

# BULLETIN

volume 83, issue 5 *May 2009*

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**OUR 82nd YEAR OF  
ASTRONOMY IN LOS  
ANGELES**

**Los Angeles Astronomical Society**  
Griffith Observatory  
2800 East Observatory Road  
Los Angeles, CA 90027

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*Editor's Corner*  
*Public Support*

**D**uring our public events such as the Griffith public star parties, and the public outreach programs, we need people without equipment to answer questions, to give the telescope operators a chance to go to the restroom or take a snack, and to help with crowd control. So please consider dropping by and helping out a bit. It's a great chance to meet with the public and help our society with one of its more visible public efforts.

We're still feeling our way forward with the process of cleaning up and developing the usage rules and procedures for the Garvey Ranch facilities. Please see page 5 for more details.

We're getting more details considering the jackets with our LAAS logo on them. See page xx for details.

My thanks to all who have contributed to the success of the bulletin. Please consider writing or submit images. Articles need to be 1,500 words or less. Submit only a few images at one time, each with its own caption. The deadline for submitting bulletin material is the 10th of each month. If possible, please submit electronically to:

BulletinEditor@laas.org

Material may be sent to the LAAS address listed at the top of the column at left, but timely reception and publication cannot be guaranteed. ✧

## *RTMC Astronomy Expo*

May will be highlighted by the annual RTMC Astronomy Expo. The 2009 RTMC will be held over the Memorial Day weekend from May 22 to May 25. This event attracts upwards of 2000 amateurs from many states. We have even had "mates" from Australia. The LAAS will have a booth where we can brag about our Society and sell some items as a fund raiser to support LAAS functions, just like last year. This consists of a 15' square enclosure with tables and chairs. Volunteers will be needed at the booth for 2 hour increments. There will be a sign up sheet at the May general meeting. Also, if you have any odds and ends that are no longer used, donations will be appreciated. We will see you up there.

D. Sovereign

## *Garvey Ranch Observatory Clean up and Policy update*

We're continuing with the process of cleaning up the work shop at Garvey Ranch Park, including the development of procedures and policies concerning the storage of items, so your friendly neighborhood LAAS board asks for everyone's patience and understanding in the coming months.

We need help in this endeavor, both in organizing, moving stuff, writing catalogs, et al. Please contact the following people.

**PJ Goldfinger : [pj@chara-array.org](mailto:pj@chara-array.org)**

**Mary Brown : [nwwrgz@yahoo.com](mailto:nwwrgz@yahoo.com)**

**David Sovereign : [ddsovereign@yahoo.com](mailto:ddsovereign@yahoo.com)**

## *Special Video*

Luis Ashelford sent me this alert.

"400 Years of the Telescope, A journey of science, technology and thought" documentary. Panoramic visuals, cutting-edge technologies and introspective contemplations position "400 Years of the Telescope" as the must-see cinematic feature for the International Year of Astronomy in 2009.

Overview of the Documentary is available at:  
<http://www.400years.org/documentary.php>

The trailer is available on YouTube at:  
<http://www.youtube.com/watch?v=UFm6gubuP2o>

# Mt Wilson 60" Nights



LAAS has arranged for two half-nights and one full-night at the Mount Wilson 60-inch telescope this year. All three are New Moon nights. Half-nights are until 1:00 am.

Aug 21st Fri (half night)  
Sept 18th Fri (half night)  
Oct 16th , Friday (full night)

Only LAAS members are allowed to sign up. If there is still room two (2) weeks prior to the date, paying guests will be permitted. Everyone who shows up, whether family member, friend, or guest, will have to pay in order to be allowed in the 60-inch telescope observatory. The cost is \$80 per person for the full night (no half night reservations on a full-night outing), and \$45 per person for the half night. We are allowed to accommodate only a limited number of participants at each session, and your reservations are being accepted on a first come, first serve, basis.

***To secure your reservation, send in your request AND A CHECK payable to LAAS to our Treasurer at:***

P.O. Box 56084  
Sherman Oaks, CA 91413

Any LAAS member who has not been to a 60-inch night at Mount Wilson should consider it as an opportunity to visit astronomy history. To see the location and equipment used by giants such as Shapley and Hubble will add to your appreciation of their contributions.

The scope will belong to LAAS for the time indicated. We mutually agree upon which objects to view. Often, a member is the operator, so it is a very comfortable environment. (Do bring a coat, however). The viewing is without a doubt the best you are likely to see in your lifetime.

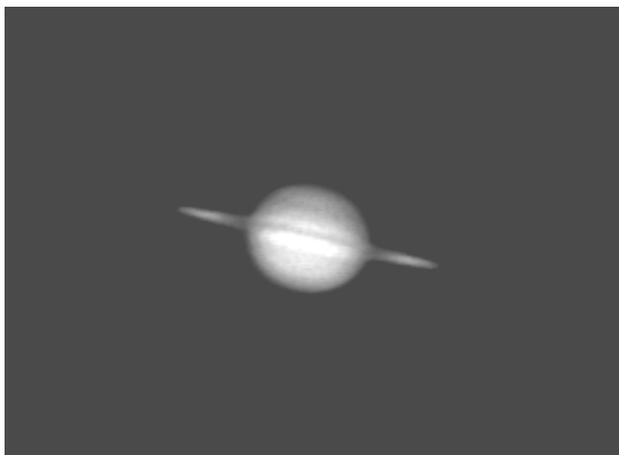
If you need any further information about attending these nights on Mount Wilson, contact our Treasurer at [treasurer@laas.org](mailto:treasurer@laas.org) or by mail at P.O. Box 56084, Sherman Oaks, CA 91413. ✧

# *Nights with the Mt Wilson*

## *60-inch*

*By David Nakamoto*

I've been up several times to see through the 60-inch, the last being the 2003 Mars Opposition night. For those that have not experienced a night using the Mount Wilson 60-inch Cassegrain telescope, I can say that it was one of the most enjoyable times I've had on any telescope to date. The extremely long focal length of 960 inches (80 feet or nearly 27 yards) means that the field of view is very narrow, and even the largest eyepiece available with a focal length of 100mm(!) means a magnification of 240x and a field of view of 11 arc-minutes. This is the same magnification as an 8mm eyepiece through an 8-inch f/10 SCT. The field of view is the same as the image of Saturn shown below if you hold the image 24 inches from you.



Because of the small field of view, galaxies are not really suitable for seeing through this telescope. The largest, brightest ones are actually much larger than 11 arc-minutes and therefore you can't see the entire galaxy. This includes the Andromeda galaxy M31, the Triangulum galaxy M33, and even NGC 253 the Sculptor spiral. Also, limitations in the fork mount limit how far south you can point the telescope. For example, during the 2003 Mars opposition, Mars could only be viewed by taking off some non-essential portions of the mount and then having two observers look carefully as the third moved the scope south. I was one of the observers, and the portion of the scope I looked at came within 1-inch of

*(Continued on page 6)*

the mount!

Despite the limitations, many objects look very bright and startling through this scope. During my observing sessions, I remember that the Cat's Eye nebula, NGC 6543 in Draco, was so bright that its image could be taken by a digital camera in less than a fraction of a second. Although not as bright, many planetary nebula look much brighter than through even large amateur instruments, and show details more readily and easily. The faint moons of Saturn, Tethys, Dione, and even Enceladus, were easily visible. Even with the rings tilted towards the observer so their brightness tends to drown it out, Mimas was just visible. Jupiter shows amazing detail, and the four Galilean moons are no longer small dots, but begin to show themselves as worlds. The advantage of the 60-inch is that even novices can see these things easily, and more experienced observers can see more than they could with even large amateur instruments.

That's not to say that everything's pristine. Just as with all telescopes, seeing conditions affect your experiences at the eyepiece, and with such large magnifications, the 60-inch suffers more than most. On average seeing nights, the limit on the size of details can be a couple of arc seconds, producing quite blurry images on the planets. On the other hand, Mount Wilson is famous for having nights where the seeing goes rock steady, mainly due to the relatively frequent occurrence of inversion layer events over the greater Los Angeles area. On these nights, the telescope really shines.

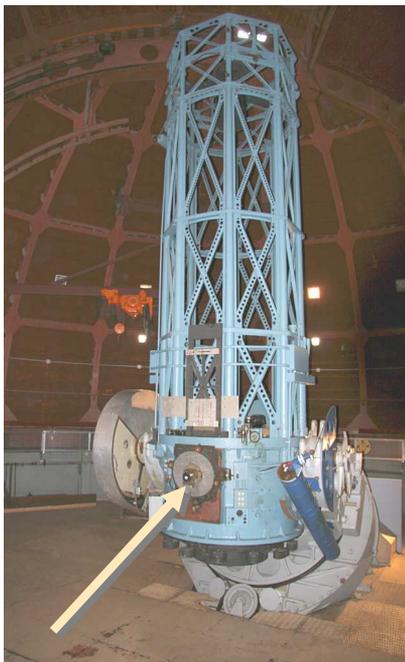
(By the way, amateurs can take advantage of these nights also, albeit with city lights all around, and get more out of their own equipment. Such nights are characterized by the stars not twinkling, or twinkling very slowly. These are the nights to see the moon and planets, and even those deep sky objects that were barely visible, since seeing blurs these objects and makes them fainter and have less contrast.)

Average time at the eyepiece per observer is highly dependent on how many objects the group as a whole wishes to see, and what other activities the group is willing to allow. For instance, short snapshots of things through the eyepiece with a camera are often permitted, but long exposures are not. I tried to use a web camera, but after 10 minutes of frustration trying to get something to focus on the camera, I gave up. This was due to (1) the narrow field of view of web cameras which did not permit any stars from appearing in the field of view, (2) the fact that I could not use the camera with an eyepiece, so focusing had to be done without an eyepiece, and (3) I didn't want to take up too much time because 19 other people wanted to use the telescope. On the other hand, during the Mars 2003 opposition, we stayed on Mars to try and see as much detail as we could.

Although the Wilson staff supplies a list of objects they've deemed most visible

*(Continued on page 7)*

through the 60-inch, visitors can make suggestions, but some homework is needed. Galaxies are, by and large, not good targets. Only a few show anything. This is because the most popular amateur objects are larger than the field of view of even the 100mm eyepiece, and all have low brightness per unit area of sky, and even the 60-inch can't compensate for that. Diffuse nebulae are even worse; very low surface brightness and most are quite large. All open clusters and almost all globular clusters, the latter either being so large that only the core can be seen, such as M13 (20 arc-minutes) or M2 (16 arc-minutes) or are too far south. Small objects are best, but some care must be given with these. For instance, Uranus and Neptune are still 1/10 the size of Saturn's sphere, and even at 480x magnification will appear both small and featureless. Pluto is always a point of light, and picking it out of the other 13th magnitude stars surrounding it is always challenging.



The eyepiece to the 60-inch is located near the base of the truss assembly that makes up the tube of the telescope. Basically, it's at the other end of the "tube" as compared to a Newtonian. The arrow in the image above points to it. A ladder is necessary to reach it, unless the telescope is pointed straight up, in which case you can stand on the floor of the observatory and look through the eyepiece. Any other position, and you need to use a large ladder supplied by the observatory. It has a platform at the top. But when the telescope is pointed south, you actually step onto, and even rest your body on the telescope! Since the telescope weighs many tons, your weight does not cause the telescope to shift, quite the opposite experience many of us have, especially at public star party nights, when the slight touch of the telescope by people is enough to move it. And even though

you're under the protection of a dome, something few amateurs regularly know, while you're protected against the wind, you're not protected against the cold! Always be prepared to dress warmly, even during the Summer months.

No matter what object you observe, the 60-inch offers a view that few others can give you. Securing nights up there is difficult, so take advantage of the resources of the LAAS and spend a night or two with the 60-inch. ✧

# *Reaching Out: What I Have Learned at the Schools*

*By Herbert Kraus*

In recent years I have found participating in LAAS' school outreach programs to be among the most satisfying of my astronomical activities. But when it comes to selecting astronomical objects at which to point my telescope and show the school kids – and their parents and teachers – I have learned some lessons. I thought I would share these with the readers of this Bulletin, particularly those of our members who would also like to participate in the outreach program.

We are all used to the simple fact that when we take our telescopes out for astronomical observing we are at the mercy of the weather. Clouds, air currents and atmospheric humidity take their toll. But star parties at local schools are subject to two additional limitations: First, the schools we are invited to visit are located in one of the most light-polluted metropolitan areas on earth. That's where we have to set up our telescopes. We cannot take our equipment and several dozen school children to the Lockwood Valley or Mount Pinos or some dark sky location in the desert. So if you like to spot the faint fuzzies that make astronomical observing and imaging interesting at such distant locations, forget about them at outreach parties in and around the city.

Secondly, even though some of the children at these events may already have some knowledge and understanding of astronomy, the observing program should be made interesting for a majority of the young viewers. Usually, they have never looked through a telescope before, nor do they have much of an understanding of the nature of planets, stars, clusters of stars, nebulae and galaxies, and how these objects differ from each other.

Constrained by these limitations, I have learned to follow these rules:

1. When you are at an elementary school, avoid – or at least don't spend much time on -- even the few faint fuzzies that you can spot in urban skies, because it is difficult to make what looks like a smudge on the eyepiece interesting to the young children. In a high or middle school, it may be feasible to show them the brighter galaxies like M31, M51 or M81 and the bright globulars like M13, M3, M5 or M22, when the observation can be accompanied by a meaningful explanation of why the object in the eyepiece is so un-prepossessing, such as by explaining that the light from these galaxies has traveled millions of years to reach our eyes, or that this very distant globular cluster contains hundreds of thousands of stars like our sun. The Orion Nebula may be a suitable object for the

*(Continued on page 9)*

schoolchildren if you describe it as a place where stars are born and point out the Trapezium, but other emission nebulae and planetary nebulae are unlikely to serve your purposes at school outreach events.

2. By all means, show them any bright planets in the sky. Of course Jupiter and Saturn must be on the evening's agenda when they are in the sky – even though Saturn's apparition in 2009 and 2010 is less spectacular than usual since we are seeing the rings edge-on. Mars is also a must when it's up in the evening hours, whether or not your equipment can show any surface markings; many children expect to see a "red planet" that they have been told is another world on which living creatures may be living, or may once have lived, or may live in the future. Venus is also a must when it's available, although some of the youngsters will believe they are looking at the moon when they see Venus as a crescent.

3. Don't hesitate to show them some double stars, but don't emphasize those that are difficult to "split" in your equipment and avoid those whose separation is so far apart that the children will simply see them as two stars that happen to be in the same part of the sky (remember that most of your viewers won't really appreciate how small a portion of the sky is within your eyepiece's field of view). My rule for double stars is (a) show those that are bright and almost "touching" in your field of view, like Castor, Mizar, Algieba or Almach, and (b) show those with obvious color contrasts, calling the colors to the viewers' attention, like Albireo, 145 Canis Majoris or Iota Cancri.

4. I also like to show the reddest of the carbon stars, such as R Leporis in the winter and T Lyrae in the summer, and invite the viewers to notice how red their light is, but for viewing these objects I prefer an eyepiece with a fairly wide field of view to take in as many surrounding stars as possible in order to contrast the red star's color from that of its neighbors.

5. Open clusters: Large clusters in which stars are scattered about a wide area are usually not good outreach targets. The Pleiades and the Beehive are more impressive for the schoolchildren in a finder than through most telescopes. If you show the kids a cluster, it may be advisable to select one with some child-friendly unique characteristics, such as M6, the butterfly-shaped cluster in Scorpius, or NGC 457, the "flying owl" or "Owl Cluster" in Cassiopeia (we old-timers also think of it as the "ET Cluster," but remember that the ET movie was released long before today's school children were born). And with a sufficiently wide field of view they might enjoy being shown the coathanger; I know: this is an asterism and not a true cluster, but that makes no difference to the kids you show it to. Even the double cluster in Perseus is not a great crowd pleaser.

*(Continued on page 10)*

6. Finally the moon: I like to show them the moon around its first quarter, and point out some features of the lunar surface, like the Alpine Valley (Vallis Alpes) or the straight wall (Rupes Recta) or Rainbow Bay (Sinus Iridum) or the chains of big craters such as Theophilus-Cyrillus-Catharina when the moon is 4 or 5 days old, or Ptolemaeus-Alphonsus-Arzachel around first quarter. The children will almost always want to see where the astronauts landed on the moon; during the early days of the lunation I show them the area in the southern portion of the Sea of Tranquility where Apollo 11 landed, and at and shortly after first quarter I show them the area in the Imbrium Basin north of the Apennines where Apollo 15 landed.

At these events, the children may also try to teach you a few other lessons that you may be inclined to reject: that the North Star is the brightest star in the sky; that “aliens” live on the moon; that the Apollo moon landings were a hoax; that bright Sirius must be the “biggest” star in the sky; or that the ringed planet Saturn they can see through your telescope is a simulated artifact, because it cannot really look like that. But whatever lessons you might take away from them, these school outreach events can enhance your enjoyment of amateur astronomy. ✧



These star trails were taken by David Pinsky from the LAAS' Lockwood Valley site. He used a canon EOS Rebel DSLR at ISO 400. The exposure time was 18 min.

## *New LAAS Jackets on the Way*

The jackets will be embroidered with our L.A.A.S. logo on the left chest and fully on the back. The total price is \$76.37 (which includes sales tax), and for an extra \$2.50 you can also have your name embroidered on the jacket.

The jackets will be delivered to members who have ordered them at either our Clubhouse in Monterey Park or at a General Meeting at Griffith Observatory or at any of our club functions (but NOT Lockwood Valley). If you cannot make it to any of these locations, your jacket will be shipped to you via USPS at your expense.

We must receive your order by May 31, 2009, and this offer will expire then. So please hurry and send in your order and \$76.37, or \$78.87 if you want your name embroidered on the jacket, to

L.A. Astronomical Society  
P.O. Box 56084  
Sherman Oaks, CA 91413.

Please write "Club Jacket" on your check or money order and be sure to include the following information in your order:

- (1) the size of the jacket
- (2) whether you want your name embroidered on it and, if so, the correct spelling of that name.
- (3) your e-mail address and/or telephone number where we can contact you when the jacket is ready for delivery, and
- (4) at which L.A.A.S site you plan to pick the jacket up when it is ready, or the address to which we should have it shipped.

The Jackets will be the Port Authority brand model number J754 from Blue Sky Designs LLC. The specifications are:

100% polyester Poly-filled body with heavyweight fleece lining for extra warmth

Half elastic, half self-fabric cuffs 1 x 1 rib knit trim at waistband and cuffs

Lower slash pockets, interior pocket (all with zip closures) \* Durable Teklon,,·Nylon shell \* Nylon-lined sleeves for easy on/off

Adult Sizes: XS to 6 XL

*Herbert Kraus and Michael White*

# *Griffith Observatory*

## *Public Star Party Procedure*

PJ Goldfinger handles our Griffith Observatory Public Star Party List. As patrons may drive up freely and reservations are no longer needed, we will continue to keep a sign up list for this event. Please note changes may occur in future PSP events and to read the policy below each month.

LAAS Members must still sign up on time - Deadline is no later than the Tuesday night prior to the Saturday GO Public Star Party each month. The list information required is:

- Your name, any LAAS Members and Non members in your car.
- Bring Telescope y/n.

**NOTE: Those attending without a telescope as a favor will be required to be of some assistance if asked, needed and able.**

It is primarily the main focus of any LAAS member who attends this event to be of Public Service with their telescopes in showing the patrons of Griffith Observatory the delights of the nighttime sky. New Members are not expected to adhere to this policy. Please feel free to come up and enjoy the event given you are signed up.

Parking will be on the east side of the Griffith Observatory Hill designated for GO employees. A guard will be stationed with the LAAS GO PSP list. It is always wise to have one's LAAS name badge and/or club ID on them just in case. Unloading telescope and equipment will remain the same procedure as well, with a drive up , drop off and park down hill routine.

The list currently has been updated to 30 spots for LAAS members. First come, first serve.

Please check the LAAS website and Yahoo list for changes and updates in any LAAS event, as there are many communication mediums and some are missed.

To sign up for the Griffith Observatory Star Party the email address is: laas.starparty@gmail.com. Attendance is only granted once a confirmation email has been received. Most important though is to have fun and enjoy! ✧

*PJ Goldfinger*

# Outreach Program

Come on out to the school and show all the enthusiastic kids, parents, and teachers the night sky. They always appreciate it. And if you get WOW's when they look through you scope, you'll feel good. If no scope, come out anyway and help up set up or answer questions from the kids. So, Outreach volunteers, let's pitch in. I'm sure the kids and adults will appreciate our effort.

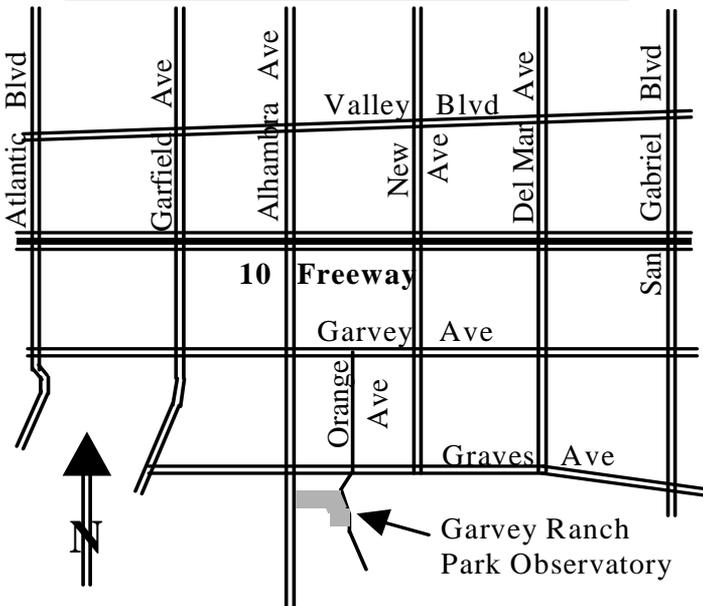
Thanks !      Outreach@laas.org      (818) 891-3087 ✧

(Editors Note: Be aware that often these requests come with very little advanced notice. Therefore, we won't post any events in the bulletin unless it is more than a month away. The best way to get news of these events is to use the Internet and either join the LAAS Yahoo group or access the LAAS website. To join the LAAS Yahoo group, see page)

*Don DeGregori*

## Map to Monterey Park Observatory

(The place to build your telescope)



# LOANER CORNER



It might not look like it, but the spring and summer star parties are just around the corner. Now is the time for new members and existing members that would like to try out something new to check out one of the LAAS loaner telescopes. At the present time there are several available. All are fully equipped with a set of eyepieces. A simple collimating tool is included with all reflectors and a star diagonal is included with refractors.

LAAS-1: 4.5" f/8 Celestron reflector on a Polaris mount.



LAAS-2: 4.5" f/8 Tasco reflector on an Edmund equatorial mount with a clock drive. This telescope has been upgraded with a 1.25" focuser and 6x30 finder.

LAAS-4: 6" f/5 Telescopic reflector on a Dobsonian mount.

LAAS-6: 10" f/4.5 Discovery reflector on a Dobsonian mount. This fast telescope is also equipped with a Tele View Paracorr to correct off axis coma common with fast paraboloids.

LAAS-7: 80mm f/15 Meade refractor on an Orion Sky View Deluxe equatorial mount. This is an excellent instrument for the Moon and planets.

LAAS-8: 80mm f/11.4 Selsi refractor on an equatorial mount.

LAAS-9: 80mm f/6.25 refractor with University Optics objective on an equatorial mount. This fine Rich Field Telescope is good for going through the Messier Catalog.

For more information call: David Sovereign at (626) 794—0646. ✧

*David Sovereign*

LAAS-4

LAAS-2



# EVENTS CALENDAR

Date	Event	Location and Information
May 2nd (Sat)	Public Star Party	Griffith Observatory 2:00 pm to 10:00 pm See pg 12 for details on how to attend.
May 6th (Wed)	Board Meeting	Garvey Ranch Park Historical Museum Lounge area. 8:00 pm to 10:00 pm
May 11th (Mon)	General Meeting	Griffith Observatory Leonard Nimoy Event Horizon Theater Speaker Topic: TBD 7:45 pm to 9:45 pm
May 23rd (Sat)	Dark Sky Night	Lockwood Valley
May 30th (Sat)	Public Star Party	Griffith Observatory 2:00 pm to 10:00 pm See pg 11 for details on how to attend.
Jun 3rd (Wed)	Board Meeting	Garvey Ranch Park Historical Museum Lounge area. 8:00 pm to 10:00 pm
June 8th (Mon)	General Meeting	Griffith Observatory Leonard Nimoy Event Horizon Theater Speaker Topic: TBD 7:45 pm to 9:45 pm
Jun 20th (Sat)	Dark Sky Night	Lockwood Valley
Jun 27th (Sat)	Public Star Party	Griffith Observatory 2:00 pm to 10:00 pm See pg 12 for details on how to attend.

## LAAS Yahoo Group—how to join

The group is private, and therefore does not come up in a search. To join, send email to: LAAS-subscribe@yahoo.com. Include your full name so the moderator can verify your LAAS membership. Your full name is necessary so we can check our records to see if you really are a LAAS member. If approved, you will receive further instructions via email. ✧

## Sky and Telescope Subscriptions

Sky and Telescope subscriptions renewals should be sent directly to Sky Publishing. To start a Sky and Telescope subscription, contact the LAAS Treasurer (see the contact information on page 2) directly to get the club rates, then thereafter send the renewal bills directly to Sky Publishing. ✧

## Astronomy Magazine Subscriptions

For those that subscribe to Astronomy Magazine through the LAAS, the rate has gone up to \$34 a year, \$60 for two years. ✧



LAAS Home Page: <http://www.laas.org>  
LAAS Bulletin Online: [http://www.laas.org/Resources\\_Newsletter.htm](http://www.laas.org/Resources_Newsletter.htm)

### Membership Annual Dues:

Youth	\$ 20.00
Regular (18-65)	\$ 45.00
Senior Citizen (65 and up)	\$ 30.00
Senior Family	\$ 40.00
Family	\$ 60.00
Life	\$ 500.00
<i>Additional fees:</i>	
Charter Star member	\$ 30.00
Star member, with pad	\$ 70.00
Star member, no pad	\$ 60.00
Printed Bulletin	\$ 15.00

**(Membership due date is indicated on the mailing label)**

## HANDY PHONE LIST



LAAS Answering Machine ..... (213) 673-7355  
Griffith Observatory  
Program..... (213) 473-0800  
Sky Report.....unavailable for now  
Lockwood Site ..... (661) 245-2106  
(not answered, arrange time with caller.  
Outgoing calls – collect or calling card)  
Mt. Wilson Institute..... (626) 793-3100