

BULLETIN

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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

Change of Address, Membership:
Stephen Dashiell, LAAS Secretary

LAAS Officers:

President..... David Sovereign
(626) 794-0646
Vice President David Nakamoto
david.nakamoto@verizon.net
Treasurer Herbert Kraus
Treasurer@laas.org
Secretary..... Stephen Dashiell
Secretary@laas.org
Recording Secretary PJ Goldfinger
& Richard Roosman
pj@chara-array.org

Volunteers:

Library Mary Brown
nwwrgz@yahoo.com
Outreach..... Don DeGregori
& Herbert Kraus
Outreach@laas.org
Loaner Telescopes Dave Sovereign
(626) 794-0646
Messier Program Norman Vargas
(626) 288-4397
New Members..... Andee Sherwood
Coordinator@laas.org
Speakers Bureau Tim Thompson
timthompson3@verizon.net
Youth Liaison (None Currently)
Youth@laas.org
Bulletin Editor..... David Nakamoto
BulletinEditor@laas.org
Bulletin Printer..... Richard Roosman
Web Site Manager Jim McGee
admin@laas.org
Contributing Authors... Tim Thompson
Don DeGregori
David Sovereign

Editor's Corner Public Support

ne of our constant needs is support for our public events, whether it's the public star parties at Griffith, or the public outreach programs to schools, or the new member star party in April, we need people to not only show up with telescopes, but perhaps more importantly and urgently, we need people to show up WITHOUT EQUIPMENT. For every member that shows up with equipment, it would be ideal for another member to be there to answer questions, tend to the telescope to give the operator a chance to go to the restroom or take a snack, and to help with crowd control. When your busy showing things through a telescope, and being mindful who is touching your equipment, it's hard to shift your mind to other things like answering questions. It only means you need to contribute your time and knowledge to the event, nothing else. **PLEASE CONSIDER CONTRIBUTING YOUR TIME TO ANY OF THESE PUBLIC EVENTS.**

We have a great need to clean up the Garvey Ranch facilities that we use. The drive for this the simple everyday fact of maintaining a facility that is use friendly. PLEASE see page 4 for more details.

My thanks to all who have contributed

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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. ✧

New Member Party !

The New Members Potluck And LAAS Open House will be held on April 18, 2009 at 5:00 PM in the Community Center at Garvey Ranch Park in Monterey Park. There will be a Star Party on the lawn after the meeting until 10:00 PM. There will be a raffle for the New Members and activities for all. Come for an evening of food, fun and star gazing.

If you'd like to volunteer or have any food or fun ideas for the event, please send an email to Andee at Coordinator@laas.org. ✧

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>

Garvey Ranch Observatory Clean up and Policy update

We will be sprucing up and cleaning out our club house, shop area, library and dark room, and the observatory over the next few months. Unfortunately there are many items that are of unknown origins. If you have left or stored anything at this site please come and pick it up or it will be discarded. As of 2009 in order to continue to keep our humble home in a stable orbit we have implemented the following guideline:

The current rule and protocol is anybody requesting to bring or donate goods to the Garvey Ranch facility must have the LAAS board approve that item first in writing. If acceptance is granted it must be clearly labeled and subject to the terms set forth by the LAAS Board.

If you're interested in assisting us please write to one of the people listed below; comments and suggestions are also welcome. Stay tune for further updates, and feel free to come by the club house and hang out. Thanks !

PJ Goldfinger : pj@chara-array.org

Mary Brown : nwwrgz@yahoo.com

David Sovereign : ddsovereign@yahoo.com

NGC 4319 and Its Companion Quasar

By David Nakamoto

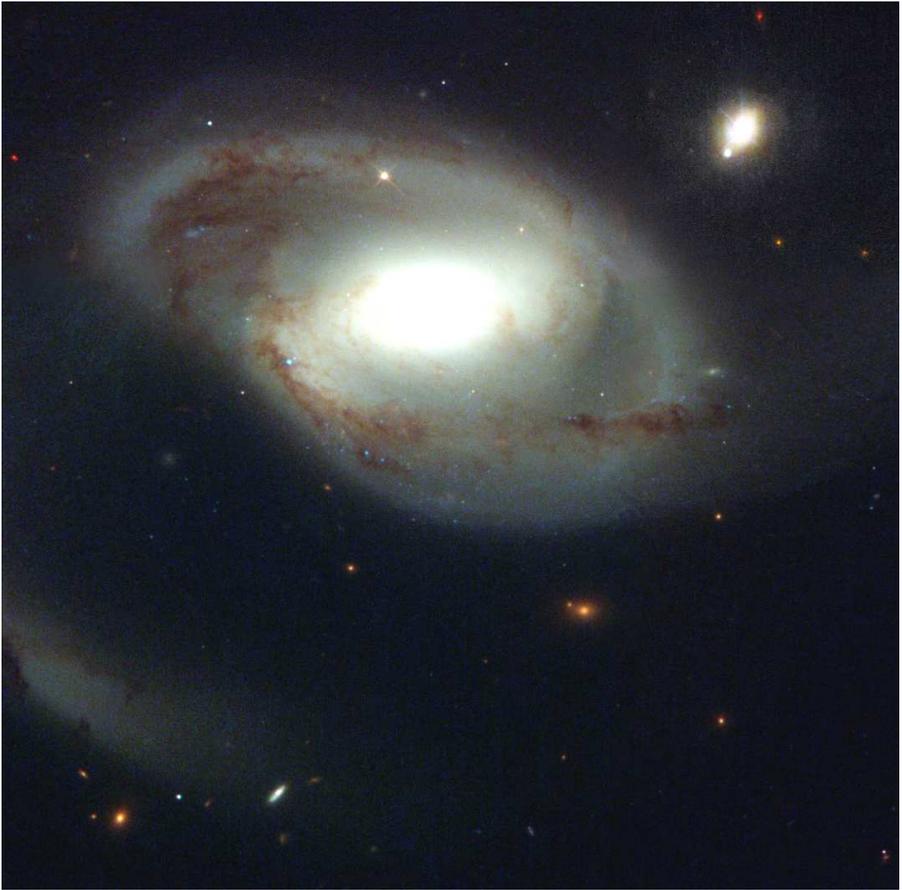
As with all astronomers, professionals and amateurs, certain objects and/or activities fascinate us in ways that derive from personal factors. This is why both professionals and amateurs specialize. And what fascinates one won't fascinate another. This is especially so with amateurs, where we pick types of objects as our favorites without regard to whether they're the latest trend in research. In this sense, amateurs are freer than the professionals. Those trends are just where donors and grant foundations gravitate towards when dispensing their millions, so those trends determine what topics professionals tend to study.

One area of interest I share with some professionals is the phenomenon of strange interactions between galaxies. Many of these are visible to amateurs with moderately large instruments, say 10-inches in aperture. Of course, for galaxies, "being visible" usually means you just see the core of elliptical and spirals, and perhaps the brightest part of the rest. This is something that is lost when one looks at pictures or images of galaxies. For instance, the Andromeda galaxy is visible from even urban skies if the light pollution isn't too severe, and no direct light shines on the observer or the equipment. But all you'll see without telescopic aid is the central core. The famous spiral arms are not visible except with telescopes. If we could see the entire galaxy, it would be several times the width of the full moon !

Also, what qualifies as "strange"? In this case, looks certainly qualify. However, I also like galaxies that have anomalous red shifts, pairs or, as I wrote about earlier in the case of Stephan's Quintet, groups of galaxies that seem to have red shifts that seem puzzling, in light of apparent physical connections between the members. Dr. Halton Arp is still one of the most iconic figures in

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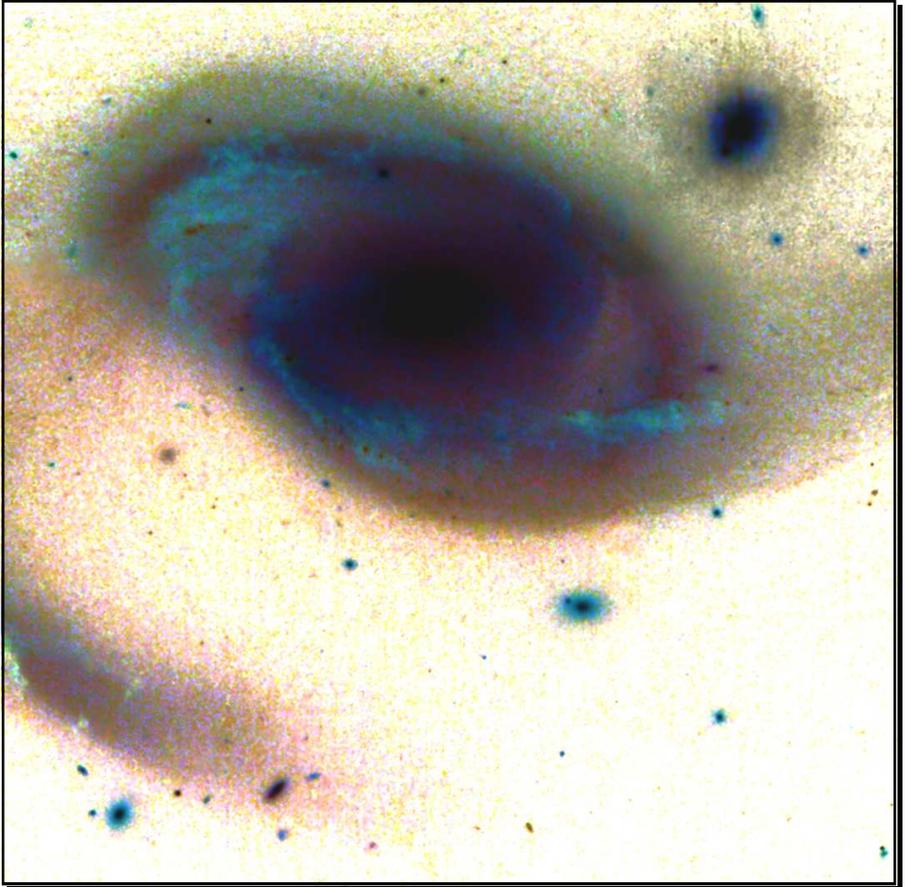
this field, and has identified many puzzling examples. One is located between the bowls of the Little and Big Dippers, NGC 4319 and its “companion” the Markarian quasar designated 205.



NGC 4319 is a distorted spiral, as seen in the image above, copied from, and provided by the Hubble heritage website. NGC 4319 has a bar structure and a faint disk of material totally encircling the central core. Outside of this it appears to be one very long and tightly coiled spiral arm. This arm actually leads away from the galaxy and is seen faintly continuing in the lower left corner of the image. There is another arm that is in front of the galaxy, the evidence of which comes from the line of dark nebulae

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extending horizontally below the galaxy's core. This one extends in the same direction as the line of dark nebulae and to the right of the image. Neither one connects to the quasar 205, which is the bright object in the upper right corner of the image. In the caption for this image, it states that this image shows no evidence for a connecting bridge of material between the galaxy and the quasar.



However, look at this image, which is the same as the one on the previous page but processed through histogram equalization, then the colors are reversed to make faint details easier to see (it is a long known fact that the visual system is designed to see dark

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objects on light background rather than the reverse). It shows a definitely bridge of material that seems to extend along the long axis of the quasar, which is oblong, and towards the core of NGC 4319. This bridge is what makes for Dr. Arp's case that the two objects are physically connected, despite the red shift that places the quasar 10 times further out than NGC 4319.

Now, before someone cries "conspiracy", it has been pointed out to me by Tim Thompson that the ones that write the captions are NOT the researchers themselves, and often don't pay attention to what the researchers tell them to write about the images, so perhaps those researchers actually know better. NOR is this a solid case for Dr. Arp. If you look carefully at the first image, you'll see many small galaxies surrounding NGC 4319. There's one below and to the right of NGC 4319 glowing red. Another is white and at the end of the extension to the spiral arm, in the lower left corner, and there may be another one closer to the lower left corner.

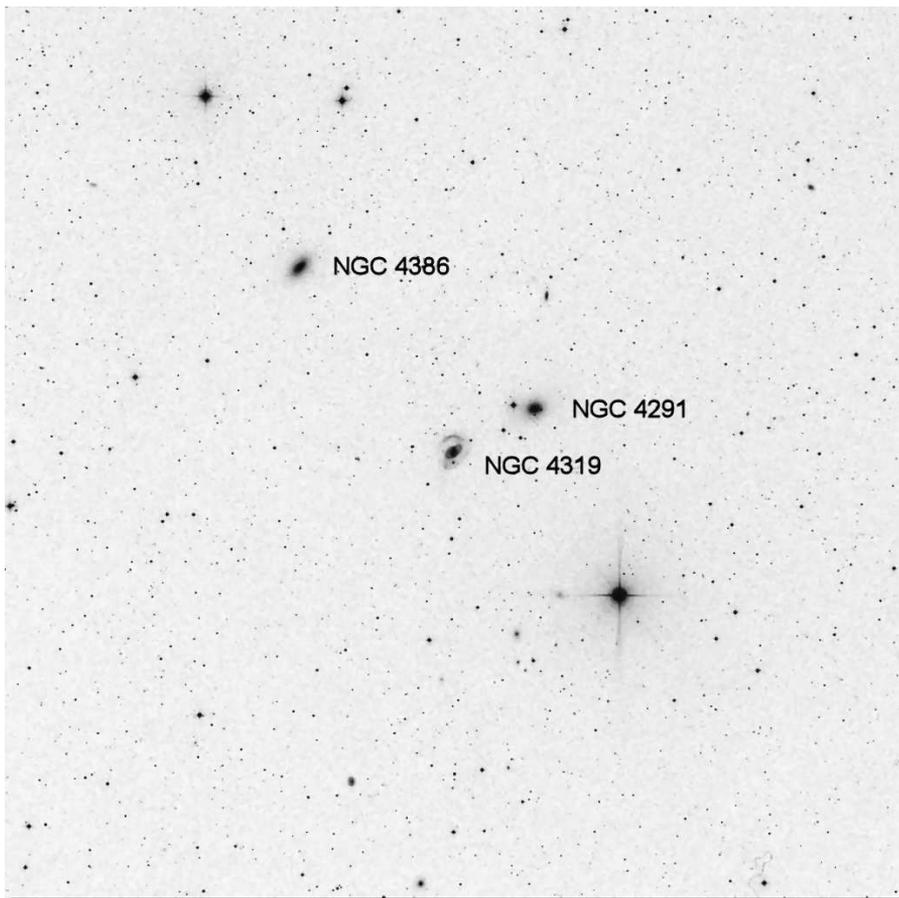
It is very likely that this case is similar to NGC 7339 and Stephan's Quintet. There is a front group of galaxies that includes the nearby galaxies NGC 4291 and 4386 along with 4319, with a more distant group behind it which includes the quasar 205. There was an interaction between the quasar 205 and another object that is BEHIND NGC 4319 and hence hidden from us. In a universe with so many millions of galaxies, situated in three dimensions, all around us, such coincidences should be expected.

I will admit, however, that they are fascinating, and sometimes puzzling. For instance, there's the case of NGC 7603 located in Pisces, and VV 172, located between the Little and Big Dippers . . . but I'll leave those for another day.

But the caption for the Hubble image, and the responses to it from supporters of Dr. Arp's ideas, both exhibit a strange denial of evidence or ideas against their positions. In my opinion, the webmasters for the Hubble Heritage site do not bolster their position by denying the evidence their own images show. And in the Arp camp, they also disfavor themselves by denying that coincidences can and do exist. I guess what it shows is that both

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sides of a scientific debate can become hard-headed, stubborn, and antagonistic to other possibilities, especially when huge amounts of hard to get money are at stake. ✧



This image, supplied by Skyview (Goddard Space Flight Center) from the Digital Sky Survey, shows a 1° field of view around NGC 4319. The other two major galaxies in the field, 4386 and 4291, share 4319's red shift value. If you're looking for the quasar 205, it's the "star" right below 4319. This give some idea of the small size of these objects. North is at the top.

The bright star in the image is an unnamed star in Draco, shining at magnitude +5.5.

If you wish to look at this object with your own eyes, the coordinates are RA 12h, 22m, and Dec +75°, 19.5'. Good Luck !

Imaging deep sky objects with a Webcam?

(an opinion and a query)

By David Nakamoto

One idea that recently came up in [Sky and Telescope](#) was using a series of short exposures through a single shot dedicated CCD astroimager to achieve high resolution images of bright deep sky objects by combining (known as stacking) the images to reduce the effects of tracking errors, noise, and other factors that make such imaging a normally painful process, or at least a very time consuming one.

As one who did some deep sky imaging with such a camera, I can appreciate the advantages of not having to have the best tracking, the best seeing conditions, and the attractiveness of higher resolution on the images when imaging deep sky objects. The problem is, as the authors in [Sky and Telescope](#) mention, is that the series of images might take up several gigabytes (!!!).

What I was wondering was whether a web camera might achieve some success on deep sky objects. In particular, I wonder about the following:

1. Since video is being taken, not individual images, this should reduce the memory requirements. It certainly will reduce the amount of time needed to acquire enough images. The trouble is, each frame of the video will only have an exposure time of a fraction of a second.
2. Can tracking be eliminated completely? If the individual images show no drift, then the answer is yes. This opens up the possibility of using Dobsonians and other alt-azimuth mounts.
3. I know that through a 5-inch f/12 Maksutov, a web camera can image the moon Titan around Saturn, even if the individual images do not show the moon. I write this to warn those that might try this proposed technique that you might not see the object in your video, but it still might be there. Stacking the images is essential if this idea is going to work.
4. You'll probably still need a CCD camera to make this idea work. CMOS cameras are far more common on the market, but they have noise problems that would swamp out the faint signal from a real source, even

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with stacking.

Anyway, I'm going to try this idea out on my 5-inch Mak and 10-inch Dob. If others wish to try it, please let me know what results you got. You can write to me through the BulletinEditor@laas.org address.

And Good Luck ! ✧



As Venus climbs high in the western sky after sunset, photo opportunities will arise. This image was taken on January 11th by David Nakamoto. Venus is just visible between the top of the image and the top of the famous Astronomer's monument.

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.

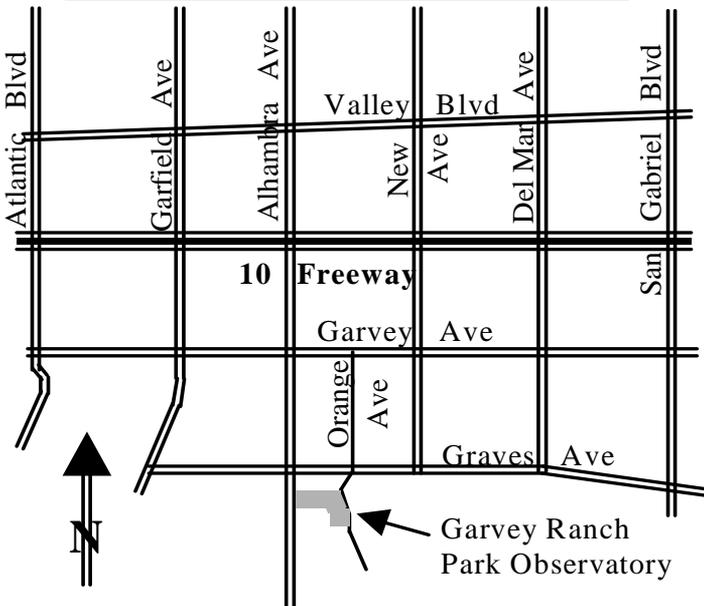
Thanks ! Outreach@laas.org (818) 891-3087 ✧

(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
Mar 4th (Wed)	Board Meeting	Griffith Observatory Conference Room. 8:00 pm to 10:00 pm
Mar 7th (Sat)	Public Star Party	Griffith Observatory 2:00 pm to 10:00 pm See pg 11 for details on how to attend.
Mar 9th (Mon)	General Meeting	Griffith Observatory Leonard Nimoy Event Horizon Theater Speaker Topic: The SOFIA project 7:45 pm to 9:45 pm
Mar 28th (Sat)	Dark Sky Night	Lockwood Valley
Apr 4th (Sat)	Public Star Party	Griffith Observatory 2:00 pm to 10:00 pm See pg 11 for details on how to attend.
Apr 8th (Wed)	Board Meeting	(tentative) Griffith Observatory Conference Room. 8:00 pm to 10:00 pm
Apr 13th (Mon)	General Meeting	Griffith Observatory Leonard Nimoy Event Horizon Theater Speaker Topic: TBD 7:45 pm to 9:45 pm
<i>Apr 18th (Sat)</i>	<i>New Member Party</i>	<i>Garvey Ranch Park</i> <i>See map page 13</i> <i>5:00 pm to 10:00 pm</i>
Apr 25th (Sat)	Dark Sky Night	Lockwood Valley

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

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