



SJAA EPHEMERIS

SJAA Activities Calendar

Jim Van Nuland

March

- 3 **General meeting at Houge Park.** Our speaker is Dr. James Graham discussing planetary disk observations with the Keck using adaptive optics and HST. 8 p.m.
- 8 Mirror-making workshop at Houge Park. 7:30 pm
- 9 Astronomy Class at Houge Park. Rob Hawley will conduct a Messier Marathon preparation class. 7:30 p.m
- 9 Houge Park star party. Sunset 6:09 p.m., 68% moon rise 00:01 a.m. Star party hours: 7:00 to 10:00
- 10 Dark sky weekend. Sunset 6:10 p.m., 59% moon rise 1:03 a.m.
- 11 Daylight Saving Time begins. Advance clock one hour.
- 17 Dark sky weekend. Messier Marathon. Sunset 7:17 p.m., 1% moon rise 7:00 a.m
- 23 Astronomy Class at Houge Park. The subject will be the moon led by Akkana Peck. 7:30 p.m
- 23 Houge Park star party. Sunset 7:22 p.m., 34% moon sets 1:31 a.m. Star party hours: 8:30 to 11:30
- 24 Mirror-making workshop at Houge Park. 7:30 pm

April

- 1 **SJAA/Bay Area Annual Auction XVII** Noon to late afternoon.
- 5 Mirror-making workshop at Houge Park. 7:30 pm
- 6 Astronomy Class at Houge Park. Dave North will tell us of more lunar observing projects. 7:30 p.m
- 6 Houge Park star party. Sunset 7:35 p.m., 82% moon rise 11:54 p.m. Star party hours: 8:30 to 11:30
- 7 Dark sky weekend. Sunset 7:36 p.m., 74% moon rise 0:54 a.m.
- 14 Dark sky weekend. Sunset 7:42 p.m., 7% moon rise 4:57 a.m.
- 20 Houge Park Astro Day. Sunset 7:47 p.m., 20% moon SETS 0:20 a.m.
- 21 Mirror-making workshop at Houge Park. 7:30 pm
- 28 **General meeting at Houge Park.** Karrie Gilbert will speak on Studies of Andromeda Galaxy Halo Stars. 8 p.m.

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

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

Annual Meeting 2007

Mike Koop

The SJAA Annual Meeting, as required by the club bylaws, was held on February 3rd, 2007. President Mike Koop called the meeting to order. The first order of business was to review the current board members with a year remaining in their term, which included Rob Hawley, Mike Koop, Gary Mitchell, and David Smith. Since 2007 is an odd year, we have to elect 5 board members. Lee Hoglan, Rich Neuschaefer, Gordon Reade, and Craig Scull agreed to continue on as board members for another two years. Bill O'Shaughnessy resigned from the board in September of 2006, leaving a spot open. Nominations were open to the membership present at the meeting. Steve Nelson was nominated from the floor. No other members were nominated. The slate of 5 was voted in without any objections. Please congratulate and thank our new and continuing board members for volunteering their time to assist in the continuing success of the club.

Jim Van Nuland gets "Once in a Lifetime Award" Twice!

Mike Koop

At the February board meeting, Jim Van Nuland was awarded the Dr. A. B. Gregory Award. The award is given "In Recognition of Outstanding Contributions of Time and Effort to Others in Amateur Astronomy". It is to be presented only once. Dr. Boris Gregory was a professor of French Literature at San Jose State College. He had a lifetime interest in astronomy, and at his retirement was given one of the earliest C-8 telescopes. Dr. Gregory was president of SJAA for one term, 1973-1974. He was on the Board from antiquity until his death in March 1979, and was especially adept at welcoming newcomers. With years of experience, he was often asked for advice and help, and his answer was typically, "Come over and we'll work on it". At board meetings, he was very often the first to say, "I'll look into that".

Jim was first given the award back in 1984, in recognition of his 6 years of service as club secretary. Jim also was very active organizing lunar grazes and occultations for the SJAA. He wrote an article monthly in the Ephemeris about the observing events happening at the Calico Observatory, conveniently located in his backyard, mostly focused on the Great Red Spot transit times. Fast forward 23 years. Jim just stepped down as club secretary

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DEEP SKY OBSERVING

by Mark Wagner

March 2007 third quarter to new moon observing list. The list begins in the north and moves southward. Objects are within roughly a two hour section of right ascension that is at a comfortable elevation to the east at astronomical dark. This list is just a sampling of the full list which is at <http://www.resource-intl.com/Deep.Sky.Mar.07.html>.

TARGET	CONST.	TYPE	SIZE	MAG.	RA	DEC
N3065	Ursa Major	Galaxy	1.7'x1.6'	13.5	10h 01m 56s	72° 10' 14"
Nice double galaxy system.						
NGC 2985	Ursa Major	Galaxy	4.5' x 3.5'	11.2	09h 50m 21s	72° 16' 47"
Near M81/82						
M82	Ursa Major	Galaxy	11.3'x4.2'	9.3	09h 55m 52s	69° 40' 57"
Arp 337						
M81	Ursa Major	Galaxy	27.1'x14.2'	7.9	09h 55m 35s	65° 03' 48"
NGC 3077						
NGC 3077	Ursa Major	Galaxy	5.5'x4.0'	9.9	10h 03m 21s	66° 44' 02"
Close to M81						
NGC 2976	Ursa Major	Galaxy	5.9'x2.6'	10.8	09h 47m 15s	67° 55' 03"
N 3359						
N 3359	Ursa Major	Galaxy	7.3'x4.3'	11	10h 46m 36s	63° 13' 26"
NGC 3079						
NGC 3079	Ursa Major	Galaxy	8.0'x1.4'	11.5	10h 01m 56s	55° 40' 35"
AGC 1377						
AGC 1377	Ursa Major	Galaxy Cluster	4.3'x2.5'	11.6	11h 49m 15s	56° 05' 02"
NGC 3898 brightest						
N 3158	LMi	Galaxy	2.0' x 1.8'	11.9	10h 13m 50s	38° 45' 53"
Great field, especially if you can go deep.						
Arp 270	LMi	Galaxy	1.8'x1.6'	12	10h 49m 50s	32° 58' 58"
NGC3395 - multi-galaxy system						
NGC 2964	Leo	Galaxy	2.9'x1.5'	12	09h 42m 53s	31° 50' 50"
Paired with NGC 2968 and other very dim galaxies.						
AGC 1185	Ursa Major	Galaxy Cluster	1.2'x1.1'	14.1	11h 10m 38s	28° 46' 03"
NGC 3350 brightest Contains Arp 105, several members visible.						
Arp 316	Leo	Galaxy	2.0'x2.0'	11.8	10h 18m 24s	21° 53' 34"
NGC 3193 group, nice view, Hickson 44						
Arp 94	Leo	Galaxy	5.2'x4.0'	10.3	10h 23m 30s	19° 51' 56"
NGC 3227 and NGC 3226 interacting.						
M65	Leo	Galaxy	9.8'x2.8'	10.3	11h 18m 55s	13° 05' 33"
Arp 317, also M66 (Arp 16) and NGC 3268						
M105	Leo	Galaxy	5.4x4.8'	10.2	10h 47m 49s	12° 34' 55"

AUCTION XXVII — April 1, 2007

Jim Van Nuland

It's spring, and time for the annual migration of astronomical paraphernalia from one garage to another! On Sunday, April 1, 2007, an astronomical auction and swap meet will be conducted at Houge Park in San Jose, sponsored by the San Jose Astronomical Association. The SJAA Auction is a great opportunity for beginners to purchase their first telescope at a great price! Experienced observers often find equipment they need for their next observing project, from O-III filters to finders to star charts. All kinds of interesting items are found in the auction.

It's an odd year, so Jay Freeman will be our auctioneer. Those who have observed his performance in previous auctions have learned to appreciate his skillful evaluation of classical astronomical items on the spot. Great entertainment for all!

Doors open at 11:30 am to register material for the auction. All material must be registered by 12:30 pm to allow sufficient time to enter the items into the computer and to allow bidders time to view the auction material. Over the years, we have discovered that the maximum number of items we can sell before the audience gets restless is about 100. Please limit yourself to about four items maximum for the auction. In order to reserve your spot in the auction, please pre-register your items so that people know what you are bringing as described below. The club reserves the right to accept only appropriate material for the auction.

The auction is a fundraiser for the SJAA. In the past, we charged a flat 10% commission with a \$50 cap on any one item. It was brought to our attention that this might prevent your payment from being completely tax deductible and possibly could complicate things for the club. So, we have eliminated the mandatory commission and any payments to the club are now voluntary donations, thus are definitely

tax deductible. Our Auction program has been updated so now, you can voluntarily donate any portion of your sales to the SJAA. You can also cap the maximum amount of the donation to any value you wish! For example, say you wish to sell an LX200 telescope. When you register the scope, you can set the donation value to 20% with a cap of \$100. Say the scope sells for \$1000, we would calculate your donation to be \$100 since the cap was reached. Think of your donation as a tip. Remember, tip for good service! You can help even more by donating the item to the SJAA! Typically, 80% of the auction revenue is from such donations. The auction will begin at 1 pm, and will run as long as needed. Sellers may specify a minimum bid, which, if not met, will return the item back to the seller with no donation requested. After the auction, buyers and sellers settle up using one check to (or from) SJAA and claim their items. We do not handle charge cards. There is no fee for bidder cards, nor for entrance to the hall.

After the auction, material for the swap meet will be allowed into the hall, about 3 pm. The swap also allows people some additional haggling time for those items that were too optimistically priced by the seller in the auction, or to sell those odds and ends items which were better off being in a swap, or turned away due to the 100 item auction limit. Sellers are encouraged to bring items that would interest the astronomical audience such as astronomical, science, computer, or tech items. Joe Sunseri of Earth and Sky Adventure Products is expected, with many fine new and used items, including eyepieces, finders, and binoculars. At the swap, each buyer pays the seller. Sellers are to keep track of their sales, and a donation (10% is requested), as for the auction. There are no table fees. All donations to the auction and the swap are tax-deductible, as SJAA is a 501(c)(3) educational organization.

The SJAA offers free advertising if you

pre-register your items for the auction. Please email the auction team at auction@sjaa.net with a description of the item and a picture if possible. All items submitted by 6 pm on Friday, March 30th will be added to the auction website. This allows the bidders to find out how much that APO scope is really worth, so you will be more likely to sell it.

Part of running a successful auction is to make sure that there are people who are new to astronomy in attendance. We can use your help to make this so! Go to the auction website linked off the main page, download, and print a auction poster to display. Post them at the bulletin boards at work, at church, at your local library, or where you think people might be interested. Hand it out to a friend who has expressed interest in getting a telescope. You get the idea! Thanks for your assistance!

For more about SJAA, visit our web site <<http://www.sjaa.net>>, or email to the above address. See you there!



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.

Messier Marathon 2007

Rob Hawley

Spring is time for the annual Messier Marathon. The scheduled date is Saturday March 17 in the overflow parking lot at Henry Coe State Park. We have also reserved the area for Friday night.

By a quirk of fate all of Messier's original list of objects are visible during March of each year. Since this year's event is being held in mid instead of late March you will get a few additional minutes of darkness at sunset and before sunrise. This may make it possible to get a couple of the objects you have not seen in the past.

The Marathon may strike many as Type A behavior taken to an extreme. While there is an element of that it is also great experience that can really help a beginner learn to efficiently use his scope. That was certainly my experience.

I don't recommend a Marathon to "see" all of the Messier objects. The timeline dictates that you will not spend enough time on many objects to do anything more than identify them and move on. Having to locate all of the objects in one evening will force you to work efficiently. Almost all of the objects are easily located – if your technique is good. So the main reason I recommend the marathon, especially for beginners, is to practice efficiently finding stuff. Once you can do a marathon you will be able to find anything within the limits of your scope!

Many beginners quake at the prospect of traversing the Virgo galaxy cluster. It basically comes down to having the correct tools. A couple of years ago I scripted the entire marathon using my planetarium program Sky Map Pro. Last year I took that work and converted it into a set of charts and instructions. These charts provide wide angle overviews of each segment of the marathon and finder charts for each object. Where necessary more detailed charts are provided that give detailed instruction on how to move your scope through crowded fields. These charts are available at www.robhawley.net/mm

This year I added two additional charts. If you have the charts from 2006 you can just download the new charts.

Messier Marathon Prep Beginner Astronomy Class

This year I will also teach a preparation class as a special edition of our Beginning Astronomy Class on March 9 at 7:30 PM. Paper copies of my charts will be available for cost (under \$10) at the class for anyone who is interested.

– RH

The Last 31 Days In Astronomy

The news seen between Jan. 10 and Feb. 10, 2006.

Jan-11-2007 **More on Supernovae** Recent observations of the supernovae remnant from Kepler's supernova clearly classify that supernova as a Type Ia. The telltale signs are large amounts of iron and not much oxygen. <http://skytonight.com/news/5167547.html>

Jan-30-2007 **Hubble's ACS Fails** The Advanced Camera for Surveys on the Hubble Space Telescope has stopped working for the third time in a year and this time it might be gone for good. The ACS was installed on a Hubble servicing mission in 2002 and was only expected to last 5 years – it came up one month short. When the next Hubble servicing mission is performed the ACS will not be replaced but a new wide field camera will be installed that will take over the functions of the ACS. <http://skytonight.com/news/wires?id=102669493&c=y>

Feb-02-2007 **Moon Impactor Greenlighted** NASA has given approval for the Lunar Crater Observation and Sensing Satellite (LCROSS) which is expected to launch in October of 2008 and impact the moon at its South Pole in January of 2009. NASA Ames in Mountain View is leading the project and a buildup at Ames is expected. <http://skytonight.com/news/wires?id=102809335&c=y>

Feb-06-2007 **Night Clouds on Mars** Night Clouds on Mars have been shown to do something similar that night clouds do on Earth. That is the clouds help trap heat. In other words, cloudy nights on Mars lead to higher temperatures. The difference is not insignificant. Areas that are blanketed by the night clouds are warmer by about 20 degrees Celsius. http://www.space.com/scienceastronomy/070206_st_mars_clouds.html

Feb-07-2007 **MRO Sending Reams of Data** The Mars Reconnaissance Orbiter has already sent enough data back to earth to fill up 1000 CD-ROMs. The rate of data return will increase as Mars and Earth move closer together. <http://jpl.nasa.gov/news/news.cfm?release=2007-013>

Feb-07-2007 **JWST Ready for Polishing** The 18 hexagonal mirrors which be used in the James Webb Space Telescope (JWST) have been shipped to Richmond, CA where they will be polished. The JWST is scheduled to be launched in 2013. http://www.nasa.gov/vision/universe/starsgalaxies/mirror_size.html

Now! **New Horizons looking at Jupiter** The NASA mission called New Horizons is heading toward a 2015 date with Pluto. But on Feb. 28, 2007 it will pass close to Jupiter in order to get a speed boost. It will also take pictures and measurements while it is in the Jovian neighborhood. The following link will tell you more. http://www.nasa.gov/mission_pages/newhorizons/main/index.html

A Great Big Wreck

Dr. Tony Phillips

People worry about asteroids. Being hit by a space rock can really ruin your day. But that's nothing. How would you like to be hit by a whole galaxy?

It could happen. Astronomers have long known that the Andromeda Galaxy is on a collision course with the Milky Way. In about 3 billion years, the two great star systems will crash together. Earth will be in the middle of the biggest wreck in our part of the Universe.

Astronomer John Hibbard isn't worried. "Galaxy collisions aren't so bad," he says. A typical spiral galaxy contains a hundred billion stars, yet when two such behemoths run into each other "very few stars collide. The stars are like pinpricks with lots of space between them. The chance of a direct hit, star vs. star, is very low."

Hibbard knows because he studies colliding galaxies, particularly a nearby pair called the Antennae.

"The two galaxies of the Antennae system are about the same size and type as Andromeda and the Milky Way." He believes that the Antennae are giving us a preview of what's going to happen to our own galaxy.

The Antennae get their name from two vast streamers of stars that resemble the feelers on top of an insect's head. These streamers, called "tidal tails," are created by gravitational forces—one galaxy pulling stars from the other. The tails appear to be scenes of incredible violence.

But looks can be deceiving: "Actually, the tails are quiet places," says Hibbard.

is star formation. While individual stars rarely collide, vast interstellar clouds of gas do smash together. These clouds collapse. Gravity pulls the infalling gas into denser knots until, finally, new stars are born. Young stars are difficult to be around. They emit intensely unpleasant radiation and tend to "go supernova."

GALEX can pinpoint hot young stars by the UV radiation they emit and, in

combination with other data, measure the rate of star birth. "Surprisingly," Hibbard says, "star formation rates are low in the tidal tails, several times lower than what we experience here in the Milky Way." The merging cores of the Antennae, on the other hand, are sizzling with new stars, ready to explode.

So what should you do when your galaxy collides? A tip from GALEX: head for the tails.

To see more GALEX images, visit www.galex.caltech.edu. Kids can read about galaxies and how

a telescope can be a time machine at spaceplace.nasa.gov/en/educators/galex_puzzles.pdf.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.



This GALEX UV image of the colliding Antennae Galaxies shows areas of active star formation, which is not in the tidal tails as one might expect.

"They're the peaceful suburbs of the Antennae." He came to this conclusion using data from GALEX, an ultraviolet space telescope launched by NASA in 2003.

The true violence of colliding galaxies

SJAA 2006 Financial Report

Where's the money coming from:

	2005	2006	Difference
ATM	360.00	75.00	-285.00
Auction, Buyer	7,745.80	5,778.50	-1,967.30
Auction, bidder fee	188.50	1.00	-187.50
Books	1,640.28	1,944.50	304.22
Dues — members	5,034.00	5,529.99	495.99
Gift Received	36.00	1,023.00	987.00
Interest inc	192.29	178.65	-13.64
Misc inc	1,416.26	2,242.00	825.74
S&T Subscriptions	5,617.34	4,949.95	-667.39
Swap	1,292.25	967.90	-324.35
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SUBTOTAL	23,522.72	22,690.49	-832.23

Where's the money going:

	2005	2006	Difference
Auction seller	6,690.05	4,641.00	-2,049.05
Book Purchases	1,757.84	1,603.00	-154.84
Bulk Mail	671.64	660.00	-11.64
Dues — paid out	235.00	220.00	-15.00
fees	411.99	642.62	230.63
Gifts Given	200.00	100.00	-100.00
Insurance	1,140.00	1,140.00	0.00
Misc	309.20	2,405.33	2,096.13
Newsletter	2,313.78	2,563.54	249.76
Nonprofit fees	20.00	0.00	-20.00
S&T, Subscriptions	5,337.90	4,975.45	-362.45
Speaker fee	215.00	225.00	10.00
Telephone	186.80	221.99	35.19
Telescopes	9.73	93.05	83.32
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SUBTOTAL	19,498.93	19,490.98	-7.95



	2005	2006	Difference
OVERALL TOTAL	4023.79	3195.51	-824.28

Cash Flow Notes:

Auction:

The incoming Auction Seller and outgoing Auction Buyer represents the cash flow during the day of the auction. At the end of the day there was no net outgoing money.

	2005	2006	Difference
Auction income	1055.75	1137.50	81.75
RASC and other books:			
Books, net	-117.56	341.5	459.06

Note: Some books sales during 2006 were from books purchased in 2005. This results in a higher apparent profit in 2006 and an apparent loss in 2005. Moving the sales of the 2005 books to the 2005 column results in the following actual profits:

	2005	2006	Difference
Actual books, net	95.23	128.71	33.48

Fees paid: Some of the larger items in the fees category. (PayPal transaction fees for memberships includes both dues only and with Sky & Telescope.)

	2005	2006	Difference
PayPal-memberships	112.08	187.18	75.10
PayPal-Calstar	0.71	-51.61	50.90
Caterer-Calstar	250.00	250.00	0

Miscellaneous 2006, incoming and outgoing: Some of the larger items in the Misc. category. (The port-a-potty was for the Ayers star parties):

Misc. incoming, Calstar:	1958.00	
Misc. outgoing, Calstar:	-1789.61	

	159.39	
Misc. incoming, Port-a-potty:	249.00	
Misc. outgoing, Port-a-potty:	-403.43	

	-154.43	

Sky & Telescope member subscriptions may show a profit or loss in any given fiscal year because payments received and subscriptions paid don't break evenly across our fiscal annual boundary. The S&T subscription program is actually a small loss for us. Sky Publishing charges \$32.95, we charge \$33 even. That extra five cents is more than offset by postage of mailing in the orders and PayPal transaction fees.

Accounts as of 12/31/2006, compared to 12/31/2005

	2005	2006	Difference
CD 1	5,063.82	5,076.34	12.52
CD 2	5,070.00	5,167.51	97.51
CD 3	---	5,000.00	---
Checking	6,079.28	4,325.23	-1784.38
Observatory Fund	3,042.00	3,100.51	58.51
PayPal	201.13	0.00	-201.13
Savings	402.45	403.55	1.10
Petty Cash	57.15	41.83	14.68
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TOTAL	19,915.83	23,114.97	3199.14

This report was prepared without audit from the books and records of the SJAA.

Gary Mitchell, Treasurer



Janice Voss speaking on the Kepler Mission on March 7, 2007

7 p.m. at Foothill College

Andrew Fraknoi

On Wednesday, Mar. 7th, 2007, at 7 pm, Astronaut/Scientist Janice Voss of NASA's Ames Research Center, will give a non-technical, illustrated talk on: "Searching for Earth-like Planets: NASA's Kepler Mission" as part of the Silicon Valley Astronomy Lectures in the Smithwick Theater, Foothill College, El Monte Road and Freeway 280, in Los Altos Hills, California.

Free and open to the public. Parking on campus costs \$2.

Call the series hot-line at 650-949-7888 for more information and driving directions.

No background in science will be required for this talk.

The more than 200 planets discovered around other stars so far are all Jupiter-like planets, big and most likely made of gases and liquids.

Naturally, astronomers are eager to refine their search to be able to identify smaller solid planets, resembling our own Earth. In November 2008, NASA is scheduled to launch the Kepler mission, to search for Earth-like planets around distant stars. Dr. Voss, who is the Science Office Director for the project, will describe the design and expected results from the four-year mission.

Dr. Voss has advanced degrees in electrical engineering and aeronautics/astronautics, and has also done research in space physics. She became an astronaut in 1991, and has been a mission specialist on five space flights. She has logged over 49 days in space, traveling 18.8 million miles in 779 Earth orbits.

As part of the evening, she will also discuss her experiences as a scientist in space and her perspective on the space program. She will take questions from

the audience at the end of the talk.

The lecture is co-sponsored by:

- * NASA Ames Research Center
- * The Foothill College Astronomy Program
- * The SETI Institute
- * The Astronomical Society of the Pacific.



Janice Voss – photo courtesy of NASA

SJAA Yosemite Public Star Party 2007

Jim Van Nuland

The annual SJAA Yosemite star party will be held on August 17-18, 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. The rest of the time we can be tourists.

We are expected to have at least one scope per two people, and to attend both star parties, not just Saturday.

The camping is rough by modern standards: no dining room, no showers, no hot water. Read about it on my Yosemite page at <<http://www.svpal.org/~jvn/yosemite.htm>>, or contact me with questions.



If you can tolerate the limitations, tell me the number of people you'll have, and the number of scopes that will be set up for the public. E-mail me at jvn@svpal.org, or phone 408-371-1307 10 a.m. to 10 p.m. Priority is given to SJAA members.

If you would rather arrange your own housing, let me know that too, and how many telescopes you'll set up for the star party.

The moon reaches first quarter on the following Monday, so this is an excellent date; the moon will be down by the end of the public portion of the star party.

SETI Institute Open House Celebrating Science 2007

An Interactive Science Faire for the entire family will be held at SETI headquarters on March 3, 2007 2-4 PM.

Free and open to the public.

For more information, preregistration, and directions <http://www.seti.org>

Project ASTRO

Project ASTRO is seeking amateur astronomers to work with teachers in 3rd-9th grade classrooms. The deadline for applications is May 4 but why wait. Find more information at <http://www.astrosociety.org/baprojectastro> or contact the Bay Area coordinator Vivian White at bayareaastro@astrosociety.org.

Riverside Club's Observing Site at Landers

3rd of a series

Steven Nelson

Riverside has a site out in the desert near 29 Palms and Josiah Tree National Monument. It is mostly a gift. It is in a subdivision, with a small simple house, and was traded for bare land. At five flat acres it is one of the smallest sites. Here is what I have extracted from their web site and newsletters. http://www.rivastro.org/ras_landers.html

Ten "licensees" have paid to build the first ten pads (and the related electrical system), and will be using them (? years). Owners always have first "dibs" on their use. On any night, including star parties, the pad will remain vacant and available for occupancy by the licensee until sunset.

If the licensee hasn't called, and it is after sunset, then any club member can use the pad for that evening only. A licensee can also directly authorize a fellow member, or a guest, to use his or her pad. The electrical outlets on

the power posts are understood to be there to benefit the pad licensees. Any "borrowing" of an outlet must occur with the agreement of the pad licensees — to just plug in without asking is not good manners. The parking spaces immediately north of the pads are for the use of the pad licensees only. Please respect the right of a pad licensee to be able to back up to his or her pad and unload their equipment.

The RAS has recently installed "public" power posts on the observing field. These are available for any member or guest to use for telescopes and/or computers. The observing field is free for anyone (public included) to use. It is open to the public at all time (with no support services). An RV parking area is to the front of the property and a tent camping area is in the back (behind observing field).

Six people have paid to build roll-

off roof observatories and have exclusive use of them. It is unclear what the financial and redevelopment connections are between these and the club.

The club has generated over \$40,000 in equipment donations for its public programs and this site is used as a part of its public outreach. There have been regular barn-building activities at the site and the community spirit seems strong. It is about a 90 minute drive and has fairly dark skies and good seeing. Significant neighbors though! The site has been build-out in less than 5 years.

The financial model – Major donor, a dozen significant improvement donors. More than a dozen significant private equity investors. Site maintained by club dues (\$40/yr.).

Van Nuland wins Gregory Award
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after 27 years of service. He is the school star party coordinator for the club, a post he has held officially since 1996. The school star party program has grown from a few schools a year to over 30 schools a year. We can confidently say that Jim has shown Saturn to well over 10 thousand students over the years! It is this dedication that the board decided was worthy of a second Gregory. As Gary Mitchell pointed out, you can get more than one Oscar! The award will be presented at the Auction on April 1st.

Jim was the first person nominated for a Gregory Award during my six years of service as President. We have been negligent in recognizing the contributions of many people in this organization. There is currently no mechanism for nominating people, or timeline to do so. Fortunately, Bob Fingerhut, a good friend of Dr. Gregory and who is the originator of the award, has agreed to preside over the nominating committee. Is there someone you feel is worthy of the award (including yourself)? Write up a paragraph and email it to Gregory@sjaa.net or mail it to the club address care of "Gregory Award". Check out the Gregory Award on the SJAA website for more information on due date for nominations and to see past award winners. Congratulations Jim and thank you for your two lifetimes of service!

Pluto Occultation!

Mike Koop

On 18 March 2007 a little bit before 11:00 UT, Pluto and its atmosphere will occult a Magnitude 15 star for up to 6 minutes. The scientists who are involved with the Pluto Express mission are very interested to find out what the atmosphere of Pluto is doing right now. This will be visible thru out California. Franck Marchis of UC Berkeley is coordinating a combined occultation effort. If you have a CCD camera and any size telescope, you may be able to contribute to the team. For more information, check out the slide presentation at

http://astro.berkeley.edu/~fmarchis/document/Pluto18Mar2007/pluto_charon_occ.pdf

March of the Planets

Akkana Peck

After a winter mostly bereft of planets, March skies give us something to look forward to, along with (I hope) warmer, clearer and more pleasant evenings.

Saturn is ideally placed for observing this month, visible all night and transiting before midnight at nearly seventy degrees up. Take a look at how much the rings have closed since last year — we're viewing them at a fairly shallow 14-degree angle now (last year it was more like 18 degrees). Is it easier or harder now to see ring features like the small gaps in the outer ring?

Venus shines high in the evening sky. A telescope will show it as gibbous.

Mercury is visible in morning skies this month, and here in the northern hemisphere it never gets very high. Mars, too, is visible in the mornings, and on the night of March 25 it has a relatively close encounter with Uranus — they'll pass within a degree of each other. Neptune and Pluto are morning objects as well, but neither is very well placed for observing — you're better off waiting a few months if you want to go hunting the outer reaches of our solar system.

Jupiter rises an hour or so after midnight. If you're trying the Messier Marathon this month, Jupiter makes a nice break in the middle of all those Ophiuchus globulars. If you're worried about ruining your night vision, try looking at Jupiter with your other eye, the one you don't normally use to observe. It'll preserve night vision in your good eye, but it's a good exercise for another reason: if you're like me, you may find that your non-observing eye isn't nearly as well trained to see detail, and you may have a surprisingly hard time picking out normally features. It's a good reality check for public star parties, so you don't start expecting first-time observers to see that cool swirling festoon coming off the trailing edge of

the Great Red Spot. Remember when you were starting out and had trouble seeing the equatorial bands and the polar regions?

We'll unfortunately miss most of this month's total lunar eclipse on March 3. The central part of the earth's shadow (called the umbra) will already have crossed the moon by the time it rises for observers in San Jose, at 5:06pm. The rising moon will still be shaded by the outer part of the shadow (the penumbra), but that will be extremely difficult to see — it'll probably look like any other full moon rising. But cheer up — we'll get a nice lunar eclipse later this year on August 28.

Early March evenings are a good time to observe the Zodiacal light.

This faint band of light, rising from the horizon along the line ecliptic, is caused by sunlight reflecting off the tiny dust-sized particles left over from the formation of our solar system. This is a naked-eye sighting requiring dark skies — telescopes and binoculars will be no help here, but it's a great way to start a Messier Marathon evening. Ironically, the RASC Observers Handbook suggests that Venus is so high and so bright that it might actually make the zodiacal light more difficult to see. What do you think? I'm skeptical, and I'd be interested in hearing from anyone who looks for the Zodiacal Light and finds that Venus makes it more difficult.

Around the end of the month, we'll have a very close encounter with an asteroid dubbed 2006 VV2. VV2 will pass us at only eight times the distance of the moon. That's close! The asteroid, about 2 km in diameter, still won't get very bright — about 10th magnitude at its brightest — but since it's so close, you'll be able to see it move against the background stars after watching for only a few minutes.

Closest approach is March 30th, when it will be heading south through the center of Leo, but you can pick it up on the 26th as it passes near Polaris. Google for "2006 VV2" as the time approaches (don't forget the quotes — you want Google to look for the whole phrase) to get finder charts and other information.

For anyone who missed seeing Comet McNaught in January and really needs a comet fix, periodic comet 2P/Encke, believed to be the source for the Taurid meteor shower, may become bright enough to be visible in binoculars in Pisces and Aries around the end of the month and stretching into early April. Not much of a substitute for missing the spectacular McNaught, but at least dedicated comet watchers have something to look for.

On March 11 at 2am, Daylight Savings Time begins. That's three weeks earlier than the date in years past. A couple of years back Congress decided that Daylight Savings Time wasn't confusing enough, so they passed the Energy Policy Act of 2005 and changed the date of the switch.



The fall change, in November, will be a week later than usual.

So on Saturday night, set your clocks forward an hour and prepare to stay up later waiting for dusk. And check in on your computers and PDAs on Sunday morning to see if anyone told them about the Energy Policy Act. Current operating systems should get it right, but older computers may need their clocks reset.

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Submit

Submit articles for publication in the SJAA *Ephemeris*. Send articles to the editors via e-mail to ephemeris@sjaa.net. **Deadline, 10th of previous month.**

SJAA loaner scope status

All scopes are available to any SJAA member; contact Mike Koop by email (koopm@best.com) or by phone at work (408) 473-6315 or home (408) 446-0310 (Please leave message, phone screened).

Available scopes

These are scopes that are available for immediate loan, stored at other SJAA members homes. If you are interested in borrowing one of these scopes, please contact Mike Koop for a scope pick up at any of the listed SJAA events.

# Scope	Description	Stored by
1	4.5" Tasco Newt/ EQ Mount	Annette Reyes
3	4" f/15 Quantum S/C	Hsin I. Huang
6	8" f/10 Celestron S/C	Karthik Ramamurthy
7	12.5" f/7 Dobson	Craig Scull
8	14" f/5 Truss Dobson	Charles Santori
11	f/8 Orion XT6 Dob	West Valley College
13	f/8 Orion XT6 Dob	Rajiv Vora
14	8" f/8.5 Dob	Bill Kerns
15	8" f/9 Dobson	Mike Koop
19	6" f/8 Meade Newt/P Mount	Daryn Baker
23	6" f/8 Edmund Newt/EQ Mount	Wei Cheng
24	60mm f/15 Meade Refractor	Al Kestler
26	11" f/4 Dobson	Vivek Kumar
27	13" f/4.5 Dobson	Steve Houlihan
28	13" f/4.5 Dobson	Craig Scull
32	5.5" f/7.6 Dobson	Sandy Mohan
33	10" Deep Space Explorer	Art Kalb
34	8" f/10 Dynamax S/C	Yuan-Tung Chin
38	4.5" f/8.5 Meade Digital Newt	Tej Kohli
39	17" f/4.5 Truss Dobson	Steve Nelson
40	Super C8+	Srinath Krishnan
41	18" Sky Designs Dob	Kevin Roberts
42	11x80 Binoculars	Ritesh Vishwakarma
44	4.5" f/8 Orion Skyview	Mantle Yu

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
12	8" f/6 Orion XT Dob	John Schulein	3/7/07
35	8" f/6 Meade Newt/EQ Mount	Lee Barford	4/25/07
36	Celestron 8" f/6 Skyhopper	Steve Quigley	4/12/07
43	4.5" f/8 Orion XT Dob	John Walker	4/6/07

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 f/10 Compustar	Bill Maney	Indefinite
10	Star Spectroscope	Greg Bradburn	3/15/07
16	60mm H-Alpha Solar Scope	Mike Koop	Repair
21	10" Dobson	Michael Dajewski	Repair
29	8" Celestron S/C Astrophoto	Rodney Moorehead	2/18/07
37	4" Celestron Fluorite Refractor	David Smith	5/4/07

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