

★ ABOVE THE FOG

• BULLETIN OF THE SAN FRANCISCO AMATEUR ASTRONOMERS •

Vol. 56, No. 2 - February 2008

February 20, 2008 - General Meeting
Randall Museum . 199 Museum Way . San Francisco

"LA BELLA LUNA" - TOTAL ECLIPSE



Partial eclipse begins at sundown.
Total eclipse begins at 7:00 pm and ends at 7:51 pm.
Public lecture on "Moonology" at 8:00 pm
Partial eclipse ends at 9:09 pm

Telescopes available to public.
SFAA members please bring your telescope(s).
There should be lots of people so we'll need lots of eyepieces
and attached telescopes to look thru.

2007 CLUB OFFICERS & CONTACTS

<i>President</i>	DIRK LAMMERTS	president@sfaa-astronomy.org
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	Robert English	(415) 383-6475
		Citystarparty1@sfaa-astronomy.org
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	Elan Morpurgo	(415) 242-1464
	Jorge Morales	
<i>Alternate Board Members</i>	Jared Willson	
	Lon Carter	
<i>Webmaster</i>	Joe Amato	Web-master@sfaa-astronomy.net

CLUB TELESCOPES

The SFAA owns eight very fine, easy to use, loaner telescopes well-suited for deep sky, planets, and star parties. All scopes are available to any SFAA member. The loaner custodians for the majority of our fleet are Pete & Sarah Goldie. Please contact them at pg@lbin.com for details if you are interested in borrowing a scope or if you have items you can donate for the loaner program (eyepieces, star maps/books, red flashlights, collimator, etc.). Please contact the appropriate member indicated below if you are interested in borrowing one of the telescopes.



- 1) 6" f/10.3 Dobsonian/Ken Frank president@sfaa-astronomy.org
- 2) 8" f/7 Dobsonian/Pete Goldie
- 3) 8.5" f/6 Dobsonian/Pete Goldie
- 4) 10" f/8 Dobsonian/Pete Goldie
- 5) 114mm f/4 Newtonian StarBlast/Pete Goldie
- 6) 8" f/10 Celestron SCT/Annette Gabrielli/agabrielli@sfaa@sbctglobal.net
- 7) 8" f/10 Meade SCT/Stefanie Ulrey/treasurer@sfaa-astronomy.org
- 8) 9.5" f/5.6 Celestron Newtonian/Ken Frank/kennethfrank@planitarium.net

CLUB ASTRONOMY VIDEOS

The SFAA owns a series of astronomy videotapes featuring Alex Filippenko, a world-renowned professor of astronomy at UC Berkeley. The videotapes provide an introduction to astronomy and cover topics such as the Solar System, the lifecycles of stars, the nature of galaxies, and the birth of the Universe. The SFAA loans the tapes free to all members. If you are interested in viewing these tapes, you may check them out at any of the SFAA General Meetings. These tapes were kindly donated to the SFAA by Bert Katzung. For information on the course tapes themselves:



<http://www.teach12.com/ttc/assets/coursedescriptions/180.asp>

MEMBERSHIP DUES

Membership is billed for each upcoming year on June 30. Members may receive no more than one bulletin after the expiration of membership.

SFAA Website and Online Services



The SFAA web site at sfaa-astronomy.org is provided to our members and the general public for the sharing of club information and services. The web site contains links for club [star parties](#), [events](#), [newsletters](#), [lectures](#) and [meetings](#). If you wish to interact with other people who are

interested in astronomy, the SFAA web site offers public and members only [bulletin board forums](#). If you wish to remain up-to-date on club activities, then we encourage you to subscribe to one or both of our public [mailing lists](#), which will allow you to receive our newsletter and/or club announcements via email. Other useful and interesting information and services are available on the site such as [observing location reviews](#), member [astronomy photos](#), and [members only telescope loans](#). Information about SFAA's membership, organization and by-laws are available at the club's online public document [archive](#). If you need to contact a representative of the SFAA, then please visit our [contacts](#) page to help in finding the right person to answer your questions.

Above the Fog is the official bulletin of the San Francisco Amateur Astronomers. It is the forum in which club members may share their experiences, ideas, and observations. We encourage you to participate by submitting your articles, announcements, letters, photos and drawings. We would also like to hear from our new members. Tell us about yourself – what you have done in the past and what other clubs you have joined. **The deadline for the next issue is the 20th day of the month.** Send your articles to Editor@sfaa-astronomy.org.

IMPORTANT DATES

SFAA GENERAL MEETINGS & LECTURES

Wednesdays
February 20
March 19
April 16

7:00 p.m. Doors open. 7:30 p.m. Announcements. 8:00 p.m. Speaker
Randall Museum, 199 Museum Way (Near 14th Street and Roosevelt)

BOARD MEETINGS

Tuesdays
February 12
March 11
April 8

7:00-8:30 p.m.
Randall Museum, 199 Museum Way
(Near 14th Street and Roosevelt)

MT TAM STAR PARTIES – SPECIAL USE PERMIT – MEMBERS ONLY

Special Use Permit observing nights on Mount Tamalpais are private and open *only* to SFAA members. Please arrive by sunset (times listed below). A permit is required for each car. We must vacate the mountain by 2 am except on specially approved nights (such as Messier Marathon).

VOLUNTEERS ARE ALWAYS NEEDED

SATURDAYS

February 9 – 5:42 p.m. **Gatekeepers: Jim Cottle and Ken Frank**
March 8 (Messier Marathon) - 6:11 pm **Gatekeepers: Barbara Arrighi & (Volunteer needed)**
April 5 – 7:37 pm **Gatekeepers: (Volunteer needed)**

CITY STAR PARTIES - TELESCOPE CLINIC ONE HOUR BEFORE SUNSET

VOLUNTEERS ARE ALWAYS NEEDED

Saturday, February 16, 5:49 p.m. at Land's End (Point Lobos)
Saturday, March 15, 7:17 p.m. at Randall Museum – Speaker - VIVIAN WHITE - Subject to be announced
Saturday, April 12, 7:43 p.m. at Land's End (Point Lobos)

Weather may cancel the City Star Party. Call the SFAA Hotline at (415) 289-6636 AFTER 4 PM to learn the status of the event and the location. If the hotline announces the Star Party is cancelled, the Telescope Clinic and Lecture are cancelled as well. However, if the Hotline does not cancel the Star Party, be assured that the Lecture will proceed as scheduled even given less-than-perfect telescope conditions.

Please note that while City Star Parties WILL ALWAYS be held on Saturdays, some will be closer to the last quarter phase of the moon, while others will be close to first quarter. This is so we can work around dates for Mt. Tam public star parties as well as our members-only events on Mt. Tam.

Map and directions – Land's End (Pt. Lobos) <http://www.sfaa-astronomy.org/clubarchive/directions-pointlobos.php>



NEW SFAA MEMBERS

Scope City is offering to new members a \$25 credit toward the purchase of telescopes and binoculars.

Obtain a receipt for dues payment from Vivian White, Treasurer,
treasurer@sfaa-astronomy.org.

Contact Sam Sweiss at Scope City to arrange for your discount.

PRESIDENT'S COLUMN

It is barely a week since Ken Frank handed me the SFAA corporate seal as he welcomed me in my new role as President at our Annual Awards Dinner. As my first official act, writing the President's column for this month's newsletter, I want to extend my personal as well as all our thanks to Ken for his superb leadership and to the other Officers, Board members, and volunteers who all helped to navigate the club through the past year. And I would like to welcome our 2008 Officers and Board members – many of them familiar names. You will find the complete list in this newsletter.

Our Annual Awards Dinner at Delancey Street Restaurant was a great success – aside from the realization that you can find street parking in that neighborhood when there is no ballgame going on. I counted more than 35 members who all enjoyed good food, drinks, and great company. The highlight of the evening was the Awards ceremony with awards creatively designed and expertly crafted by Linda Mahan as in all the previous years – thank you so much, Linda!

The rain is pouring down outside as I am writing this column. As we are all eagerly waiting for the rain to stop so that we can dust off our telescopes and head out under clear skies, I want to mention some worthwhile indoor activities (other than grinding a new mirror or learning NGC objects by heart). Most people know the SETI@Home initiative (<http://setiathome.berkeley.edu/>), the chance to discover signals from extraterrestrial civilizations by donating your Internet-connected computer's idle processing time to the project. An even more engaging activity is Stardust@Home (<http://stardustathome.ssl.berkeley.edu/>). Dr. Scott Sandford from NASA Ames gave a talk on the Stardust sample return mission at the September 2006 General Meeting. In addition to particles originating from comet Wilde 2, the Stardust return capsule brought home tiny interstellar dust grains dispersed in 1,000 square centimeters of aerogel that needs to be examined under a microscope. The Stardust team calculated that it would take them 20+ years to scan the entire aerogel volume. So they created Stardust@Home. You can go to their

website and scan through microscopic images hunting for interstellar dust. Just the right distraction for long rainy winter evenings! And you can even earn an official recognition as a certified interstellar dust hunter.



I would like to announce another project that I am personally extremely excited about. Spaceflight, especially the Apollo Missions, is what got me and many others interested in astronomy. We will observe the 40th anniversary of the Moon Landing on July 20, 2009. I know, that is next year. But it was a long journey that finally brought us to the Sea of Tranquility on that day. The 18 months leading up to this event were unprecedented in history and barely repeated since. Inspired by Jim Cottle's talk about the Saturn program and the Apollo 11 launch at last December's Member's Night, I asked Jim for help with an ambitious project for the Newsletter. I am thrilled to report that Jim volunteered to help chronicle the journey to the Moon over the next year and a half. We are planning an introductory feature for the March Newsletter and there is much more to come throughout the rest of the year – so stay tuned.

Finally, I would like to remind us of the upcoming events in February. We have the Mount Tam members only SUP on February 9th and the City Public Star Party at Lands End on February 16th. As always: weather permitting - check the SFAA website and phone the hotline for updates. And don't forget the General Meeting with the special Total Lunar Eclipse event on February 20th!

DIRK LAMMERTS
PRESIDENT

TOTAL ECLIPSE OF THE MOON by John Westfall

The total lunar eclipse that takes place in the evening of February 20th, 2008, Pacific Standard Time (the morning of Feb. 21, Universal Time), is conveniently timed for the Bay Area, except that the Moon will rise in the east with the eclipse already in progress.

SCHEDULE OF EVENTS

The predicted sequence of eclipse phases is below. As the size and darkness of Earth's shadow varies from eclipse to eclipse, the times below are approximate by perhaps 1-2 minutes. (Times are in Pacific Standard Time, twilight and rising/setting times are for San Francisco, and directions are Celestial):

4:34.9 PM *First Penumbra Phase* begins – Moon's eastern limb first touches Earth's penumbral shadow. The Moon will still be below the horizon for us, but no matter, as this event is a theoretical one; the shading will be too faint to see until later.

5:42.9 PM *First Partial Phase* begins – Moon's northeastern limb contacts the edge of Earth's umbra. The umbra is illuminated only by light refracted through the Earth's atmosphere, so the umbra is very dark compared with the penumbra. We still can't see this event from San Francisco.

Sadly, the Moon rises, and the Sun sets, a few minutes after the partial eclipse begins (at 5:46 and 5:54 PM, respectively). However, when the Moon does rise, it will rise against the Earth's shadow in our atmosphere; the blue-grey shadow (the "twilight wedge") has a warm-hued upper border (the "Bow of Venus") – a good photo op.

7:00.5 PM *Total Phase* begins (and *First Partial Phase* ends), with the Moon's southwestern limb being the last part of its disk to enter the umbra. The Moon will pass near the edge of the southern portion of the Earth's shadow, so its southern limb should be fairly brightest compared with the rest of the disk.

7:21 PM *Astronomical Twilight* ends – the eclipsed Moon can now be seen against a dark sky.

7:26.0 PM *Greatest Eclipse* (umbral magnitude 1.111).

7:51.5 PM *Total Phase* ends (and *Second Partial Phase* begins), the Moon's southern limb passing from the Earth's umbra to its penumbra. Totality has been fairly brief; just 51 minutes.

9:09.1 PM *Second Partial Phase* ends, the Moon's northwestern limb being its last portion to move from the umbra to the penumbra.

10:17.2 PM *Second Penumbra Phase* ends (although any visible shading will probably have ceased 15-20 minutes earlier). The eclipse is over.

OBSERVING THE LUNAR ECLIPSE

General—A total eclipse of the Moon, although not as spectacular as a total solar eclipse, is much more leisurely, and is a memorable sight, especially during its total phase. It is worth watching even with the unaided eye, but binoculars or a small- or moderate-aperture telescope make it all the more impressive. Drawing and Photography—Artistically inclined persons often sketch the eclipse phases. Alternatively, an everyday camera, film or digital, can easily handle photography of the event, although the Moon will

appear quite small with a normal focal-length lens and time exposures will be needed during totality. Using a telephoto lens, photographing through a telescope's eyepiece, or, if possible, removing the camera lens and placing the camera at the telescope's focal plane, can give memorable results. Attractive wide-angle views of the Moon entering the Earth's shadow may be taken during evening twilight.

Danjon Luminosity—The darkness of the umbra can be estimated by describing the darkness of the Moon at greatest-eclipse with the *Danjon Luminosity Scale*, where:

- L = 0.0 Very dark eclipse. Moon almost invisible, especially at mid-totality.
- L = 1.0 Dark eclipse, gray or brownish coloration; lunar surface details distinguishable only with difficulty.
- L = 2.0 Deep red or rust-colored eclipse; with a very dark central part in the umbra, and the outer rim of the umbra relatively bright.
- L = 3.0 Brick-red eclipse, usually with a bright or yellow rim to the umbra.
- L = 4.0 Very bright copper-red or orange eclipse, with a bluish, very bright umbral rim.

Stellar Magnitude of the Eclipsed Moon—Another way to measuring the darkness of Earth's umbral shadow is to find the stellar magnitude of the Moon during the eclipse. You can do this is by reversing binoculars; turn the eyepiece moonward and look through the main lens. This shrinks the Moon, making it appear more star-like. This method also dims the Moon, allowing it to be compared with a bright star or planet. The amount of dimming increases with the binoculars' magnification (the aperture of the binoculars does not have an effect), expressed in magnitudes approximately as follows: 3X, 2.6 Mag.; 4 X, 3.2 Mag.; 5X, 3.7 Mag., 6X, 4.1 Mag., 7X, 4.4 Mag.; 10X, 5.2 Mag.

There are several bright comparison objects in the sky during totality; because they will be at different elevations than the Moon, a correction for differential atmospheric extinction should be applied. The objects, with their apparent visual magnitudes and their atmospheric-extinction corrections, are:

- Saturn +0.2 Mag.; add 0.1 Mag. to estimated lunar magnitude.
- Regulus +1.4 Mag.; subtract 0.2 Mag. from estimated lunar magnitude.
- Mars -0.1 Mag.; subtract 0.7 Mag. from estimated lunar magnitude.
- Sirius -1.5 Mag.; subtract 0.4 Mag. from estimated lunar magnitude.

(Note that, at mid-eclipse, Saturn will lie only 3.7° northeast of the Moon, while Regulus will be placed just 3.0° to the Moon's northwest.)

The reversed-binocular method works well during the partial phases, as well as during totality for bright eclipses. For the total phase of dark eclipses, memorize the brightness of the eclipsed Moon as seen with binoculars or a small telescope, then compare it with to a star defocused to the Moon's size, seen through the same instrument. (This places demands on your visual memory, so you may want to alternate between the Moon and the comparison object more than once.)

Timing Eclipse Events— As every lunar eclipse is different, there is scientific value in recording the aspects of each one. Timing particular events allows one to measure the size of Earth's umbra, which varies from that based on simple geometry. This can be as simple as noting the apparent time, to 0.1-minute precision, when the partial and total phases begin and end. With a telescope, you can also time when prominent craters enter and leave the umbra. The next section describes a special project for this eclipse.

Timing an Eclipse of the Moon with the Unaided Eye—In map-making and navigation it is essential to be able to find one's latitude and longitude. With GPS we now find these coordinates with ease. However,

prior to the invention of the telescope, the only practical way to find longitude involved two observers at different places noting their local times of the phases of eclipses of the Moon. The time difference between the two locations gave their longitude difference.

This procedure provided the only longitudes measured before the modern era. The results were not very accurate. Part of the error undoubtedly was due to the imprecision of timing events by “hours of the night.” But some of the error was also attributable to the naked-eye timing of the events.

Naked-eye timings of the phases of a lunar eclipse are rarely done these days, so there are no published data on their accuracy. For this reason, the writer invites observers to time, *without telescope or binoculars*, the visible umbral contacts of the total lunar eclipse of February 20, 2008 (i.e., beginning of totality, end of totality and end of partial phase).

Although the timings must be made without optical aid, this doesn't mean you can't observe most of the eclipse through binoculars or a telescope. However, to avoid any possible bias in the timings made with your unaided eyes, we recommend the following:

Beginning 10 minutes before the predicted time of an eclipse contact, view the Moon with the naked eye only. Also, during this period do not look at a timepiece or listen to time signals until the instant that you believe the eclipse contact has occurred. Then note that time to 0.1-minute precision. You can now resume viewing through binoculars or a telescope.

We hope that some observers will be interested in this minimal-technology way to observe an eclipse of the Moon. When the event is over, please send your results (for this special project only) to the writer: John E. Westfall, ALPO Science Editor, P.O. Box 2447, Antioch, CA 94531-2447; johnwestfall@comcast.net. Be sure to note where you observed from, as well as any circumstances, such as clouds or haze, which may have affected your results.

Conclusion.—For more information about observing lunar eclipses, such as determining photographic exposure times (which can be found by experiment with a digital camera), or more precise methods of measuring the eclipsed Moon's magnitude, check: the *Sky & Telescope* website: skytonight.com/observing/objects/eclipses, the *Observer's Handbook 2008* of the Royal Astronomical Society of Canada (pages 125, 129-133, 135 and 139), Philip Harrington's book *Eclipse!* (Chapters 4 and 8) and www.MrEclipse.com.

The Eclipse Section of the Association of Lunar and Planetary Observers welcomes lunar (and solar) eclipse observations. Send your drawings, photographs or other observations to: Michael D. Reynolds, Associate Dean, Math & Science, Florida Community College, 3939 Roosevelt Blvd., E-345, Jacksonville, FL 32205 (Astrogator90@comcast.net).

Time for me, Time for you, Time for SFAA

by Barbara Arrighi, aka, your new secretary

Time, time, time. Most of us don't have enough, some of us waste too much. I'm giving some of my extra, I mean, normally wasted time to SFAA this year to be your new secretary.

I joined SFAA in August 2007, soon after being transplanted to the Bay Area from San Diego. My reason for joining is probably the same one that most of you joined for, namely, to be surrounded by a community of people that share an interest in astronomy. Okay, that's the "official" reason I give, but truthfully, the perks of membership are what really enticed me.

The perks of membership? Just in case you forgot, they include: informative and often entertaining lectures given at the monthly meetings, the ability to borrow club telescopes for FREE, the public and member only star parties, and access to some very cool events, such as the annual tour of the Stanford Linear Accelerator Center and the yearly Yosemite trip. I'm probably forgetting others, but those are what excite me.

I was happily starhopping along, enjoying the perks of membership, when one day, Ken Frank approached me and asked if I would consider being the new secretary for SFAA. My initial thought was NO, but I decided to think it over. Ken invited me to a board meeting. Instead of being a stiff, boring meeting, it turned out to be relaxed and laid-back. I enjoyed sitting there learning about the "behind the scenes" of SFAA.

After my second board meeting, I told Ken that I would volunteer to be the new secretary. I realized that it was only going to take about 4 hours a month of my precious time, time that is normally wasted in one week just watching junk on television.

The truth is that SFAA needs other volunteers besides board members. The biggest need right now is for help at star parties. There are two or

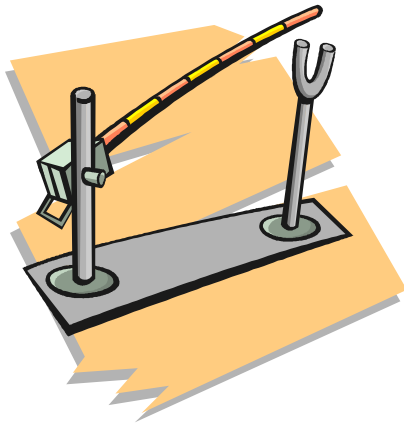
three star parties each month, depending upon the month. These include: the city star party, the Mt. Tamalpais public star party and the Mt. Tamalpais member only party.

If you have any extra time this year, please consider helping out at a public star party. Don't have a telescope? No problem. Either help with naked eye observing, bring some binoculars or borrow a club telescope. If you borrow a club scope, guess what, you can keep it for a month! Did I mention it's FREE to borrow a club scope? Don't know the sky that well? That's okay too, there are plenty of other things to do that would help out. As a bonus, if you help out at a Mt. Tam public star party, members are allowed to stay and observe after the public leaves!

Volunteer gatekeepers are needed for both the members only and the public star parties up on Mt. Tamalpais. No, you don't have to sit by the gate the whole time! Basically, you need to make sure that the gate stays closed during the viewing time so the public doesn't enter, and when members want to leave, they need to be escorted to the gate. Generally people are led down in groups so that you only need to go down a couple of times. You'll spend most of your time observing the night sky. So, if you're planning on viewing up at Mt. Tam once or twice this year, why not consider getting trained as a gatekeeper and helping out?

I'm giving SFAA 4 hours a month this year, others are giving more or less. That's the thing, to volunteer for SFAA, it doesn't have to be a time-demanding or long-term commitment. Think helping out at one star party a year isn't enough? Think again -- that's exactly what SFAA needs.

If you can give any time to SFAA this year and want more information, you can contact me at: secretary1@sfaa-astronomy.com.



GATEKEEPER TRAINING

SATURDAY . MARCH 8TH . 3:00 PM
MT. TAMALPAIS . Pan Toll Ranger Station

Training for gatekeepers will take place Saturday, March 8, 2008, 3:00 pm, at the Pantoll Ranger Station. Training is conducted by the Mt. Tam State Park staff and will take approximately 2 hours. Snacks will be provided. Join us for the all night Messier Marathon immediately following!

VOLUNTEERS ARE NEEDED FOR THE FOLLOWING DATES/ACTIVITIES AS INDICATED

MT. TAM
SPECIAL USE PERMIT
MEMBERS ONLY
(Always on a Saturday)

MT. TAM PUBLIC STAR PARTY

(Always on a Saturday)

February 9
FULFILLED
March 8

I VOLUNTEER NEEDED

April 5

I VOLUNTEER NEEDED

May 3

I VOLUNTEER NEEDED

May 31

I VOLUNTEER NEEDED

July 5

VOLUNTEERS NEEDED

August 2

VOLUNTEERS NEEDED

September 27 (SFAA Picnic)

VOLUNTEERS NEEDED

October 25

VOLUNTEERS NEEDED

November 29

VOLUNTEERS NEEDED

December 27

VOLUNTEERS NEEDED

May 10
VOLUNTEERS NEEDED

June 7
VOLUNTEERS NEEDED

July 12
VOLUNTEERS NEEDED

August 9
VOLUNTEERS NEEDED

September 6
VOLUNTEERS NEEDED

October 4
VOLUNTEERS NEEDED

SFAA ANNUAL AWARDS DINNER, JANUARY 19, 2008

A new location, a new renaissance with new commitment, new people and record attendance made for a wonderful dinner and recognition of the achievements of SFAA members throughout the past year.

OBSERVER OF THE YEAR - ELAN MORPURGO



SERVICE AWARD LINDA MAHAN



HERMAN FAST AWARD MICHAEL PORTUESI



WRITING CONTEST

ELAN MORPURGO – FIRST PLACE THE ONE-HANDED ASTRONOMER

Elan Morpurgo

It all started as a sort of a joke. I was wondering what to get my wife for her birthday some five or six years ago. As usual, I hadn't a clue. But I had some spare time on my hand and some loose change rattling in my pocket. So on one sunny autumn afternoon, I found myself heading to the mall.

As the saying goes: Never send a man by himself to a shopping center for you never know what he'll come back with. On this particular occasion, I returned home from my hunting expedition with a rather large and colorful box, which I proudly presented to my wife. She spent a couple of minutes unpacking it and admiring its contents before announcing that even though the idea was noble and the intention (she was sure) pure, I had, in fact, just bought myself a telescope!

What can a 'true man' do when confronted by such strong emotions? Should he kneel on the floor and beg for forgiveness? Should he swallow his pride and hurry back to the mall and try his luck again?

No, no way! Our macho man was not about to humiliate himself in private and most surely not in public. As I saw it, there lay before me only two good options: either commit Hara-kiri right there on the spot or become an astronomer. Having a strong (some would say insatiable) will to live as well as a strong aversion to blood; I chose astronomy to be my *métier*, though, in hindsight, I might have done myself a favor by choosing option "A".

As you can imagine, things deteriorated rather rapidly from there. I found myself standing on the roof of our house night after night squinting at the heavens through my new toy. And what a wonderful toy it was! With its three and a half inches of aperture, one eyepiece, whizzing plastic gears and electronics, my little ETX-90 was a real thing of beauty, probably meant more to be looked at rather than through. Still, I was convinced that the universe was about to reveal its secrets to me instantaneously, not withstanding my sheer foolishness, and total lack of knowledge in anything remotely astronomical. Not to mention a myriad of other annoying details such as the grove of oaks that hid a good chunk of the night sky, the bright light emanating from my neighbors window, and the ball of whitish haze that dominated the one treeless horizon in the direction of San Francisco. Still, in spite of all odds, or maybe because of them, I was having a blast seeing my first star clusters and nebulas.

Since I was basically clueless, I turned for help to the trusted instruction manual. One piece of advice that caught my attention was: "Join an astronomy club, attend a star party." Well, this sounded like sage advice. There may be others like me standing on other rooftops seeking to solve the same eternal questions: Who are we and what are we doing here?

So it happened that I became a card-carrying member of the San Francisco Amateur Astronomers. No longer did I have to observe alone. I bid good-bye to my perch on the roof with its obstacles and limitations and, in the company of my newfound friends, started observing from the flanks of venerable Mount Tam that suffered from most of the same obstacles and limitations sans my neighbors' annoying bright light. One quick glance at my fellow astronomers was all I needed to convince me that I was in a league of my own, and a very minor league at that. Surrounded on all sides by telescopes the size of the Transamerica building, me and my mini-scope felt like imposters.

If I was to hold my own, a return trip to the mall started to look more and more inevitable. Should I confront my demons and ask the same salesperson that only a short while ago told me without blinking an eye that my scope is "all I'll ever need" to sell me a bigger and better one that will allow me to join the telescope lineup on the mountain

without being the laughing stock of the club? Should I demand a written guarantee that it is indeed “all I’ll ever, ever, ever need”? After much internal debate and in order to avoid any chance of more humiliation at the mall, I went on-line and ordered a new scope from a dealer on the other side of the continent.

My new 8-inch Meade go-to scope was indeed all I ever needed or dreamed about (at least for a while). It certainly gave me a dose of respectably I so urgently needed and the heavens started to look a tad more like what I saw when I briefly glanced through other peoples’ scopes. Even though there remained a few purists that found it annoying to listen to the not-so-soft hum of the telescope gears in the stillness of the night, I knew I was in the ‘groove.’ Many of the celestial objects that beforehand were beyond or just barely visible, suddenly came into sharp focus. Not only the new scopes but also a seeming endless stream of add-ons and gadgets (to bolster my self-image) made astronomy so much more enjoyable and fun. The days of few eyepieces were long gone and it seemed like there was always something else to acquire that will make the experience ‘perfect.’ I felt as though I had finally arrived. The only obstacle to having a perfect night of observing was, as the saying goes: location, location, location!

So, each summer I joined the ‘mass migration’ of amateur astronomers that, like the now extinct herds of buffalo that once moved across the prairies, roam the backcountry looking for the perfect dark sky. From Lake Sonoma to Shingletown at the foot of Mount Lassen, on to the Oregon Star Party at the remote high desert of central Oregon, to the California Star Party at Lake San Antonio in southern Monterey County, I plied my trade. Some of those pitch-dark, star-filled nights under the glow of the heavenly river of milk, were indeed both spectacularly beautiful and awe inspiring. They were the hours and minutes that gave the whole enterprise of Amateur Astronomy its significance and true meaning.

Two full years with an eight-inch scope for a ‘true’, red blooded, and still eager astronomer is two years too long. Aperture fever was settling in once again with no relief in sight -- until I checked the for-sale ads and found myself a ten-inch monster that I hoped would calm my fervor. I drove halfway to L.A. and returned home that same day in the pouring rain with my new ‘fat baby’. It went on raining for day after day until it was time for me to go back to Israel to visit my family and friends without ever having a chance to use my new scope.

I returned home three weeks later all ready and eager to finally go out and find out what I had got. But it wasn’t to be: three days after my return, catastrophe struck in the form of a major stroke that happened during the night.

This time I found myself in the hospital instead of on a mountain and after five days in the intensive care unit, I was farmed out to a rehab facility where all they could do to help was to introduce me to the wonderful contraption named a “wheel chair” and provide me with a plastic brace for my lame leg. Once or twice a day, the nice doctor came by to confirm that I was still mostly alive even though my right side was completely paralyzed and I could hardly speak or make much sense.

But even during those horrific first weeks astronomy was not totally forgotten. The best place at the rehab center was an outdoor patio where one could escape the hospital-like atmosphere. It was on this patio that my new friend the wheel chair and I spent most of our ‘spare’ time. One evening, after what must have passed for dinner, I went outside to enjoy the mostly obscured view of the setting sun when the security guard on duty passed by and, without looking, locked the door behind me. I was left outside in the gathering darkness to do what I craved most: a star party for one!

That was nearly two years ago. Since then not a whole lot has changed, even though many who know me well will beg to differ with this, somewhat gloomy, assessment. My right hand is still mostly non-functional and my leg is still in a brace. But I can speak, oh boy can I speak. By trial and error and a lot of stubbornness and perseverance, I have taught myself how to manage with only my left hand. To my great surprise and delight even my telescopes can be managed and operated with one hand alone.

As to astronomy, not a whole lot has changed either. Most of the stars are still twinkling in their places, as far as I can tell. On moonless nights, you can still find my astronomy buddies and me stargazing on Mount Tam through my telescope though, surely, with a renewed sense of awe and appreciation.

CHERYL SCHUDEL – SECOND PLACE FROM A DREAMERS PEN

Cheryl Schudel

It's spring and we're all aglow as we see the heads of the seven sisters go.
Ancient sailors rained upon by Merope's tears, dance in joy at the beginning of a New Year.
Leo roars shaking his mane of long hair, his Regulus heart set on Virgo so fair.
And Venus comes and Venus goes and where she hides we do not know.
Down to the plutonic world to visit Chiron her icy lover, or up to Io her eruptive brother.

Summer, the swans afloat, followed close by an old sea goat.
Lyra the harp a ring in his strings, stays far away from Scorpio's stings.
The beehives abuzz with droplets of dew
Midsummer's dream tells me half the years through.

And Venus comes and Venus goes and where she hides we do not know.
At the altar she bestows her wishes that Deimos and Phobos make up with kisses.

Fall, as time seems to slow,
Skies full of water creatures show.
Days are shorter, and shadows grow.
Mars goes retrograde; it's true,
There's so much left to do.
Long nights, Beaver moon reigns full with light
Farmers gather reap and sow from the seeds they plant below.

And Venus comes and Venus goes and where she hides we do not know.
Behind the sun she hides for a season, until sweet Sirius lures her out with reason.

Winter and Orion the mighty hunter, his belt jewels sparkling like glass
Has a sharp sword created mostly of gas.
His red-eyed tormentor charges toward the galactic center.
Black hole there we're told, will let us pass, or take firm hold.

By gravity pulled the shortest day arrives, and then God bless us all, we make it to the other side.
We're slung around the galactic core, and through the veil of Cassiopeia's mighty door.
Looking back and forth in her mirror alone, leaving the old year behind she welcomes us home.

And Venus comes and Venus goes and where she hides we do not know.
Three times we curtsy before her crescent face.
Grant us favor to some day rise and sit beside her place.
The first the last forever be, the one we commit to memory.

THIRD PLACE TIE – JIM WEBSTER & JOHN DILLON

REVISITED: GENESIS OF ASTRONOMICAL INTEREST

Jim Webster

It was long ago and far away in another time and place. Much time was spent in the great outdoors. Crime and poverty didn't seem to exist. Homes had expansive lawns and large front porches that were in frequent use by their occupants. Backyards were used extensively at night in the summertime to watch multitudes of fireflies and the Milky Way under dark clear skies.

Across the street from where I lived were undeveloped lots used as a park and planted as a jungle forest. My friends and I often cared for God's beloved small creatures, stray cats and dogs, there. We frequently visited gracious neighbors and their beautiful gardens, and open fields nearby seemed to beckon us to run upon them. We were a privileged and coddled lot, my friends and I.

My father was an avid and rugged outdoorsman. We had many overnight fishing trips with blankets spread by the creek bank under open skies.

My mother, who was a brilliant and joyful person, seemed to know everything. She would patiently point out the constellations to me and tell me the names of various bright stars. She would have to tell me this frequently because the sky appeared to move and though I was fascinated, I would forget. She told me fascinating and intricate stories about ancient myths that past civilizations believed regarding the constellations. This held a deeply moving spiritual impact upon me.

Optical augmentation or enhancement by the use of a telescope or binoculars in such a dark but brilliant sky never occurred to me. It would seem distracting in retrospect when we had this beautiful canopied dome to view.

Later, there were social and technological waves of revolution in the form of air conditioning and televisions, which radically changed our way of life. Rarely did we look up at the night sky or think about it. People in large cities had never even seen the night stars. Our spiritual life seemed to falter. There didn't seem to be pertinent needs to even know what phase the moon was in or to know the Judaic holidays, which are based upon moon phases.

There have been many astronomical happenings that I found impressive. These included unexplained mysteries, such as formations of large green balls of light rapidly moving in the night sky and explosions of blinding light in the dark sky, among others. In the realm of the more easily explained physical phenomenon, I have seen massive meteoric fireballs seemingly explode immediately overhead, visual impacts upon Jupiter, huge bright comets and meteor storms. Once after leaving a deathbed scene at one of our great Midwestern hospitals, I stopped on my drive to the family home at a farm once owned by old friends, now a wildlife refuge, and walked into a darkening field replanted with native buffalo grass and found myself surrounded by literally millions of fireflies brilliantly lighting my path and the new moon dark sky.

As interesting and impressive as I found these astronomical events and others, none of these approximated the spiritual, emotional, intellectual or plainly visceral impact and indelible impressions as the gestalt of my genesis of astronomical awakening in my early childhood. I remember the fascination of the romance, poetry and physics that the night sky held for me as I stood there amazed, gazing at the wondrous glories of our heaven.

APOCALYPTO-APOCALIMPO-APOCALIMBO-APOCABIMBO - APOCA...

John Dillon

I just saw “Apocalypto” - Mel Gibson’s blood and guts foray into Mesoamerican history. I have a particular interest in Mundo Maya and archeoastronomy, and I had once met the main archeological consultant on this film, so I overcame my Gibsonian aversions and bought a bucket of popcorn and sat in the dark for 2 hours.

This revue is for amateur astronomers only. I will not comment on the anthropological, or sociological, or anatomical, or hematological, or blood-splattered gore, or vile and gruesome butchery, or throbbing sli... [excuse me, I need to take a break for a minute]

OK, back to astronomy.

The central event of the film is the horrific ritual slaughter of captured slaves staged to ward off a total eclipse of the sun somewhere in the Yucatan peninsula 2 days prior to the arrival of the 1st Spaniards. [The classical Mayan civilization collapsed 500 years before the Spanish arrived! But I promised not to comment on the non-astronomical aspects of the film. Ignore this.] Planning this bloody spectacle would have required precise knowledge of where and when an eclipse would happen. The Mayans were exceptionally sophisticated observers of celestial mechanics (greater than any other New World culture, and the equal of most Old World ancients as well), and as advanced as their mathematics was – they could not have calculated that the path of totality would pass over their ritual center at a specified time! Like a very few Old World civilizations, the Mayans discovered the 19 year pattern of eclipse “seasons”, the times when eclipses were possible, but they could not have compensated for the tiny perturbations of the moon’s orbit that have a major impact on the precise location of the path of totality. Only rarely would a “predicted” eclipse actually be seen. In any case, their knowledge of eclipses was extensive and they would have well understood that to make an eclipse go away - just sit and wait. However, a precise and reliable prediction would not have been possible – and “close” doesn’t count in ceremonial eclipse rituals. A partial eclipse is a total non-spectacle! Since a total solar eclipse was the promised big draw for the communal gathering and ritual sacrifice in this story, it’s failure to occur would likely have roused the disappointed throng to call for the heads, and internal anatomy, of the priests! That should encourage sacerdotal caution. [Look it up – you don’t get many chances to use a word like that.]

I will grant Mel some leeway on these intellectual and academic points (though they are central to the story’s anthropology). Instead I will focus on how he did with portraying an eclipse as a Mayan spectator would have seen it.

Mel had the moon zipping across the face of the sun from 1st to 4th contact in about 2-3 minutes, rather than 2-3 hours. First of all, as we amateurs astronomers know, you can’t look up and actually see the moon move across the sun – not without filters. I saw no pre-Columbian mylar in the crowd scenes. That’s why partial eclipses are such non-events, even today. But Mel’s priests lucked out with their prediction and as the assembled throng watched, the darkness increased in proportion to the disappearance of the sun - when half the sun was covered, things were half as bright. Seconds later, when he had the sun mostly covered, it was mostly dark. The actual experience of an eclipse is very otherwise. For those who have witnessed an eclipse, it is striking that there is little sensation of light attenuation till the sun is almost entirely covered (the eye/brain combo is very adaptable to light level changes). With only a faint sliver of sun exposed there is a palpable change in the intensity and quality of daylight and then, suddenly, darkness sweeps out of the west and engulfs the viewer in the shadow of the moon. The visceral sensation is such that even modern sophisticated eclipse chasers shiver from something other than the drop in temperature. The reality of a total solar eclipse is more visually stunning and more emotionally powerful than the faux spectacle Mel provided. And emotional spectacle was clearly a goal for this film. A few bucks for an astro-consultant would not have registered on the bean counter’s spreadsheets and could have been recouped in enhanced popcorn sales. I was always near a phone, but it never rang.

But I held the most egregious error for last.

When the eclipse ends, Mel’s hero, Jaguar Paw, escapes and darts off into the jungle and runs all night - under the glare of a full moon! A FULL MOON!! On the night of an eclipse? Mel, MEL! While the other errors are perhaps too subtle for your target audiences to notice or care about, having a full moon on the night of an eclipse portrays a complete ignorance of what a solar eclipse is and how it happens. Next time call your local amateur astronomy club for advice.

Oh the Horror, the Horror!



ASTROPHOTOGRAP[HY

FIRST PLACE – NORMAN MAHAN – ROSETTE NEBULA



SECOND PLACE – GEOFFREY COLLINS – ANDROMEDA
(IMAGE NOT AVAILABLE)

THIRD PLACE – CHERYL SCHUDEL – (THREE IMAGES)
FIRST IMAGE – MT. TAM SUNSET



SECOND IMAGE - MILKY WAY



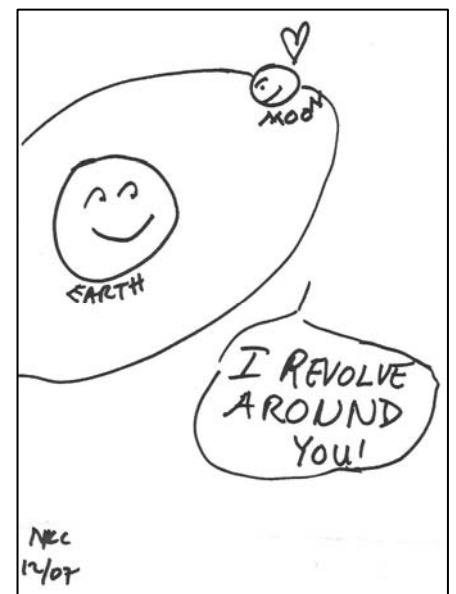
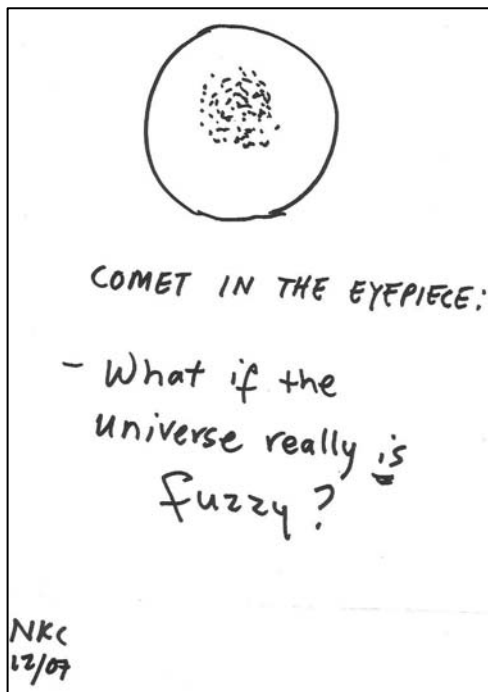
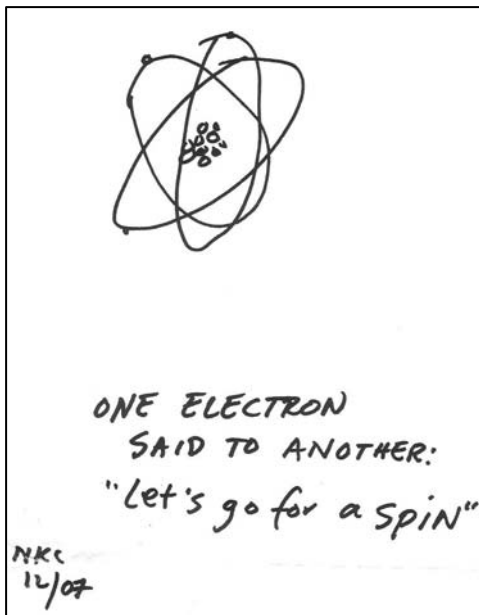
THIRD IMAGE - ORION NEBULA



ART CONTEST
 FIRST PLACE
 CHERYL SCHUDEL
 SATURN CAKE



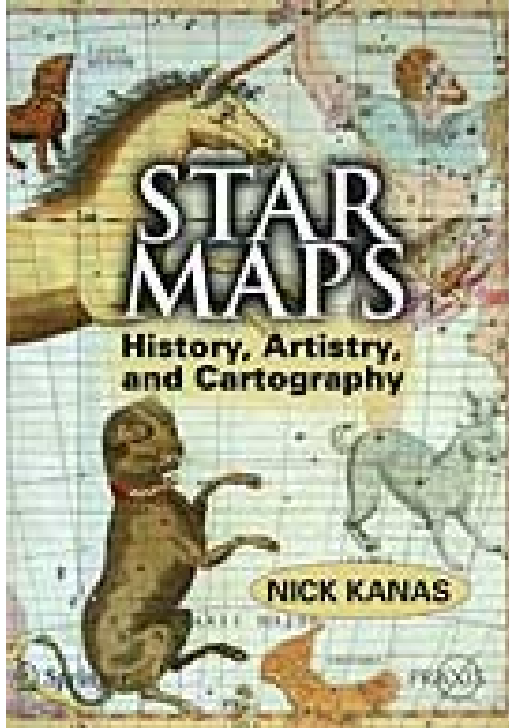
SECOND PLACE
 NANCY COX
 ASTRONOMY
 CARTOON SERIES



STAR MAPS: A BOOK REVIEW

by Ken Frank

Dr. Nick Kanas lecturer, author and San Francisco Amateur Astronomer member has a new book out entitled Star Maps History, Artistry and Cartography. The deceptively simple title hides a plethora of knowledge and beauty of celestial atlases and prints, many in Nick's personal collection.



You can find the book at <http://www.praxis-publishing.co.uk/view.asp?id=273&search=home>

Star Maps is a dangerous combination in book form for me. I have a penchant for rare book collecting and charts. Nick has gone to great lengths to compile these collections and conveniently rolled them all into one concise edition.

From references of Muggles via Isaac Frost to Nicolas Camille Flammarion assisting Urbain Jean Joseph Le Verrier discovering Neptune at the Paris Observatory, I learned far more than cartography or chart collecting ideas.

In the preface Nick reminds us nostalgically of when he joined the SFAA, bought an 8 inch Newtonian and was in need of a good star atlas and a warm jacket while up on Mt. Tam observing. Nick also thanks the SFAA in his acknowledgments section for support and encouragement. He started out with Norton's Star Atlas and was intrigued by the imagery found in antiquarian prints, hand illumination and collecting. What he felt missing though was a book that combined the appreciation and love of these images and charts and a practical guide to the evolution and understanding of these beautiful depictions of the night sky.

Nick and his wife Carolynn have been passionately collecting celestial prints and star atlases since 1977.

SFAA GENERAL MEETING – APRIL 16, 2008

FEATURED GUEST SPEAKER

**DR. NICK KANAS, PROFESSOR OF PSYCHIATRY, UCSF, AND SFAA MEMBER
CELESTIAL MAPPING FROM ANTIQUITY TO TODAY**

Save the date for SFAA's general meeting on April 16, when Dr. Nick Kanas will trace the history of celestial cartography from the time of the classical Greeks through the Golden Age of pictorial celestial maps to modern day star atlases. He will illustrate his talk with photographs from antiquarian celestial books and prints taken from his recent book: Star Maps: History, Artistry, and Cartography (Springer, 2007).

WHAT'S UP AT NASA

Jane Houston Jones

There are a lot of really interesting multimedia offerings on the JPL website this month.

On JPL's front page <http://www.jpl.nasa.gov/index.cfm> you'll find:

What's Up - a short podcast showcasing a unique view of the night sky. January's podcast is available, a little later than usual, due to so much going on in space and science-wise, in January, including,,

Cassini at Saturn Interactive Explorer - NASA's first 3-D interactive mission experience using a web browser. Try it and let me know what you think!!!

Explorer 1, the first US Earth-orbiting satellite, launched January 31,1958

Scroll past the top features to News and Features for:

Cassini finds Rhythm in Saturn's Rings

January 29 - Asteroid zooms by Earth

And finally, NASA and Beatles celebrate anniversaries by beaming "Across the Universe" into Deep Space. <http://www.jpl.nasa.gov/news/news.cfm?release=2008-019>

February 20 is the date of a great early evening total lunar eclipse, and February 24th is Saturn Opposition. Both offer great opportunities to show what's up!

Jane

--

Jane Houston Jones

Senior Outreach Specialist, Cassini Program

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Pasadena, CA 91109 818-393-6435

jane.h.jones@jpl.nasa.gov

Cassini SOC <http://soc.jpl.nasa.gov/index.cfm>

What's Up? <http://education.jpl.nasa.gov/amateurastronomy/index.html>

City Arts and Lectures presents
NEIL DEGRASSE TYSON
The Annual Claire Matzger Lilienthal Distinguished Lecturer
In conversation
Tuesday, February 19, 2008
Herbst Theatre, 8pm
San Francisco
Tickets . \$19 each

Whether discussing the universes' origins as host of NOVA's "ScienceNOW" or asserting that Pluto is a not a planet on "The Colbert Report," astrophysicist Neil deGrasse Tyson translates the universe's complexities for a broad audience. Known as the great explainer of all things cosmic, Tyson first became known in the astronomy community by lecturing on the subject at the age of fifteen. He is currently the director of New York's Hayden Planetarium at the American Museum of Natural History, where he also teaches. Tyson has written seven popular books including the bestselling *Death by Black Hole* and the memoir *The Sky Is Not The Limit*. His professional research explores star formation, dwarf galaxies, exploding stars, and the structure of the Milky Way, topics which he writes about in his long-running "Universe" column in Natural History magazine. Tyson's varied honors include the NASA Distinguished Public Service Medal and People Magazine's 2000 "Sexiest Astrophysicist Alive."

Most City Arts & Lectures programs can be heard in edited and delayed broadcasts in the San Francisco Bay Area on KQED-FM (88.5) on Sundays at 1 pm, Tuesday evenings at 8 pm, and Wednesday mornings at 2 am. Neil's program is scheduled to be aired starting on May 4th.

For More Information see: <http://www.cityarts.net>

THE INTERNATIONAL DARK SKY ASSOCIATION



As an individual SFAA member, you can help The International Dark-Sky Association (IDA). The IDA seeks to preserve dark skies worldwide for the benefit of society by promoting good outdoor lighting practices and educating the public on the rewards of preserving the night sky.

<http://www.darksky.org/mc/page.do?sitePageId=55055&orgId=idsa>

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Spring Benjamin Dean 2008 Spring Lecture Series

The Morrison Planetarium and the California Academy of Sciences are pleased to announce the Spring 2008 Benjamin Dean Lecture Series in Astronomy. We look forward to seeing you at these exciting lectures.

Monday, February 25

DR. ROBERT HURT
CALIFORNIA INSTITUTE OF TECHNOLOGY

VISUALIZING THE INFRARED UNIVERSE: THE IMAGERY OF NASA'S SPITZER SPACE
TELESCOPE

Astronomy is arguably the most visual of sciences, even when it transcends the limits of mere human vision. Astronomers are but observers, reconstructing events long ago and far away by collecting light across the entire spectrum of light. NASA's Spitzer Space Telescope presents interesting challenges in visualization. How do you represent data from beyond the visible spectrum that can be seen and admired, but also understood? What role does art play in communicating the science of the universe?

Monday, March 31

DR. RACHEL BEAN
CORNELL UNIVERSITY

THE DARK SIDE OF THE UNIVERSE

Recent cosmological observations have provided an extremely puzzling insight into the nature of the universe. 95% of the universe's contents are invisible or "dark", with 25% being "dark matter" and the majority in a mysterious form labeled "dark energy". Understanding the origins of the dark universe is requiring collaboration between theorists and observers, and between astronomy and fundamental particle physics and represents one of the major challenges in physics today.

SILICON VALLEY ASTRONOMY LECTURES
Smithwick Theater, Foothill College
El Monte Road and Freeway 280, Los Altos Hills
Non-technical Astronomy Program . Free and open to the public
No background in science required for this program

Wednesday, Jan. 23, 2008, 7:00 pm
Multimedia Presentation

ASTRONOMER JOEL PRIMACK, UNIVERSITY OF CALIFORNIA, SANTA CRUZ
and
NANCY ABRAMS, PHILOSOPHER AND ATTORNEY

THE VIEW FROM THE CENTER OF THE UNIVERSE:
DISCOVERING OUR EXTRAORDINARY PLACE IN THE COSMOS

Remarkable discoveries in the last decade are transforming "cosmology," the study of the universe as a whole. Our cosmos appears to be made mostly of "dark matter" and "dark energy," with the stars and galaxies we can see making up only a tiny fraction of it. We are beginning to understand the first few minutes after the Big Bang and the way in which the structure of the universe arose.

Joel Primack and Nancy Abrams' program is both a progress report and philosophical reflection on our modern view of ourselves and our place in the cosmos. Using the latest science, cosmic images and visualizations, plus music, themes from myth, and even cartoons, they will illustrate how the new ideas about the universe have widespread cultural implications.

Joel Primack is an award-winning physicist and cosmologist, who writes for both his colleagues and the public. Nancy Abrams is a former Fulbright Scholar and student of mythology. While working for the Congressional Office of Technology Assessment, she invented a method called "scientific mediation" that lets government agencies make intelligent decisions despite scientific uncertainty. Together they teach a course on "Cosmology and Culture" at the University of California, Santa Cruz. This led to their popular book, published in 2006, with the same title as this lecture.

This interdisciplinary program is something of a departure from our usual series of lectures, but should intrigue and challenge everyone interested in the meaning of science for our times.

Parking on campus costs \$2.

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

The program is co-sponsored by

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

SFAA 2008 Calendar of Events

Mount Tam Public Events

Public nights on Mount Tamalpais start with a lecture in the Mountain Theatre, followed by public viewing in the Rock Springs parking lot. SFAA members may observe privately from 11 pm-2 am. SFAA's access to SUP private events (below) is contingent on our support of the Mt. Tam public events.

- May 10, sunset 8:09 pm
- June 7, 8:30 pm
- July 12, 8:32 pm
- August 9, 8:09 pm
- September 6, 7:31 pm
- October 4, 6:47 pm

Mount Tam SUP Events

Special Use Permit observing nights on Mount Tamalpais are private and open *only* to SFAA members. Please arrive by sunset (times listed below). A permit is required for each car. We must vacate the mountain by 2 am except on specially approved nights (such as Messier Marathon).

- January 5, 5:05 pm
- February 9, 5:42 pm
- March 8 (Messier Marathon), 6:11 pm
- April 5, 7:37 pm
- May 3, 8:02 pm
- May 31, 8:26 pm
- July 5, 8:35 pm
- August 2, 8:17 pm
- August 30, 7:41 pm
- September 27 (Annual Picnic), 6:58 pm
- October 25, 6:18 pm
- November 29, 4:51 pm

December 27, 4:58 pm

City Star Party

CSP events start at sunset (times listed below) with a public lecture, followed by public viewing. Land's End (LE) and the Randall Museum (RM) are the locations for the CSP this year.

- January 12 (LE), 5:11 pm
- February 16 (LE), 5:49 pm
- March 22 (RM), 7:17 pm
- April 12 (LE), 7:43 pm
- May 24 (LE), 8:21 pm
- June 21 (RM), 8:36 pm
- July 26 (LE), 8:23 pm
- August 23 (LE), 7:51 pm
- September 20 (RM), 7:09 pm
- October 18 (LE), 6:27 pm
- November 8 (LE), 5:04 pm
- December 20 (RM), 4:51 pm

Weather Updates

Weather updates for all SFAA star parties are available the afternoon of the event on the SFAA Hotline: 415-289-6636 (289-NOFOG).

Board Meetings

2nd Tuesday of every month, at the Randall Museum. 7 pm. All SFAA members are invited.

- January 8
- February 12
- March 11
- April 8
- May 13
- June 10
- July 8
- August 12
- September 9
- October 14
- November 11

December 9

General Meetings

3rd Wednesday of every month (**Note: except January**) at the Randall Museum. Doors open 7 pm, announcements 7:30 pm, guest speaker 8 pm. All are invited.

- February 20
- March 19
- April 16
- May 21
- June 18
- July 16
- August 20
- September 17
- October 15
- November 19
- December 17

Other SFAA Events

- Annual Dinner: January 19
- Messier Marathon: March 8 (Alternate night April 5)
- Spring Astronomy Day: May 10
- Fremont Peak: May 30-31
- Annual Picnic: September 27
- Yosemite Weekend: TBA
- Fall Astronomy Day: TBA

Other Astronomy Events

- Riverside Telescope Maker's Conference: May 23-26
www.rtmcastronomyexpo.org
- Grand Canyon Star Party: June 21-28
www.tucsonastronomy.org/gcsp.html
- Golden State Star Party: July 2-5
www.goldenstatestarparty.org
- Stellafane: July 31- August 3
<http://stellafane.org>
- Oregon Star Party: August 28-31
www.oregonstarparty.org
- Fremont Peak Star-B-Q: TBA
www.fpoa.net
- California Star Party (Calstar): September 25-27
www.sjaa.net/calstar

2007-2008 MEMBERSHIP DUES

SFAA membership now comes due in June. Before now, dues were payable in the month a member first joined. Last year, the SFAA board voted to make everyone's dues payable at the same time - in June of each year. This was done for two reasons: 1) to save a great deal of work for our volunteer Treasurer, present and future, and, 2) for the convenience of members - it's easier to remember! In the past, many members forgot their due date and their membership unintentionally lapsed.

During this first year of transition: If your present membership runs past June 2007, just pay a prorated fee to extend your membership to June of 2008. Simply deduct 1/12 from this year's dues for each month already paid. For example, if you last paid your membership in September of 2006, you have a credit of three more months. Subtract 3/12 (1/4) from your annual fee and just pay that amount. We trust your math. Next year, and every year thereafter, everyone will pay only in June. Easy!

We realize this conversion process may be a bit confusing and more work for some. But this is a one-time transition and it will lessen the work and confusion for all the years to come!

N.B. for those of you who have a club discounted *Sky and Telescope* magazine subscription, you will need to renew your subscription separately. The magazine will send you a renewal notice. In the past, you had to send that renewal notice with payment to the SFAA; now you can mail your *Sky and Telescope* subscription renewal payment directly to *Sky and Telescope*. **Note: Not renewing your club membership on time may mean your magazine subscription(s) will also terminate.**

Thanks for bearing with us during this transition process -- it'll all seem worth it next year! Just complete the membership form on the last page of the newsletter and submit with your renewal check to:

San Francisco Amateur Astronomers
P.O. Box 15097
San Francisco, CA 94108

YEARLY RATES FOR MEMBERSHIP

\$10 – Youth (under 18) Student Membership	\$25 – Individual Membership
\$30 – Family or Foreign Membership	\$40 – Institutional Membership
\$75 – Supporting Membership	

MEMBER BENEFITS INCLUDE

- Subscribing to our Announcements mailing list to receive newsletter, activity and event announcements.
- Interaction with world class speakers as they present cutting edge astronomical research
- Discounts on *Sky & Telescope* and *Astronomy* magazines*
- Discounts on equipment and accessories at local telescope retailers
- Annual club Astrophotography, Literary & Art Awards
- Social events, such as our annual picnic and our awards dinner
- Club telescopes – use one of the club's loaner scopes on a month-to-month basis
- Yosemite Star Party – held at Glacier Point exclusively for SFAA members
- Access to events and resources in Northern California and beyond
- Field trips – to observatories and other locations of scientific interest, such as Mt. Wilson Observatory in Pasadena, Chabot Space and Science Center, Fremont Peak, and the Stanford Linear Accelerator Center
- Extended observing hours at the Mount Tamalpais Astronomy Program
- Access to dark sites in Northern California

San Francisco CA 94115

POB 15097

San Francisco Amateur Astronomers

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 \$10 Youth/Student _____
 \$25 Individual _____
 \$30 Family _____
 \$40 Institutional _____
 \$75 Supporting _____

Members pay one half the amount listed below
 Membership is billed for each upcoming year on June 30. Between January 1 and June30, new

MEMBERSHIP APPLICATION

San Francisco Amateur Astronomers
 P.O. Box 15097
 San Francisco, CA 94115



Information Hotline: (415) 289-6636

Web Page: www.sfaa-astronomy.org

Sharing the Wonders of the Universe

Has your membership expired? Your mailing label includes the month and year through which your membership is paid. If it is past, your membership has expired and this may be your last issue.