LOS ANGELES ASTRONOMICAL SOCIETY

BULLETIN

volume 82, issue 5 *May 2008*

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OUR 82nd YEAR OF ASTRONOMY IN LOS ANGELES

Los Angeles Astronomical Society

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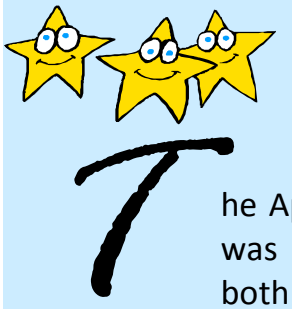


Editor's Message

The April public star party was well attended by both LAAS members and the public. In fact, many had to be turned away, since the park rangers strictly enforce the rule of everyone out by 10pm. Despite a Santa Ana condition that day, which resulted in a warm night (no coats needed!), the seeing was steadier than usual, affording great views of the Moon. Mars is gone; at 6 arc-seconds, the red planet shows nothing. Saturn however showed three to five of its moons along with its rings.

Please take note that in June, there are no dark skies scheduled. We'll have two in May and two in July.

My thanks to all who have contributed to the success of the bulletin. We always invite more input from members. Please consider writing or submit images. Please keep articles to 1,500 words or less. Please submit only a few well-chosen images, with captions if possible. The deadline for submitting bulletin material is the 10th of each month. Please if possible submit electronically to BulletinEditor@laas.org, or to dinakamoto@yahoo.com if the previous address fails.

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

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

New Member Potluck / Star Party

The date for the 2008 New Member Potluck/Star Party has been set for 4:00pm

Sunday, April 27th

It will be held at the LAAS facility in Garvey Ranch Park in Monterey Park beginning at 5:00 PM with the potluck. This will be followed by speakers who will give short talks aimed toward beginners. After the talks door prizes will be given out to new members. A star party will then be held on the lawn in front of the class room. The Moon will be at last quarter, so the sky will not be overly bright. Saturn should put on a good show. These events have always been well attended. ✧

Astronomy Equipment for Sale

Backyard Observatory
Meade EXT-80AT Telescope - New in the Box with tripod, backpack, self guiding electronics
Retail $300
Offered at $240

Sunspotter The safe way to view the sun. - Brand New
Retail $350
Offered at $275

Celestron Skyscout Personal Planetarium
Retail $399
Offered $310

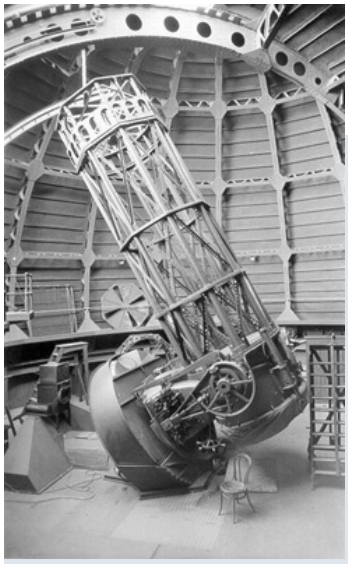
Coronado PST Personal; Solar Telescope
Retail $500
Offered $500

Celestron Giant 20x80 binoculars
Retail $348
Offered at $150

Celestron Tripod
$40

Paul Wicker – TheGalileoGuy
310 546-1437

This image of the Horsehead nebula in Orion was taken by our webmeister Jim McGee. The image is composed of 41 images, each 600 sec, through an Ha filter attached to a 80mm scope on a CGE mount and a DSI Pro II with Razorback cooler. Taken from Jim's light polluted backyard in Fullerton, CA, between March 9th through the 13th.



Mt Wilson 60" Nights

We're in the process of arranging this year's schedule of Mt Wilson 60-inch telescope nights.

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 to be in the 60-inch telescope observatory. Tim Thompson is coordinating the effort and being the contact person. He can be reached at:

Tim Thompson

1947 E. Huntington Dr., #C

Duarte, CA 91010-2655

When we start accepting reservations, please remember that it's first come, first served.

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 Wilson and Hubble, will add to your appreciation of their contributions.

The scope belongs to LAAS all night except for those nights designated as half-nights, when it will be available only until midnight. 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 your are likely to see in your lifetime.

The cost is $75 per person for the full night, and $40 for the half night. You must sign up and pay for the full night if that is the night you're reserving. No half night reservations on a full-night outing.

Send your check payable to LAAS, to Tim Thompson. ✧

Increased LAAS Membership Dues

Last year, the LAAS spent about $5000 more than it gained from its various income sources, mainly dues. This was due to mainly to increases in the daily and yearly operating costs we incur. We're projecting a similar deficit in 2008. Due to this, the governing board has made a decision to increase some of the dues.

Effective in May 2008, the dues for membership in the LAAS will be increased to $45.00 a year for regular members, $30.00 a year for senior members ages 65 and over, $40.00 a year for senior family members, and $60 a year for family memberships. In addition, members who require that printed copies of the bulletin be mailed to them, rather than access it from our website, will be charged an additional $15.00 a year to cover the costs for that service. Youth memberships will remain at $20.00 a year, and there are no changes in in our fees for star members.

As before, the benefits of regular and family memberships include subscriptions to the ***Griffith Observer***. Other members may obtain a subscription to that publication through the LAAS for $15.00 a year. All LAAS members still have the opportunity to subscribe to the magazines Astronomy and Sky and Telescope at our reduced club rates, currently more than 20% below the regular subscription rates for both publications, and amounting to less than 50% of the prices for individual issues at the newsstand. ✧

Volunteers for RTMC Requested

This year, as in past years, the LAAS will host a booth at the Riverside Telescope Makers Conference (RTMC). This year, we'll be in Telescope Field, the main area for distributers, manufacturers, and clubs. We have a larger booth this year, and we need volunteers to donate some hours of their time to help promote the club.

If you're going to visit RTMC this year, why not volunteer a bit of your time. You'll help promote the LAAS, meet new people, and make a difference.

If you're interest, please contact David Sovereign at (626) 794—0646.

The Real Lord of the Rings

By Tim Thompson

The *real* Lord of the Rings hangs out around 891 million miles from the sun, and orbits as the sixth planet in the solar system. It is, of course, the planet Saturn. Certainly already well known to people long before recorded history began, there is nothing to say about the discovery of Saturn itself. We do know that the first written records showing observations of Saturn date from about 650 B.C., and were made by astronomers in the ancient Assyrian Empire. But of course, Saturn was just a wandering point of light in the sky, until the first telescopes revealed Saturn's hidden secrets.

Galileo Galilei, the first astronomer to use a telescope, trained his homemade 20-power single element refractor on Saturn in 1610. He discovered something that surprised & frustrated him. He discovered that Saturn was a triple planet! In Galileo's words, "*I have observed the highest planet to be triple-bodied. This is to say that to my very great amazement Saturn was seen to me to be not a single star, but three together which almost touched each other.*" We now know that Galileo had discovered the rings of Saturn, but could not distinguish them as such, probably because of bad seeing. This was all surprising for fairly obvious reasons. But it was frustrating, because when Galileo looked at Saturn in 1612, he saw nothing but the globe of Saturn; the curious triple had vanished! Again, in Galileo's words, "*I do not know what to say in a case so surprising, so unlooked for and so novel*." Galileo had unknowingly become the first astronomer to witness a ring plane crossing. In 1616 he was able too see the rings properly, reporting them as half ellipses visible on either side of the planet. In 1655, Christian Huygens correctly interpreted the ellipses as a ring, but incorrectly thought it was a solid ring. In 1659 Huygens explained how Earth passed through the ring plane every 14 or 15 years. In 1660 Jean Chapelain correctly decided the rings were made of many small satellites, but few believed him, as they were still mostly convinced the ring was solid. James Clerk Maxwell proved that the rings could not be solid in 1856, but the solid ring theory was not finally laid to rest until the 1940's, when Harold Jefferies finally nailed the dynamics door shut on the whole idea.

The first of Saturn's moons to be discovered was Titan, discovered by Huygens in 1655. Iapetus & Rhea were discovered by Giovanni Cassini in 1671-1672, and he correctly realized that Iapetus has a dark side and a bright side, when he failed to see it where he knew he should, and reasoned that he was looking at the dark side. Cassini also discovered Tethys & Dione in 1684. It was a long dry

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spell for Saturn's moons, until William Herschel officially discovered Enceladus & Mimas in 1789 (he actually saw Enceladus in 1787, but chose to wait for the ring plane crossing of 1789 to confirm it). William & George Bond, and William Lassell discovered Hyperion during the ring plane crossing of 1848-1849. William Pickering discovered Phoebe in 1898, the only moon before or since, to be discovered by Earth based observations that were not during a ring plane crossing. We have so far discovered a total of 60 satellites around Saturn. Galileo discovered the four largest satellites of Jupiter, but he discovered none of Saturn's satellites.

Surely the rings of Saturn are its premiere feature. Once Earth based telescopes were good enough, astronomers could identify the prominent A & B rings, and the less obvious C ring interior to them. The A & B rings are separated by the conspicuous Cassini Division, discovered by Giovanni Cassini in 1676, while the A ring features the much more obscure Encke Division. The outermost A ring extends between 122,000 and 137,000 km from Saturn; the B ring is next in line, from 92,000 to 117,000 km; the innermost (of the classical rings) C ring lies between 74,000 and 92,000 km from Saturn. The rings look smooth from Earth, and were long thought to be solid rings, but were well known to be made of many orbiting rocks and/or ice chunks long before the first spacecraft got there. Pioneer 11, Voyager 1 & 2, and Cassini have radically altered our view of the rings. Apparently smooth as seen from Earth, Voyager 1 & 2 images revealed the rings to be built up from thousands of thin ringlets, in a complex pattern generated by gravitational tug-of-war between Saturn and its many moons. Many tiny moons have been found embedded in the rings. New rings were found (the E, F, & G rings), and the Voyagers discovered the role of Shepherd satellites. We now know that the rings are far more complicated dynamically than we ever thought before. We also know that the rings are ephemeral. The rings are about 100,000,000 years old, far younger than the solar system, which is about 4,500,000,000 years old. The rings are slowly evaporating away, mainly by losses at the outer edges of the rings, and are unlikely to last more than a few hundred million years more.

The cloud belts in the upper atmosphere of both Jupiter & Saturn are easily seen from Earth, even in small amateur telescopes. But the clouds of Saturn are much less distinct, have much less contrast than the clouds of Jupiter. The Voyager 1 & 2 spacecraft flew by Saturn on November 13, 1980 and August 26, 1981, respectively, revealing new details in the clouds of both planets. Saturn, like Jupiter, rotates very fast. Jupiter, 11.2 times bigger across than Earth, spins around with a "day" that is only 9 hours 55 minutes long. Saturn, 9.4 times bigger across than Earth, has a 10 hours 39 minute "day". Because of their rapid rotation both planets sport enormous winds. In the cased of Saturn, the clouds are clocked as fast as 1100 miles per hour. If Saturn were a hurricane, it would

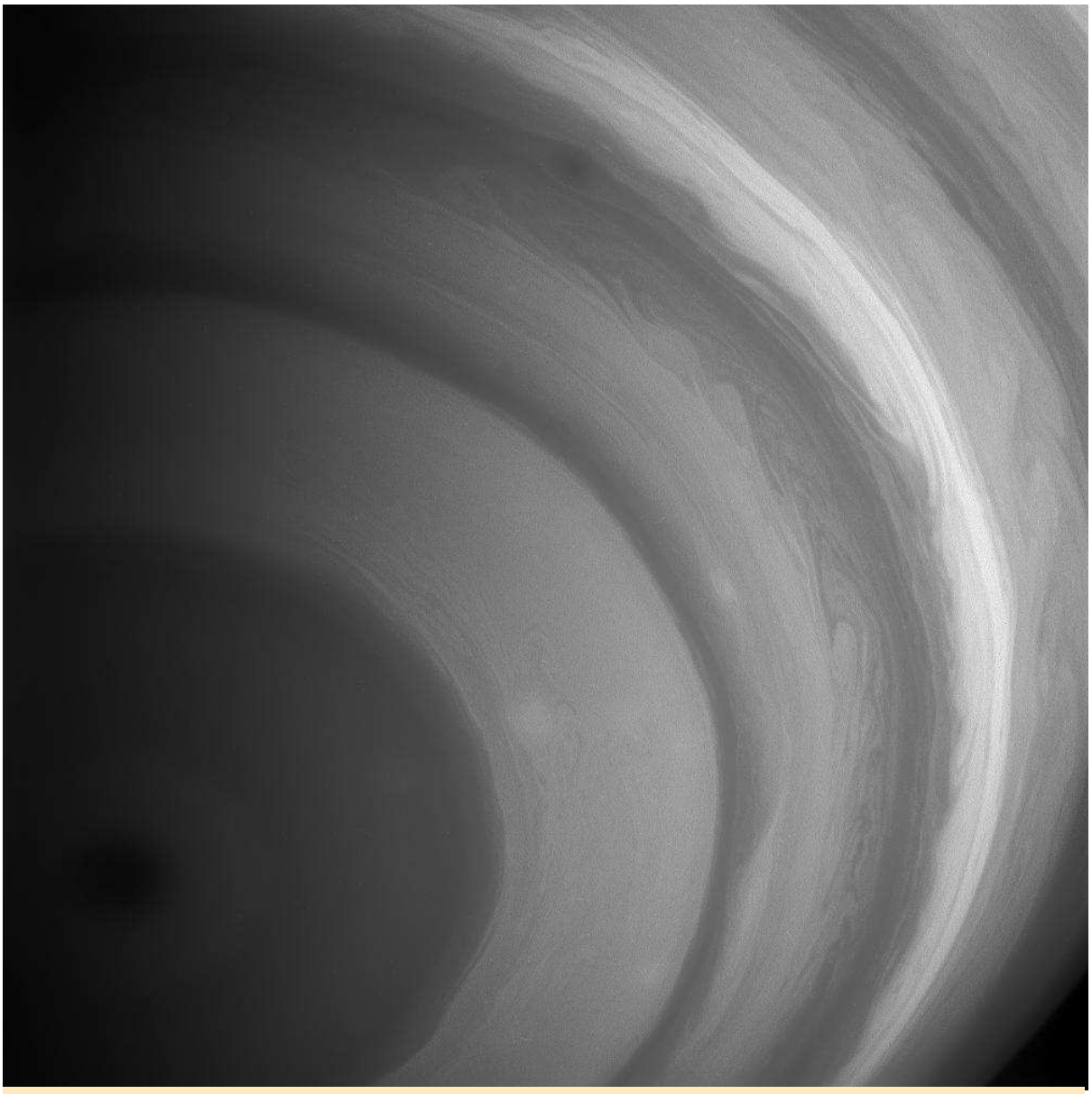
(Continued on page 10)

be about category 52 on the Saffir-Simpson scale, which currently tops out at a maximum strength of category 5. The winds in Jupiter's clouds are significantly slower.

This is the season of Saturn, as it becomes conspicuous in the evening sky. Its rings & moons & cloud belts are easy to see, so go out and look. Just don't expect the view in your telescope, from here, to look like Cassini's on the spot view. ✧

Saturn eclipses the sun in this Cassini image. The image is a composite of 165 images taken in a 3 hour period on 5 September 2006. The faint & narrow G ring is visible just outside the main rings, and the wide & faint E ring is outermost. Enceladus can be seen in the E ring on the left, and the conspicuous dot between the G ring & A ring on the left is Earth.

(above) This view of Saturn is a composite of 126 Cassini images over a 2 hour period on 6 October 2004, from a distance of 3,900,000 miles. The image scale is 24 miles per pixel.



This is a Cassini infrared image of the clouds around the south pole of Saturn. The image was taken on 1 February 2007 at a wavelength 0.890 microns and a distance of 587,000 miles. The image scale is 33 miles per pixel.

Telescope for Sale !

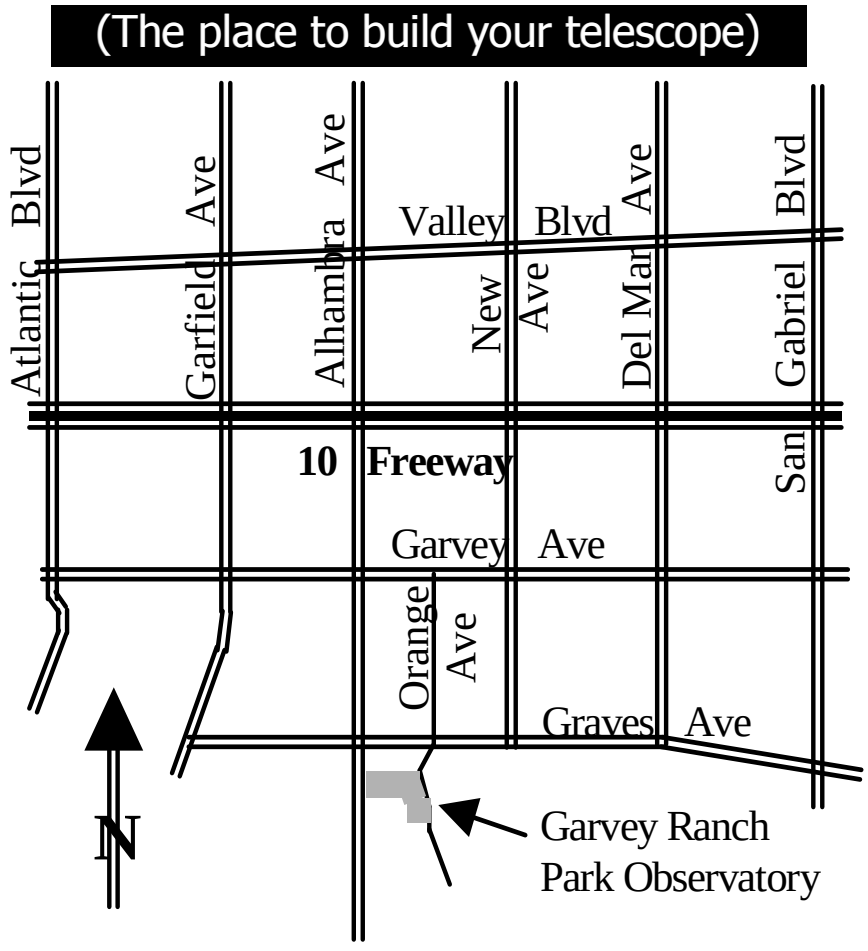
12" Meade LX200GPS Schmidt-Cassegrain with Autostar II hand control, includes extra filters and lenses, solar cover and scope buggy. $3700
Stacy Trevino— W- 909-5971904, H- 951-808-8784 (1)

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 ✧

Don DeGregori

Map to Monterey Park Observatory



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-4

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 Telescopics 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-2

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

EVENTS CALENDAR

Date	Event	Location and Information
May 3rd (Sat)	Dark Sky Party	Lockwood Valley Check for weather conditions.
May 10th (Sat)	Public Star Party	Griffith Observatory. See pg 3 for details on how to attend.
May 12th (Mon)	General Mtg	Griffith Observatory Speaker to be announced
May 31st (Sat)	Dark Sky Party	Lockwood Valley Check for weather conditions.
June 7th (Sat)	Public Star Party	Griffith Observatory. See pg 3 for details on how to attend.
June 9th (Mon)	General Mtg	Griffith Observatory Speaker to be announced

The board meeting is held at 8pm on the Wednesday night prior to the general meeting, at Garvey Ranch Park. The Monday general meetings start at 7:30 pm unless otherwise noted. See each month's bulletin for updates.

LAAS Home Page: ***http://www.laas.org***
LAAS Bulletin Online: ***http://www.laas.org/Resources_Newsletter.htm***

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@yahoogroups.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. ✧

New Members Corner

Welcome to the Los Angeles Astronomical Society! Right now, we have lost our previous New Members Coordinator to college, so we're looking for someone to take over this position. If you're interested, please contact one of the board members on page 2. ✧

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
Additional fees:	
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