.

We would be very grateful for the help of anyone who can bring a telescope to the star party the night of the 25th. Based on last year's showing, we can expect about 3000 people to come out hoping to get a glimpse of the moon, Mars, and a few of the brighter deep space objects. We'll need 80 telescopes or more on the field handled by people who love to hear the appreciative reactions of those new to the wonders of the night sky. If you would like to help us with the star party, please contact Lynda Hall at [lyndahall1@hotmail.com](mailto:lyndahall1@hotmail.com) or (916) 721-4495. As a way to thank you for your participation, we are planning a few activities at the show specifically for the

## **Santa Cruz Observing**

Chris Angelos

The Santa Cruz Astronomy Club is inviting SJAA members to attend the club's regularly scheduled observing nights at Bonny Doon Airfield. Sessions for June are scheduled on the 16th and 23rd.

Ordinarily, Bonny Doon Airfield is off limits to the general public because it is private property. However, the owner has graciously allowed us to use the location for observing one or two nights a month. Try to arrive about sunset. Find directions to Bonny Doon Airfield at the SCAC web site <http://astro.santa-cruz.ca.us/>.

Club news and schedules are updated on the club message center, 831-335-2423.



SJAA President Mike Koop (left) and Jeffrey Kirkbride from Evergreen College show off the architect's model of the new observatory to be built at the college. Watch your email for SJAA star party events to be held at Evergreen College. Photo by Jane Houston Jones.

## Directions to Houce Park

Houce (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.

Between the parking lot and tennis courts is a strip of grass where public star parties are held. The meeting hall is directly ahead (south) of the parking lot. There are restrooms on the other side of the the hall.

For directions to observing sites commonly used by SJAA members, visit the SJAA web site: <http://www.sjaa.net/directions.html>.

## Larry Lasher to Speak at June 2nd Meeting

Larry Lasher is the Pioneer Project Manager for NASA. In his talk "The History of Pioneer 10/11 and the Search for the Heliosphere" he will discuss the history of Pioneer 10/11 missions, the discoveries they made about the solar system, the search for the heliospheric boundaries, and the latest attempts to contact Pioneer 10.

June 2nd 8:00 p.m. at the Houce Park Meeting Hall.

## Upcoming Events

### Upcoming SJAA Meeting Topics

August: Elinor Gate of Lick Obs.  
September: Slide/Equipment night  
October: Jeff Moore, NASA,  
Jupiter's moons

### School Events

June 25, Evergreen Valley College

### Calstar 2001

September 13-15, Lake San Antonio

## Celestial Calendar

### June 2001

Richard Stanton

Lunar Phases:	Date	Rise	Trans	Set
FM 18:39 PDT	05	20:57	00:15	04:39
LQ 19:28 PDT	13	01:46	06:46	11:56
NM 04:58 PDT	21	04:38	13:12	21:54
FQ 19:19 PDT	27	12:14	18:59	01:08

### Nearer Planets: R. A. Dec.

Mercury, 0.55 A.U., Mag. -0.7			
07 06:43 14:00 21:17	05:58.3	+22:20	
17 05:54 13:01 20:07	05:38.9	+19:38	
27 05:03 12:07 19:11	05:23.3	+18:36	

Venus, 0.77 A.U., Mag. -4.9			
07 03:29 10:03 16:37	01:58.1	+09:28	
17 03:18 10:02 16:46	02:36.3	+12:25	
27 03:09 10:03 16:58	03:17.2	+15:18	

Mars, 0.45 A.U., Mag. -2.4			
07 21:03 01:41 06:14	17:36.6	-26:13	
17 20:11 00:48 05:19	17:22.4	-26:37	
27 19:18 23:49 04:25	17:08.4	-26:49	

Jupiter, 6.11 A.U., Mag. -1.9			
07 06:07 13:28 20:48	05:24.5	+22:52	
17 05:37 12:58 20:20	05:34.5	+23:00	
27 05:07 12:29 19:51	05:44.5	+23:06	

Saturn, 10.0 A.U., Mag. +0.9			
07 05:13 12:21 19:29	04:17.8	+19:39	
17 04:38 11:47 18:56	04:23.1	+19:52	
27 04:03 11:13 18:22	04:28.2	+20:04	

SOL Star Type G2V Intelligent Life in System ?			
Hours of Darkness			
05:28 07 05:44 13:07 20:30 05:01.7	+22:46		
05:21 17 05:43 13:09 20:34 05:43.2	+23:23		
05:22 27 05:46 13:11 20:36 06:24.8	+23:19		

Astronomical Twilight:	Begin	End	
JD 2,452,067	07	03:50	22:23
	077	03:51	22:28
	087	03:52	22:30

Sidereal Time:			
Transit Right Ascension at Local Midnight			
07 00:00 = 15:55			
17 00:00 = 16:34			
27 00:00 = 17:14			

Darkest Saturday Night: 23 June 2001			
Sunset	20:35		
Twilight End	22:30		
Moon Set	23:01		
Dawn Begin	03:50		
Hours Dark	05:20		

## **Officers and Board of Directors**

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## **Publication Statement**

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## **SJAA Loaner Scope Status**

All scopes are available to any SJAA member; contact Mike Koop by email ([loaner@sjaa.net](mailto: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	Tim Roberts
10	Star Spectroscope	Steven Nelson
15	8" Dobson	Daron Darr
16	Solar Scope	Jim Van Nuland
24	60mm Refractor	Al Kestler
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
3	4" Quantum S/C	Hsin I. Huang	7/1/01
8	14" Dobson	Jack D. Kellythorne	7/13/01
11	Orion XT6 Dob	Raghu Srinivasan	6/16/01
12	Orion XT8 Dob	Steve Sergeant	5/13/01
26	11" Dobson	Robert Morgan	6/2/01
27	13" Dobson	Gene Schmidt	6/30/01
31	8" f/8 Dobson	John Templeton	5/16/01

### **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	Al Kestler	7/19/01
7	12.5" Dobson	Bruce Horton	8/10/01
9	C-11 Compustar	Paul Barton	Indefinite
13	Orion XT6 Dob	Li Chung Ting	6/15/01
19	6" Newt/P Mount	Iikka Kallio	6/15/01
21	10" Dobson	Ralph Seguin	Repair
23	6" Newt/P Mount	Dennis Hong	7/28/01
28	13" Dobson	Michael Dajewski	6/2/01
29	C8, Astrophotography	Doug Graham	6/18/01

### **Waiting List**

8" Sky Quest: Gordon McClellan, Dennis Hong, Joe Fragola, Robert Morgan

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