



# RIVERSIDE ASTRONOMICAL SOCIETY

*rivastro.org*

## Questions?

### Who are we?

The Riverside Astronomical Society was founded in 1957 with a charter that we "popularize interest in astronomy and telescopes among the members and general public." We are a non profit club of about 300 individuals, families, and students. We are amateurs with day jobs including CPA's, doctors, plumbers, students, and truck drivers (and our share of retirees). Everyone is invited to join, regardless of their knowledge of astronomy. See the back side here for more information.

### Why are we here?

If you are reading this, you probably found us at a public "outreach." We go to shopping malls, scout troops, and street corners with a few telescopes and a lot of enthusiasm to "bring the joys of Astronomy to the general public." We get a kick out of showing people the rings of Saturn, or the craters of the moon, or the dance of the satellites of Jupiter. It's been called "guerilla astronomy," where we persuade unsuspecting passers-by to gaze at the glory of the heavens.

### So, what should I be looking for?

Depends on the time of the year, time of day, and the phase of the moon.

During the day, we bring special telescopes to safely view the **SUN**. With them, you can see sunspots. These are "cool" areas on the sun (only 7000 F degrees!!!) and look black because they are not as bright as the rest of the sun. These magnetic disturbances are bigger than the earth. You can also see red solar flares exploding off the side of the sun. They can be ten to twelve times the size of the earth, and carry enough energy to disrupt power grids and destroy satellite electronics orbiting the earth.

With a first quarter **MOON**, you will see craters, "seas," and mountains. Notice the dimple at the center of most craters, and the rays of whiter material spreading out from them. Impacting meteors immediately melt the surface, and the magma rebounds, leaving the dimple. Meanwhile, material flies out in all directions, leaving the whiter rays. Those mountain crags you see tower some three miles and more over the plains below. The ancients thought the large dark areas (the eyes and nose of the Man in the Moon) were "seas" (Latin *Mare*). They are in fact lava flows where the molten innards of the younger moon covered huge areas. Notice how the shadows highlight certain features. Come back tomorrow, and the shadows will have changed what you see. Earth based telescopes cannot see anything smaller than the coliseum. So don't expect to see the flags where the Eagle has landed!

**PLANETS** can often be seen from the city, depending on where they are in their orbit around our sun. Crowd pleasing **SATURN** has a glorious set of rings that—yes—you can see very clearly with our telescopes. The kids (and some adults) are so excited by this, many cannot believe their eyes. **JUPITER** also puts on a good show, with its stripes (indicating weather patterns) and, most of all, the moons, which you can see move over the course of a few hours. When **MARS** is around, you get glimpses of its white polar cap, its rusted surface, and on good nights, even the canyons. **VENUS**, bright as it is, is generally a featureless white, but in a telescope often looks more like a crescent moon than a planet! Be sure to catch **MERCURY** if it is around (it is said that fewer than 1 in 2000 people have ever seen Mercury). The other planets, although sometimes visible, are generally not much more than starlike dots in the sky (yes, even tiny and officially demoted **PLUTO**).

City lights limit us from showing much more. Sometimes we can see a galaxy, or a double star, or a cluster of a million ancient stars orbiting each other. But to really see the heavens in their glory, you need to head off with us on a weekend visit to our dark sky site. Bring the family camping, or just for the evening. See the backside about how to do so!





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See the calendar below for some of the activities that you and your family may enjoy. Then check the web at rivastro.org for details on time and place.



•Monthly Meetings are held at La Sierra University on Saturday nights at 7:00 (for Beginner's Corner) and 7:30 for the guest speakers and regular informative presentations. information@rivastro.org



•We also escape the city lights at our ten acre dark-sky site in Landers, and other places. Bring the family for an evening, for the week-end of camping, for the special star-be-cue, and a chance try out all the scopes under truly dark skies. starparty@rivastro.org



•Once a month, during the first quarter moon, we gather at local malls to show off the sky to passers-by. We can also arrange to come to your school, scout troop, or other event. outreach@rivastro.org



•Special Interest Groups for Astro-Imagers, Telescope Makers (RATS), and Urban Astronomers also meet monthly. In these smaller groups, members share experiences and techniques as they work together on special projects and interests. information@rivastro.org

Membership Benefits

Although the public is generally invited to all RAS functions, being a member has benefits. These include the monthly Prime Focus, special access to the GMARS Dark Sky site, and discounts on astro-equipment and events. To become a member register online at rivastro.org using Paypal, or complete the following and give to an RAS officer or mail to RAS, PO Box 21264, Riverside, CA 92516-1264.

Member Name(s): \_\_\_\_\_

Email address: \_\_\_\_\_

Street: \_\_\_\_\_

Apt/Suite: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_

Home Phone: \_\_\_\_\_

Please check following as needed:

New Member Rates: (This is a special half price rate to all new members, and is valid until the end of the membership year (June 30, 2011 or until June 30, 2012 if new after April 1, 2011.)

Individual --\$20 Family--\$25 Student--\$20

Total Included \$ \_\_\_\_\_

See rivastro.org or email membership@rivastro.org for more info

Calendar grid for 2010 with monthly activities and moon phases. Includes events like GMARS Star Party, RAS Board, and NIGHTFALL.