SJAA EPHEMERIS

SJAA activities calendar

Jim Van Nuland

April

5 ATM class. Houge Park, 7:30 p.m.(new date)

6 Darkness Squandering Time begins at 2:00 a.m. becomes 3:00 a.m.

11 Houge Park star party. Sunset 7:39 p.m., 72% Moon sets 4:33 a.m.

13 Auction XXIII (Sunday) noon

13 **Special Meeting**, Houge Park. 7:00 p.m. Fulvio Melia, *The black hole at the middle of the galaxy*

24 ATM class. Houge Park, 7:30 p.m.

25 Astronomy class. Houge Park, 7:30 p.m. Akkana Peck discusses planetary observing

11 Houge Park star party. Sunset 7:39 p.m., 72% Moon sets 4:33 a.m.

26 Deep sky weekend. Sunset 7:52 p.m., 15% Moon rises 4:52 a.m.

May

3 Deep sky weekend. Sunset 7:59 p.m., 7% Moon sets 10:23 p.m.

9 Houge Park star party. Sunset 8:04 p.m., 57% Moon sets 3:06 a.m.

10 ATM class. Houge Park, 7:30 p.m.

17 **General meeting**, Houge Park. 8:00 p.m. Norm Sperling on his new book *What Your Astronomy Textbook Won't Tell You*

22 ATM class. Houge Park, 7:30 p.m.

23 Astronomy class. Houge Park, 7:30 p.m., subject TBA

23 Houge Park star party. Sunset 8:16 p.m., 39% Moon rises 2:56 a.m.

24 Deep sky weekend. Sunset 8:17 p.m., 27% Moon rises 3:21 a.m.

31 Deep sky weekend. Sunset 8:22 p.m., 1% Moon rises 9:15 p.m.

SJAA/Bay Area astronomical auction XXIII

Jim Van Nuland

It's spring, and time for the annual migration of astronomical paraphernalia from one garage to another! On Sunday, April 13, 2003, an astronomical auction and swap meet will be conducted at Houge Park in San Jose, sponsored by the San Jose Astronomical Association. We will have the auction first followed by a swap, to allow people some additional haggling time for those items which were optimistically priced in the auction, or to sell those odds and ends items which were better off being in a swap. Jay Reynolds Freeman will be our auctioneer. Those who have observed Jay's performance in previous auctions have learned to appreciate his thorough 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 requested 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, $500 for a seller. 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 large telescope or unusual item? For some pre-auction publicity, please email auction@sjaa.net with a short description and a photo, or a link to your own web page. If you have more than 5 items (large or small), please send a list with a short description and minimum bid. This will avoid the crush at the registration table.

See elsewhere in this issue for directions to Houge Park.

— *Jim Van Nuland*, jvn@svpal.org

Special April meeting!
Sunday April 13 7:00 p.m.
Speaker Fulvio Melia

SJAA President Mike Koop poses next to one of the items to be found at this year's Astronomical Auction.

24 Hour News and Information Hotline: (408) 559-1221
http://www.sjaa.net

Eclipse over South Africa

Ernie Piini

Want to make a million dollars and more? Design a gadget that will filter away clouds at an eclipse and I'll mount it in front of my telescope, camera, and eye glasses; because once my heavy equipment is setup and aligned to the north/south pole I can't make a run for clearer skies or fly above the clouds. Sometimes clouds are impossible to avoid.

Such was the case at our site 50 km east of the city of Messina, Republic of South Africa. Our centerline coordinates were: Latitude 22 deg. 27 min. South; Longitude 30 deg., 27.5 min. East, as measured by my global positioning system (GPS).

For this eclipse I joined Jen Winter's Astronomical Tours, a 27 person expedition of nine RVs caravaning around northern South Africa. Our RV was occupied by eclipse chasers Dr. Jacques Guertin from Newark, CA; Sandra Stewart from Berkeley, CA; and me. We learned how to drive on the wrong side of the road with no accidents!

We arrived at the selected site in the afternoon around 4 p.m. and aligned our RV's in a north-south orientation. This would give us a broadside view of the early morning eclipse.

After a delicious evening barbecue we sat outside our RV's and watched the clear skies with total enjoyment as they turned super dark, displaying those wonderful star-studded southern skies. I've seen the Magellanic Cloud many times before but this had to be the best. There were no nearby cities or towns to pollute the skies. I gazed at this down-under experience in amazement for several hours before going to bed. It looked like the eclipse, just hours away, was a sure bet for a clear sky. Instead of sleeping I remained awake thinking of those tasks I still had to do to optimize my telescope and piggyback camcorder setup. A group several miles to the south played loud Cajun-like music till about 2 a.m., entertaining me since I was not sleeping.

Dr. Guertin and I rose at 4 a.m. and began our final equipment checks. Looking outside we were highly disturbed to see a cloud front, reported to be around 14,000 ft in elevation, moving in from the west. Later, more clouds crisscrossing at a much lower level made improbable our chance of seeing a clear eclipse.

At sunrise I found a few minutes of clear skies and focused my cameras without the solar filters, saving precious moments for totality. First contact was calculated for 7:12:01 a.m. From this moment on the view of the partials was only a teaser. We took a few photographs of the partials imbedded in the clouds. Totality began at 8:18:44 and lasted 1minute and 24 seconds. We verified the timing of each contact with Dr. Guertin's audio recording. We were within one second of time! Realizing we would not see totality, I removed my Canon GL-1 camcorder from the telescope mount and recorded wide angle views of the moon's shadow and the colorful horizons.

Momentarily, we saw the corona backlighting the clouds. Another group, located near Messina, approximately 70 km to the west, saw the eclipse clearly through a break in the clouds-much like what I saw at the August 11, 1999 "Miracle Eclipse" near Munich, Germany.

I felt sorry for the disappointment of those observing a total solar eclipse for the first time. I have been fortunate to have seen many clear and remarkable eclipses in the past. I was hoping they would see their one. Don't be discouraged, there is always a next time, and the view is worth the effort.

The meteorological facts I recorded included a 4 degree Fahrenheit drop in temperature from 6 a.m. to the end of totality, a 10 percent increase in humidity from 60 to 70 percent and, as I have witnessed at other eclipses, the wind ceased during totality.

For traveling halfway around the world to this eclipse, we were rewarded with a fascinating three-day drive through Kruger National Park. We saw scores of wild animals and birds from the roadside. After four trips to Africa, I saw my first rhinos! We saw lions devouring their catch, and a river infested with crocodiles. One evening after a safari observed from an open-air bus, we were treated to another barbecue. After eating we hopped back onto the bus but it could not move uphill. Did we eat that much? We had to walk the last 1000 feet or so to the top, while under protection from the wildlife by rifle-totting guards.

We saw rugged mountain ranges and scenic views. The Mac Mac Falls were interesting but can't compare to Victoria Falls that I saw during my Zambia eclipse visit in 2001. On our pre-eclipse tour we toured Pilgrims Rest, a historic village which includes a small church moved up from Cape Town in the south. The church is now a 12-stool bar, its walls stocked with booze. An awesome view, God's Window, overlooks a colorful valley far below, extending as far as the eye can see.

I loved visiting South Africa and the Kruger National Park. I'd recommend a visit to this land to anyone.

— *Ernie Piini*, EWPIINI@aol.com

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.

Sic transit mundi

Dave North

In a month where I established beyond any reasonable doubt that I can bore large groups of people, one question did stand out as interesting: What about transient lunar phenomena?

Clearly a lot of people are interested in this issue. If you doubt it, google "transient lunar phenomena" and duck!

Love the term. It's even fun as an acronym. But what it simply means is, what about things that "happen" or "change" on the Moon?

I break them down into three categories: things anybody can see and confirm, things that may reasonably be expected to have happened but are not confirmed, and things that probably didn't happen.

Last month, we had one of those things that probably didn't happen — a crater impact in the 1950s. Turns out it showed up in plates taken as early as 1919, which sort of rules it out.

But every month we have all manner of things that do happen.

Probably the effect I see talked about most often is lunar rays, such as the Hesiodus Ray. These happen when light hits an uneven wall (usually a mountain range) and a ray of light shoots through the gap between peaks.

The classic result is a dark area with a stripe of light running across it: a "ray."

There's even a Predictor for this kind of event at: http://shallowsky.com/moon/colong/ ... that will tell you when various rays will be visible over the next few months. I'm not really much of a ray fan myself, but I suppose my favorite is the Faye Ray (if for no other reason than the pun).

There are many other similar kinds of events, almost always caused by extremely low or high light (the latter causing extreme reflections and the startling illumination of such craters as Linne — itself famous for "changing" though it has not done so since modern photography started monitoring it).

Some people even include eclipses as TLPs. Why not? They're lunar, they're transient ...

Then we have some fairly famous events such as new craters, or gas emissions in the area of Aristarchus or Ptolemaeus. Though some of the observations may turn out to be legitimate, they are generally called into question because of the singularity and incompleteness of the observation (and data).

On this same subject, there's good evidence that some folks did use a clever way to see craters "formed" on the Moon. By watching the dark side during meteor storms, it's possible to see the flashes of impacts as larger particles "touch down."

"It's no surprise we see weird things such as bridges, canals or cities appearing in the right light."

There's no surprise there — it's just a clever idea that paid off.

However, most of the more sensational observations are either unconfirmed or outright hooey. I'm not sure why some become famous and others drift into obscurity, but the same seems to be true of joke and celebrities. Let's just assume there's some reason and go on from there.

For those who are truly interested, NASA maintains a database of observations of such events at http://www.mufor.org/tlp/lunar.html. It runs from 1540 through 1969; I'm not sure why it stops there (but we can guess!)

Such things as the idea that the Blair Cuspids are artifacts of an ancient civilization seem downright silly. (The "ancients" are a common theme in these stories — perhaps we finally know where the Anasazi went). Other less unlikely sightings, such as gas emissions, may have some validity. The problem is, there's not much that can be confirmed and much that could just be ...

... some strange effect of light angles and terrain.

Both are extraordinary on the Moon, from our earthly point of view.

There is no air to cause light to diffract or soften; all edges are very hard.

The surface is mostly dark, and dry to an extent that is simply beyond anything on earth. This means crystal faces can get aligned in all kinds of uncharacteristic ways, dark material can heat up remarkably, etc.

On top of that, the terrain itself is curious in that there are virtually no sharp peaks. There's almost no tectonic or volcanic activity on the Moon (nothing significant that we've seen), so the surface is pretty static. Over millions and millions of years, it has been worn to a fine, rounded dustypebbly consistency by the constant bombardment of small particles (such as the meteors that we see every night) and particles ejected by the sun.

The Moon very much does not either look or act in familiar ways. It's no surprise we see weird things such as bridges, canals or cities appearing in the right light.

Well, okay, the canals are there. Called rilles, they're the result of ancient volcanism (mostly) and can be seen almost every night. But they don't change, other than lighting effects.

I don't know a single interested Moon observer who doesn't want to see a really solid transient phenomenon, and I regret I haven't managed to duplicate the above observations.

What most of us would like is to see something like the formation of Tycho or Copernicus: a really big crater impact. That would be such fun!

Not much chance, but if you don't

Continued on next page

Sic transit mundi

Continued from previous page

look you can't see.

However, it's best to bear this "wish" in mind whenever you hear about the latest amazing thing seen on the Moon: historically, people see what they want to see.

They have found pyramids, bridges, cities ... you name it. You can find articles such as "Roman City In Kepler" and reports of "diminutive bison" seen.

One thing that is fairly clear: the herds and cities were mostly swept away after 1969.

But if I should see any of these things, you'll be among the first to know. I have certainly seen quite a few remarkable and surprising transient light effects, but every last one has turned out to be just that.

But I still want to see a big one hit.

— *Dave North*, north@znet.com

Out there

So little time, so much to see!

Mark Wagner

If you are new to deep sky observing, welcome to galaxy season. This month's targets fall between right ascension 12:46 and 14:46, and include targets in the rich galaxy fields of Hydra, Corvus, Leo, Leo Minor and Ursa Major.

Galaxy season is the richest and most fun time of year for deep sky observing, but it is possibly the worst weather-wise. If you get a good night or two this month, give yourself that extra push to grab your scope and get out. The weather can turn quickly, daylight is encroaching on night to shorten dark hours, and daylight savings time is here ... all conspire against us. It is far too easy to lose your opportunities to couch potato-ness — and you'll kick yourself upon seeing how fast this observing season passes.

Let's get right into it, which is what I encourage you to do! Objects are listed from south to north with NGC number, RA and Dec, size, magnitude and surface brightness for each object.

NGC3621 – RA 11h 18m 16s Dec -32° 48' 42" 12.3'x7.1' 9.7m 14.4 sb - This is a relatively unknown object. My regular observing partner Richard Navarrete described it as huge and bright with a mottled appearance. Track this one down in Hydra, but you'll have to aim your telescope low ... it rests deep to the south below and between Corvus and Crater.

NGC4027 – RA 11h 59m 30.5s Dec -19° 15' 44 3.2'x2.4' 11.1m 13.2 sb - Situated between Corvus and Crater, this is an odd, bright galaxy that has obviously suffered tidal disruption. North Bay observer Robert Leyland described it as "an irregular almost S-shaped galaxy. A real treat at 160x, it shows a nice dark region adjacent to a dim field star." I couldn't agree more.

NGC4038 – RA 12h 01m 9s Dec -18° 52' 5.2'x3.1' 10.3m 13.1 sb - East Bay observer Bruce Jensen has a wonderful description of this interesting galaxy in Corvus. It is known as the Ring Tail Galaxy or the Antennae. Using an 18-inch Dob, Bruce writes "NGCs4038 and 4039 showed wonderful detail at 290x. Two lopsided lobes were obvious with streamers spiraling away in disarray from these two interacting galaxies. In my old 8-inch telescope, this object was already a worthy quarry; in the 18-inch it is simply a showpiece. A wonderful object under conditions fine enough to permit fine features to shine through." What a winner!

NGC3242 – RA 10h 24m 46.1s Dec -18° 38' 34" 40"x35" 7.7m sb - Even though it is galaxy season, there are some other good objects to hunt down. NGC3242 is known as the Ghost of Jupiter, or Eye Nebula. It is a bright planetary nebula in Hydra – in fact, I think it is perhaps the brightest planetary nebula per square arcminute of surface area. Noted bay area observer Steve Gottlieb writes "This beautiful PN has a very high surface brightness and a bluish color at 100x. The view at 280x-380x is stunning with a well-defined double shell structure. The bright, narrow inner ring is surrounded by a second fainter oval envelope. Inside the bright lens is a dark, 10", donut-hole with a faint central star marking the center. In moments of steady seeing, the inner ring has a hard-edge and the central star sharpens up." This one is a must see!

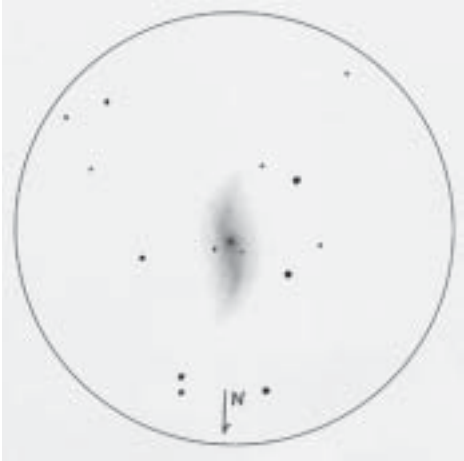
NGC3190 – RA 10h 18m 05.7s Dec +21° 49' 57" 4.4'x1.5' 11.1m 13.1 sb. Just north of the beautiful star gamma Leonis, this bright elongated galaxy is an easy find, and shares the field with three equally easy galaxies ranging from mag 12 to 13.5. The group is also known as Hickson 44 and Arp 316. These should be within the reach of even modest apertures in a dark sky. Rashad Al-Mansour from San Francisco wrote of these "3190 sat between NGC3193 and 3185. I sat looking intently and suddenly realized that I was looking at four galaxies..not three! The fourth was NGC 3187, a 13.4 magnitude galaxy that I was seeing with an 8" SCT."

NGC3344 – RA 10h 43m 31.9s Dec +24° 55' 20" 7.1'x6.5' 9.9m 13.9 sb. Find this rather unknown bright galaxy in Leo Minor. East bay observer Matthew Marcus wrote of this face-on spiral "In the C8, it looks rather like a RN illuminated by the 'pointer' stars. Careful observation shows that the core is non-stellar. It showed hints of spiral

Continued on next page

NGC4027 in Corvus at 205x. Sketch by Andreas Domenico.

Galaxy NGC3190 in Leo, as seen in a 20-inch dobsonian at 180x. Sketch by Peter Natscher.



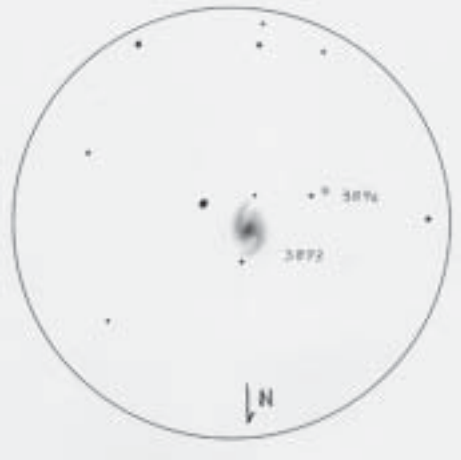
Galaxy NGC3953 in Ursa Major, as seen in a 20-inch dobsonian at 180x. Sketch by Peter Natscher.

So little time ...

Continued from previous page

structure. This is a large, bright object, which belongs with the "Messier missed 'em" list of objects you can show off.

NGC3893 – RA 11h 48m 38.2s Dec +48° 42' 39" 4.5'x2.3' 10.5m 13.3 sb. The first time I saw NGC3893 I thought it was a miniature M51. Located near chi Ursae Majoris – the bright star south of Phecda (the eastern bottom bowl star in the Big Dipper) this galaxy has a close pair in NGC 3896. Stanford researcher David Kingsley describes it this way. "Both visible in the same eyepiece field. 3893 had a bright core, hints of structure, and a star in the halo that would blink on and off neatly with averted and direct vision."

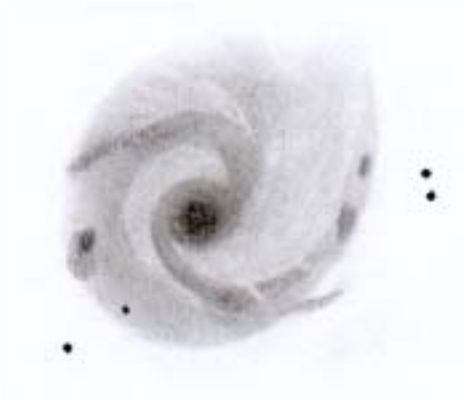


Galaxy NGC3893 in Ursa Major, as seen in a 20-inch dobsonian at 180x. Sketch by Peter Natscher.

David's observation was from Henry Coe State Park in a 7-inch reflector.

NGC3953 – RA 11h 53m 48.8s Dec +52° 19' 35" 6.9'x3.5' 10.1m 13.4 sb. Moving back up toward Phecda to find NGC 3953. This elongated spiral is bright and easy to locate. Richard Navarrete described it as a large bright spiral — an excellent object — containing a nice stellar core.

NGC3631 – RA 11h 21m 0s Dec +53° 10' 5.0'x4.8' 10.4m 13.7 sb – This wonderful object is located just below the bowl of the Big Dipper, very near M97 and M108. This face-on spiral galaxy has several bright HII regions visible in an 18-inch scope. Jeff Blanchard, observing in Santa Cruz with his 14.5-inch dob writes "it's easier to make out detail at 150x rather than 200x. This face on 6' spiral suddenly brightens at its elongated one minute core, with a suspected dark lane about one minute out from the core.



NGC 3631 in Ursa Major at 205x. Sketch by Andreas Domenico.

Just as the springtime observing season ends so quickly, this article has come to an end. There are so many more targets worth visiting. I recommend going to the web-site http://messier45.com and use the database to generate a list of other targets to compliment those I've given you here. Again, don't waste the season, this is truly when we can say "so little time — so much to see!"

— *Mark Wagner*, mgw@resource-intl.com

Change of date for the April SJAA General meeting.

Sunday April 13, 2003, 7:00 p.m., Houge Park meeting hall.

Bob Havner

Due to scheduling conflicts our April speaker, Dr. Fulvio Melia, asked if the date could be moved to Sunday April 13, 2003. It has been decided to have a special meeting on Sunday, April 13 at 7:00 pm. There will be no meeting on the 12th.

The SJAA Auction is on Sunday and following the Auction we are hoping to have a "Dinner with the Speaker" around 5:00 (this has yet to be confirmed — check the hotline for updates) followed by the talk at 7:00.

Dr. Melia's talk and his latest book is entitled *The Black Hole at the Center of Our Galaxy.*

Could Einstein have possibly anticipated directly testing the most captivating prediction of general relativity, that there exist isolated pockets of spacetime shielded completely from our own? Now, almost a century after that theory emerged, just such an entity, with a mass of about three million suns, has been found lurking at the center of our galaxy. Excitement is mounting in the astronomical community with the growing realization that we are now on the verge of actually seeing this exotic object within the next few years.

You can find out more about Dr. Melia and his book at: http://newton.physics.arizona.edu/~melia/

Be sure to note the special date and time and join us!

— *Bob Havner*, bhavner@earthlink.net

SJAA Yosemite public star party, 2003

Jim Van Nuland

The annual SJAA Yosemite star party will be held on July 25 and 26, at Glacier Point in Yosemite National Park. 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.

Detailed information may be found on my Yosemite page, http://www.svpal.org/~jvn/yosemite.htm.

The camping is rough by modern standards: no dining room, no showers, no hot water. Read about it (above), or contact me with questions. To reserve space, tell me the number of people you'll have, and the number of scopes that will be set up for the public. E-mail jvn@svpal.org, or phone 408-371-1307 10 a.m. to 10 p.m.

— *Jim Van Nuland*, jvn@svpal.org

[Editor's note — The group campsite at Bridal Veil campground is notoriously undersized for a group of thirty astronomers. There is actually room for about six vehicles and tents, and not enough bear boxes for everyone. There is a big advantage to going to Yosemite early and paying for your own campsite at Bridal Veil. Campsites are inexpensive, easy to acquire on Thursday, and it's usually possible to obtain one even on Friday before about 1 p.m. Astronomers arriving late in the afternoon on Saturday are not likely to find room for a tent, a car, or food in a bear box!]

Silicon Valley Astronomy Lecture Series
Wednesday, April 23, 7 p.m.

Andrew Fraknoi

Dr. Scott Sanford (NASA Ames) will give a non-technical illustrated talk on: "The Stardust mission: Bringing home a comet" in the Smithwick Theater, Foothill College, El Monte Road and Freeway 280,in Los Altos Hills, California, free and open to the public. Parking is $2.00. Call the series hot-line at (650) 949-7888 for more information.

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

Dr. Sanford will describe the mission, on which he is co-investigator, launched in 1999, to rendezvous with a comet in 2004 and return samples to Earth by 2006. This will be humanity's first opportunity to study the "original" material from which our solar system is built up (and which has been frozen into each comet ever since.)

Dr. Sanford works at the Astrophysics Branch at NASA's Ames Research Center and is a renowned expert in the field of meteoritics, the study of rocks that fall from space. He has helped discover a number of such rocks in Antarctica. Among his other scientific interests are molecules in the great clouds of cosmic raw material among the stars — some of which may be connected with the development of life in the universe.

— *Andrew Fraknoi,*
fraknoiandrew@fhda.edu

Join the International Dark-Sky Association!
http://www.darksky.org/

Celestial calendar
April 2003

Richard Stanton

Lunar phases:	Date	Rise	Trans	Set
NM 11:18 PST	01	06:09	12:08	18:22
FQ 15:39 PST	09	09:09	18:15	02:28
FM 11:35 PST	16	18:54	00:24	05:23
LQ 04:18 PST	23	02:47	06:18	09:54

Nearer planets:				R. A.	Dec.
Mercury, 0.85 A.U., Mag. -0.8					
07	06:19	13:10	20:01	02:01.1	+13:53
17	06:11	13:20	20:29	02:52.3	+19:26
27	06:45	13:55	21:05	03:09.3	+20:15
Venus, 1.34 A.U., Mag. -4.2					
07	04:25	10:05	15:46	22:57.5	-07:50
17	04:17	10:11	16:05	23:42.8	-03:25
27	05:08	11:16	17:25	00:27.5	+01:12
Mars, 1.10 A.U., Mag. +0.5					
07	01:50	06:38	11:27	19:31.4	-22:35
17	01:33	06:25	11:17	19:57.6	-21:47
27	02:16	07:11	12:06	20:23.1	-20:47
Jupiter, 5.04 A.U., Mag. -2.2					
07	12:41	19:47	02:57	08:42.7	+19:06
17	12:03	19:08	02:18	08:43.8	+19:01
27	12:26	19:31	02:40	08:46.0	+18:52
Saturn, 9.52 A.U., Mag. +0.8					
07	09:20	16:38	23:56	05:33.3	+22:19
17	08:44	16:02	23:21	05:36.8	+22:23
27	09:08	16:27	23:46	05:40.9	+22:27

SOL Star Type G2V Intelligent Life in System ?

Hours of Darkness						
08:06	07	05:43	12:10	18:37	01:02.9	+06:42
07:36	17	05:29	12:07	18:46	01:39.7	-10:21
07:07	27	06:15	13:05	19:56	02:17.1	+13:43

Astronomical twilight:		Begin	End
JD 2,452,736	07	04:13	20:07
746	17	03:56	20:20
756	27	04:39	21:32

Sidereal time:
Transit right ascension at local midnight

07	00:00 = 12:53
17	00:00 = 13:32
27	00:00 = 14:11

Darkest Saturday night: 26 April 2003

Sunset	18:55
Twilight	20:31
Moon rise	03:26
Dawn begin	03:41
Hours dark	07:10

Daylight Savings Time begins
02:00 27 Apr 2003

Officers and Board of Directors

Pres	Mike Koop	(408) 446-0310
VP	Bob Havner	(408) 723-2559
Sec	Jim Van Nuland	(408) 371-1307
Tres	Gary Mitchell	(408) 265-2336
Dir	Bill O'Shaughnessy	(408) 984-3985
Dir	David Smith	(408) 978-5503
Dir	Steve Nelson	(650) 968-4733
Dir	Dana Crom	
Dir	Craig & Elena Scull	

Ephemeris Staff

Editors Jane Houston Jones & Morris Jones (415) 453-2885

Circulation

Bob Brauer (408) 292-7695
Lew Kurtz (408) 739-7106
Dave North north@znet.com

Printing Accuprint (408) 287-7200

School Star Party Chairman

Jim Van Nuland (408) 371-1307

Telescope Loaner Program

Mike Koop (408) 446-0310

Web Page

Bill Arnett bill@nineplanets.org

SJAA Email Addresses

Board of Directors board@sjaa.net
Announcements announce@sjaa.net
Chat List chat@sjaa.net
Ephemeris ephemeris@sjaa.net
Circulation circulation@sjaa.net
Telescope Loaners loaner@sjaa.net
Members Email Lists:
http://www.sjaa.net/mailman/listinfo

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,
P.O. Box 28243
San Jose, CA 95159-8243

Submit

Submit articles for publication in the SJAA Ephemeris. Send articles to the editors via e-mail to ephemeris@sjaa.net.

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
3	4" Quantum S/C	Hsin I Huang
7	12.5" Dobson	Michael Lagae
10	Star Spectroscope	Lew Kurtz
15	8" Dobson	Vikram Keshavamurthy
16	Solar Scope	Bob Havner
23	6" Newt/P Mount	John Bunyan
24	60mm Refractor	Al Kestler
28	13" Dobson	Michael Dajewski
32	6" f/7 Dobson	Sandy Mohan
35	Meade 8" Equatorial	Carl Ching
38	Meade 4.5" Digital Newt	Tej Kohli

Scope loans

These are scopes that have been recently loaned out. If you are interested in borrowing one of these scopes, you will be placed on the waiting list until the scope becomes available after the due date.

# Scope	Description	Borrower	Due Date
6	8" Celestron S/C	Ashwath Kakhandiki	5/7/03
8	14" Dobson	Ron Gross	4/3/03
11	Orion XT6 Dob	Tina Mia Kurth	5/22/03
12	Orion XT8 Dob	Vinod Nagarajan	4/8/03
13	Orion XT6 Dob	Jay Natarajan	5/10/03
26	11" Dobson	Jan Lynch	4/3/03
29	C8, Astrophotography	Alfred Viceral	5/9/03
34	Dynamax 8" S/C	Mike Macedo	5/7/03
36	Celestron 8" f/6 Skyhopper	Dennis Hong	5/23/03
37	4" Fluorite Refractor	Jeff Crilly	6/3/03

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	?
9	C-11 Compustar	Paul Barton	Indefinite
14	8" f/8.5 Dob	Tom Frerickson	4/19/03
19	6" Newt/P Mount	Daryn Baker	3/27/03
21	10" Dobson	Ralph Seguin	Repair
27	13" Dobson	Richard Savage	3/21/03
33	10" Deep Space Explorer	Michael Wright	2/15/03
39	17" Dobson	Patrick Lewis	Repair

Waiting list:

6	8" Celestron S/C	Carl Ching
10	Star Spectroscope	David Kingsley, Keng The
12	Orion XT8 Dob	Rob Hawley
	A Big Dobsonian	Craig Colvin

San Jose Astronomical Association Membership Form

☐ **New** ☐ **Renewal** (Name and corrections below)

Membership Type:

☐ Regular — $15
☐ Regular with Sky & Telescope — $45
☐ Junior (under 18) — $6
☐ Junior with Sky & Telescope — $36

Subscribing to Sky & Telescope magazine through the SJAA saves you $10 off the regular rate. (S&T will not acccept 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
San Jose, CA 95159-8243

Make your check payable to "SJAA"

Name: _____

Address: _____

City/ST/Zip: _____

Phone: _____

E-mail address: _____

San Jose Astronomical Association
P.O. Box 28243
San Jose, CA 95159-8243

Nonprofit Organization
U.S. Postage Paid
San Jose, California
Permit No. 5381

ADDRESS SERVICE REQUESTED

Auction Sunday April 13
Special meeting, Sunday April 13, 7:00 p.m., speaker Fulvio Melia