

Valley Skies

The Monthly Newsletter of the Stockton Astronomical Society
and the San Joaquin Delta College Clever Planetarium

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Stockton Astronomical Society: founded November 1950 by Clarence P. Custer, M.D., 1906-1998
(Meetings of the Stockton Astronomical Society are held on the second Thursday of each month, and are open to the public.)

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General Meeting:

Olson Hall, Room 120, at UOP

Thursday, October 13, 2011 – 7:30 p.m.

Stockton Astronomical Society

presents

Greg Wilhite:

Observing Deep Sky Objects Through Live Video

Greg's presentation will include a brief discussion of how he came to own a 30" F/4.5 telescope and why he sold it to make room for smaller, faster f/ratio scopes.

The main topic of the presentation will focus on the use of live video cameras as a tool for beating light pollution, seeing detail and color in deep sky objects live from light polluted back yard locations, for use in public outreach, and for use by those with failing eyesight.

He will have some images to share with the group. If we can get online, there maybe someone broadcasting live video on

<http://www.nightskiesnetwork.com/>

...Dennis LeClert, Program Director

Visit the SAS Web Site at: www.stocktonastro.org

STOCKTON ASTRONOMICAL SOCIETY

P.O. Box 243, Stockton, CA 95201

OFFICERS FOR 2011:*President*Jeff Baldwin.....594-1894, baldjeff@comcast.net*Vice President & Program Director*Dennis LeClerc.....477-4756, dleclerc@aol.com*Secretary*Bill Ford.....462-2800, wford@pacific.edu*Treasurer*Gerald Hyatt.....474-0159, jerry.hyatt@sbcglobal.net*Newsletter Editor*Trevor Atkinson.....478-4380, tatknsn@comcast.net*Members-at-Large*Doug Christensen.....462-0798, american.sign@att.netDave Jacobi.....823-0328, dave.jacobi@comcast.net**APPOINTED OFFICERS:****Public Outreach Coordinator***School Star parties:*Doug Christensen.....462-0798, american.sign@att.net*Sky Tours & other public viewing:*Doug Christensen.....462-0798, american.sign@att.net**Star Party Coordinators***Hi-Altitude:*Miguel Ortiz.....823-0723, miguelortiz@comcast.net*Highway 4:*Jim Schuknecht.....549-1815, stargazer@att.netShawn Kerns.....986-4185, skerns@pacific.edu**Star Party Bulletin Board**<http://tech.groups.yahoo.com/group/stocktonastro/>**Equipment Manager**Jeff Baldwin.....594-1894, baldjeff@comcast.net**ATM Workshops**Jeff Baldwin.....594-1894, baldjeff@comcast.net**Observing Program Chairman**Jeff Baldwin.....594-1894, baldjeff@comcast.net**SAS Rep to A.A.N.C.**Dennis LeClerc.....477-4756, dleclerc@aol.com**Web Site Administrator**

Ray Lukaszewski.....916-683-2186

Lukaszewski@prodigy.net**SAS Web Site: www.stocktonastro.org***(All numbers are area code 209 except as noted)*

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Non-commercial advertising of astronomy-related products or services will be printed free of charge for members, for up to three months if necessary. Submission deadline is the 15th of each month.

Unless identified by a byline or other credit, all text is by the editor and does not necessarily reflect the opinions of the Stockton Astronomical Society.

EDITOR'S CORNER...

Astronomy Day: Sat., October 1

Planning is done. Volunteers are lined up. All we need now is a little cooperation from the weather. As of mid-day Thursday, it all seems to hinge on *how much* cloud there will be. Not "if" but "how much."

"Saturday: mostly sunny. Saturday night: mostly cloudy."

OK. So at what time can we expect the transition from one to the other?

Remember the year when it was solid overcast by early evening and several telescope volunteers decided it was a lost cause and went home? By the start of scheduled viewing time, the clouds had cleared and the remaining telescopes provided 90 minutes of good viewing.

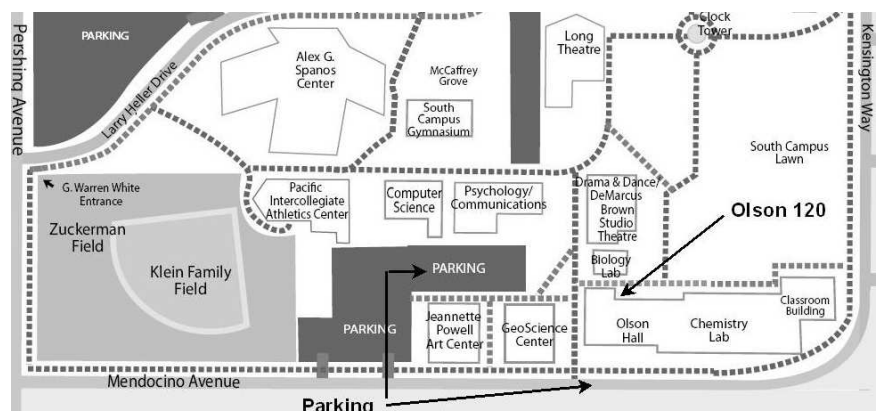
Please, telescope volunteers, let the committee make the decision to pull the plug, if there needs to be one. Assume the viewing session is on unless they announce otherwise.

**Club Telescope Inventory**

Our club has downsized a bit on its reservoir of club-owned loaner telescopes. Many are not being used or checked out and are of lesser aperture and therefore lesser interest. Our supply of large telescopes is being checked out very well.

We have one large scope available to be checked out: the 10" Meade SCT, fork-equatorial mount, lots of goodies. Hopefully somebody will read this and request to take it [so it will leave my garage] ☺ J.B..

SAS Meeting: October 13, 2011
Olson Hall, Room 120
University of the Pacific



October meeting refreshments generously provided by Marshal Merriam

Stars R Us...

SAS Star Party News

October:

New Moon: Wed., Oct. 26, 12:57 p.m. PDT

Saturday, Oct. 1 Astro Day Oak Grove Park

Sunset: 6:49 p.m. PDT

Moonset 9:58 p.m. PDT

Saturday, Oct. 22 Hwy 4

Sunset: 6:18 p.m. PDT

Moonrise (Sun.): 3:39 a.m. PDT

Saturday, Oct. 29 Hi-Alt

Sunset: 6:10 p.m. PDT

Moonset: (3-day-old) 8:44 p.m. PDT

November:

New Moon: Thur., Nov.24, 10:10 p.m. PST

Saturday, Nov. 19 Hwy 4

Sunset: 4:51 p.m. PST

Moonrise (Sun.): 1:31 a.m. PST

Saturday, Nov. 26 Hi-Alt

Sunset: 4:48 p.m. PST

Moonset: (2-day-old) 6:27 p.m. PST

Star Party Reports

Peddler Hill – September 24

September 24 was one of those **either/or** nights—the only scheduled star party night in the month, so pick your location...Hwy 4 or Peddler Hill. It also turned out to be a cloudy night.

No word on anyone having gone up to Peddler.

Directions to SAS Star Party Sites

Highway 4/Shirley Road:

Drive 30 miles east on Hwy 4 from Hwy 99. At the sign for Shirley Road/Telegraph Road, turn right off Hwy 4, then **left at the stop sign**. You will again be heading east, parallel to Hwy 4. Drive to the setup area at the end of the road.

4000' Heliport on Highway 88:

Drive 21.8 miles east from Jackson on Hwy 88 till you pass the "Elevation 4,000 ft." sign, (0.4 miles past Amador Station). Turn left at the "Emergency Heliport" sign and double back parallel to the road about 400 feet to the helipad. Set up on the north side.

Please park on N side of road only at both the Hwy 4 and 4000 ft. site.

Peddler Hill:

Drive east from Jackson on Highway 88 to Ham's Station. Continue 6.2 miles east to the junction sign-posted for Bear River Reservoir Resort on the right. Directly opposite the Resort road there is a service road, on the left, with a small "Zone 7" sign. Turn left onto the service road and go 0.8 miles to the site.



Highway 4 – September 24

"Twas a dark and stormy night..."

Well, not really. But it was not the kind of night that seasoned observers like Jeff Baldwin, Carlos Avalle, Bret Ford, et al would generally drive to the hills for. Partly cloudy and hazy. Perfect!

But, like the kid with a new bike on a rainy Christmas morning ... gotta get out and try it, right?

The "new bike" in this case was Bret Ford's new (to him) 30" f/4.5 Dob. It's now the biggest light bucket in the club. A significant size upgrade from the scope that was stolen a couple of months back.

[BTW...is this the same 30" f/4.5 that Greg Wilhite used to own?...ref program notes on page 1]

So, less than optimum conditions, but what the heck...let's get it out there and check it out dude!

Here's Jeff's account:

"We knew going in that the weather was going to be bad, but with Bret's new 30" scope we decided to go anyway. The weather was foul, the seeing was terrible and there was a lot of haze, but we worked on Bret's scope for a few hours and managed to get it fairly well collimated and workable.

"Unfortunately, the skies were too lousy to analyze the mirror well and evaluate it, although it was the star of the night regardless of the lousy skies. We're anxious to check it out under dark skies.

"Cramming that thing into his trailer was an act of magic. I only assume he got home OK.

"No reports of the Peddler Hill site, so we're not sure if anybody went all the way up or not."

[Photos on page 5]

Fall Astronomy Day Star Party

Oak Grove Regional Park

(Eight Mile Road & I-5)

Saturday, October 1, 2011

LAST MINUTE REMINDERS

We are expecting 1,000 or more people to show up, and we want to be ready for them. We hope to have at least 20 telescopes set up, a Star Lab from the County Office of Education, and several other activities to pique the interest of the many budding astronomers we expect to see.

With the SolarMax II hydrogen-alpha telescope, we will have solar observing starting around 3:00 p.m.

We will need a large cluster of volunteers. With or without a telescope, we will be able to use your help on Astronomy Day. **Please contact Coordinator Dave Jacobi** at dave.jacobi@comcast.net to help make this the premier star party of the area! Or call Dave at 823-0328 and tell him *"I'll be there. How can I help?"*

Volunteers to help with area setup should arrive by 4 p.m. Dave Jacobi has sent parking passes to all who have volunteered so far. If you still need a parking pass, call Dave at 823-0328

Telescope volunteers should start setting up around 5 p.m, certainly no later than 5:30. After drop-off, vehicles will need to be moved to a designated parking area.

Sunset will be at 6:49 p.m.. Telescope viewing is scheduled to end at 11:00 p.m.

NB: If weather is questionable, check the web site at www.stocktonastro.org If in doubt, call Dave or any of the Executive Committee members. Rain will cancel, cloudy will not. Please don't assume...let the Committee make the call.

All volunteers should bring water and snacks – there is no concession stand in Oak Grove Park. Also bring warm clothes. The evening Delta breeze can be quite cool and a cool weekend is forecast. Bug spray might come in handy...better safe than sorry.

Time to Renew (or initiate) a Magazine Subscription

Another reminder about club rate subscriptions. (See also the membership and subscription renewal form on page 11.)

The club rate for *Astronomy* magazine is \$34 for one year or \$60 for two years. If you would like to subscribe or renew, send a check payable to the SAS for whichever term you like and be sure to include enough to cover your SAS dues for the subscription period (\$20 for one year or \$40 for two years if you haven't paid your dues yet). Send your check to: SAS, PO Box 243, Stockton, CA 95201.

Highway 4 Star Party – September 24, 2011
Setting up the Big Guns



Bret's new baby — a 30" f/4.5 Dobsonian (Some baby!)



Dark Clues to the Universe

By Dr. Marc Rayman

Urban astronomers are always wishing for darker skies. But that complaint is due to light from Earth. What about the light coming from the night sky itself? When you think about it, why is the sky dark at all?

Of course, space appears dark at night because that is when our side of Earth faces away from the Sun. But what about all those other suns? Our own Milky Way galaxy contains over 200 billion stars, and the entire universe probably contains over 100 billion galaxies. You might suppose that that many stars would light up the night like daytime!

Until the 20th century, astronomers didn't think it was even possible to count all the stars in the universe. They thought the universe was infinite and unchanging.

Besides being very hard to imagine, the trouble with an infinite universe is that no matter where you look in the night sky, you should see a star. Stars should overlap each other in the sky like tree trunks in the middle of a very thick forest. But, if this were the case, the sky would be blazing with light. This problem greatly troubled astronomers and became known as "Olbers' Paradox" after the 19th century astronomer Heinrich Olbers who wrote about it, although he was not the first to raise this astronomical mystery.

To try to explain the paradox, some 19th century scientists thought that dust clouds between the stars must be absorbing a lot of the starlight so it wouldn't shine through to us. But later scientists realized that the dust itself would absorb so much energy from the starlight that eventually it would glow as hot and bright as the stars themselves.

Astronomers now realize that the universe is not infinite. A finite universe—that is, a universe of limited size—even one with trillions of stars, just wouldn't have enough stars to light up all of space.

Although the idea of a finite universe explains why Earth's sky is dark at night, other factors work to make it even darker.

The universe is expanding. As a result, the light that leaves a distant galaxy today will have much farther to travel to our eyes than the light that left it a million years ago or even one year ago. That means the amount of light energy reaching us from distant stars dwindles all the time. And the farther away the star, the less bright it will look to us.

This Hubble Space Telescope image of Galaxy NGC 4414 was used to help calculate the expansion rate of the universe. The galaxy is about 60 million light-years away. Credit: NASA and The Hubble Heritage Team (STScI/AURA)

Also, because space is expanding, the wavelengths of the light passing through it are expanding. Thus, the farther the light has traveled, the more red-shifted (and lower in energy) it becomes, perhaps red-shifting right out of the visible range. So, even darker skies prevail.



The universe, both finite in size and finite in age, is full of wonderful sights. See some bright, beautiful images of faraway galaxies against the blackness of space at the Space Place image galleries. Visit <http://spaceplace.nasa.gov/search/?q=gallery>.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

Public Astronomy

Sky Tours – 9/2

I was the only SAS member with a telescope at Sky Tours for the first hour and a half, and there were 150 people there! (Sure would be helpful if more N. Stockton members would help out at Sky Tours.)

Chris Funge, a 3rd grade teacher at Larson School in Lodi, showed up with a telescope, and he helped a lot. Toward the end Roger Starke and Matt Fisher showed up, but it was after the masses left.

I told Chris Funge he should try for the Striking Sparks classroom telescope. He had 35 of his own kids there at Sky Tours and I told him that the truly interested ones can apply through him for a Striking Sparks Telescope. I hope to continue seeing this guy, he seems very interested.

Also there, but without a telescope, was the new member, Ray, (*cruising4fun@yahoo.com*, one of our bulletin board guys.) No scope, but a very interested guy. I hope to see him at the meetings.

...*Jeff Baldwin*

Tokay Colony Elem. School, Lodi - 9/16

I received an urgent email on Thursday the 8th from Aimee Ramsower, a Lodi Unified teacher that we have done School Star Parties for in the past. She was at a new school and they were doing a science night the next Friday.... Could we do a Star Party on such sort notice?

I sent out an email to the SAS telescope volunteers and soon my inbox had enough RSVPs to tell her we would be there.

Tokay Colony is a little school on the east side of Jack Tone Rd. with a little over 100 students. I think every kid was there with parents and siblings. Fortunately the Dina Primack family, the Lavieri family, the Wheeler family and Dave Jacobi joined me so we had plenty of scopes. But without the Moon or Jupiter it was a Messier evening. With dark and clear skies the faint fuzzies were soon in view- Globular Clusters, Emission & Reflection Nebulas, Planetary Nebulas, and Galaxies all for the viewers' pleasure.

After the crowd had seen them all and were leaving for home, the Moon and Jupiter joined the party. But before we could leave Dina had to see one more dim fuzzy, Comet C/2009 P1 Garradd, and she wasn't letting us leave until we found it. It took us longer to find than it should because the elusive little curse was hiding in the glare of a magnitude 6 star. Finally we checked it off our list, packed away the equipment and headed home for bed.

Many thanks to all who responded on such short notice.

... *Doug Christensen*

Community Outreach

The SAS maintains a fairly rigorous schedule of public telescope viewing opportunities. These take the form of school star parties (mostly combined with a Science Night at elementary schools) and star parties for the general public such as our year-round monthly Sky Tours at Delta College and our summer Astronomy in the Park events.

We don't charge for any of these events and they are not held under optimum dark sky conditions. For the volunteers who give their time, the compensation rests in the excitement expressed by young and old alike when they see the rings of Saturn or craters on the Moon for the first time.

Every amateur astronomer can remember when he or she had a similar "Wow!" experience and was hooked. That's the opportunity we offer to the community, especially to youngsters who have never had the experience of looking through a telescope.

We have members who own telescopes who really enjoy the fun of sharing the night sky wonders, and especially of providing those first "Oh my God!" moments. However, as rich and rewarding as that experience often is, it is unfair and unrealistic to expect the same few enthusiasts to be at *all* the outreach events. It is particularly frustrating to be the only telescope volunteer that shows up and be overwhelmed by an unusually large turnout of curious first timers.

It is equally frustrating for Doug Christensen, our Public Outreach Coordinator, when he can't round up enough volunteers to meet the club's obligation for what is expected to be a big crowd, say at a large school.

So...if you haven't participated in public outreach before, or not for quite a while, do your bit to help out. Call Doug (462-0798) and tell him you and your telescope are available. The more people Doug has on his list of available volunteers, the easier it is for him to "spread the wealth" and avoid burnout among the regulars.

If you are a member who has checked out one of the club's loaner telescopes, you are *expected* to participate in public outreach events. That is the only "charge" we impose for your otherwise free use of an expensive instrument. It is not unreasonable to say, "It's the least you can do."

Worried that some six-year-old brainiac will ask a question you don't have an answer for? "*I don't know*" is always good. You can't know about everything in the universe...and his question just happens to be one you can't answer. ☺

If you're nervous about trying it, suck it up and sign up. Your first time out, you'll quickly realize how little you really need to know. And you'll have fun. Guaranteed.

...*Trevor Atkinson*



See the new digital planetarium in action! Public Shows will be presented one weekend every month on Friday and Saturday. The shows will be approximately 1 hour long. All public shows will include a full dome video and a live presentation of the current nighttime sky. The cost for public shows is \$8 for adults and \$6 for children, seniors, and students. Reserve your tickets at the Delta College box office or purchase them before the show at the planetarium.

...*Kyle Wilson, Planetarium Technician*



Public Shows

September 30 and October 1 at 7:30 P.M.



"Kaluoka'hina: The Enchanted Reef"

The vastness of our planet's oceans guards unimaginable secrets. One of its most precious is Kaluoka'hina, the enchanted reef whose magic protects it against humans finding it. Kaluoka'hina's colorful inhabitants live in peace until the volcano erupts, and the spell is broken. Now it's up to Jake, the young sawfish, and his paranoid pal, Shorty, to restore the magic of Kaluoka'hina. Their only lead: the ancient legend that tells of touching the Moon.

"California Skies"

California Skies is a live presentation of the current nighttime sky. You will see the stars, constellations, planets, and deep sky objects currently visible. This month's show will feature The Summer Triangle, The Ring Nebula, The Andromeda Galaxy, Uranus and Neptune.

Field Trips

The planetarium is taking bookings for field trips. If you would like to bring your school group, scout group, youth group or would like to book the planetarium for any special event call Kyle at the planetarium at **954-5313** or visit our website at www.deltacollege.edu/dept/planetarium.

ATM Report



Greg Wilhite was the only attendee for the September ATM. We worked on his 12" f/3. A bit of retrograde motion was required to eliminate some TDE and overcorrection of an area. It's going to be an outstanding photo scope.

Greg also showed up with a few parts for my telescope. I'm waiting for some parts so I can assemble the telescope and continue analysis by star testing.

...*Jeff*

Our next ATM session will be on Saturday, October 22nd from 10AM to 3PM.

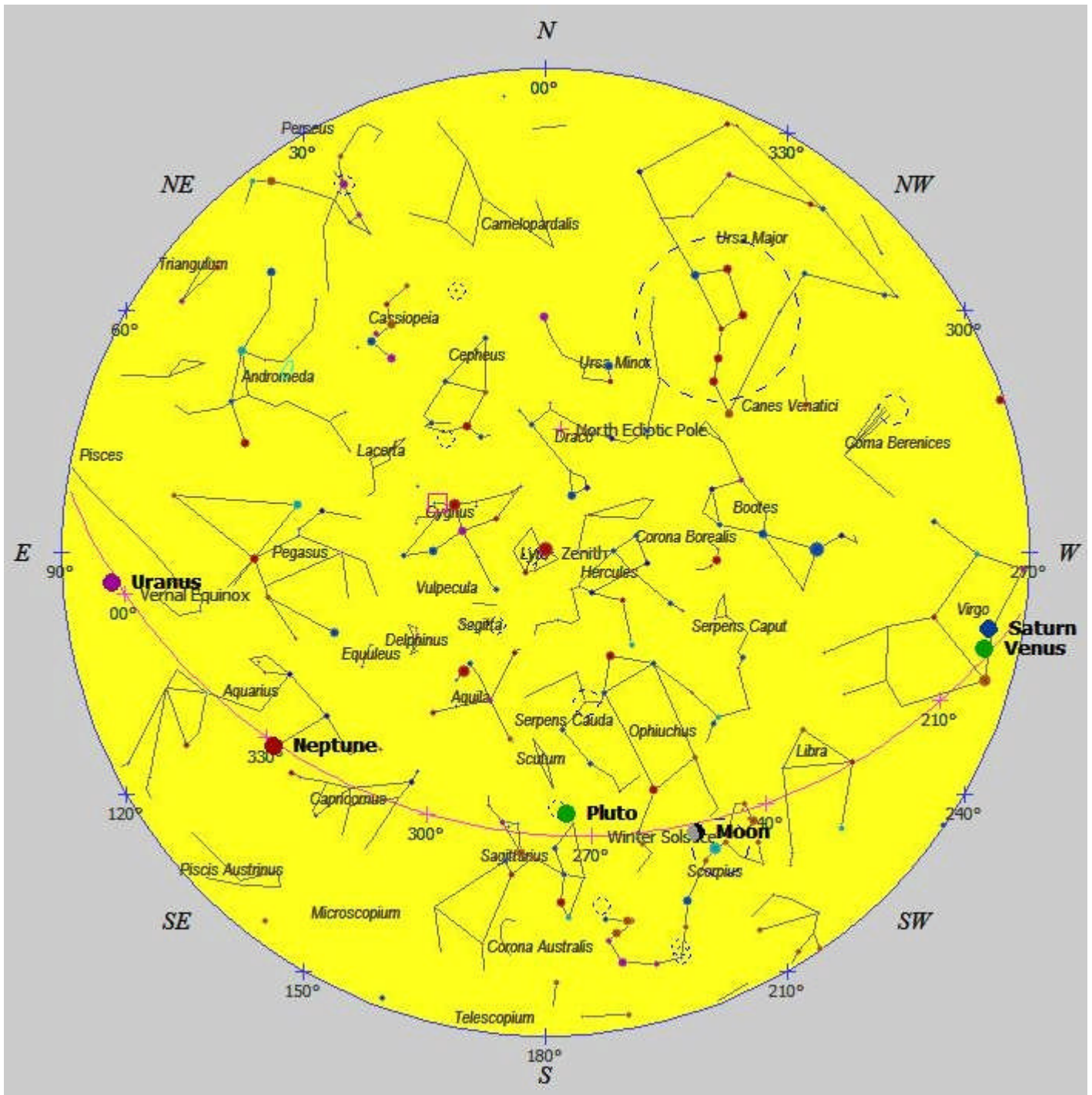
As usual, we meet at 684 Pioneer Ave. in Lathrop, and our phone is 594-1894.

October 2011 Sky Calendar

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	<p>PLANETS AT DUSK <i>Mercury:</i> In evening twilight last half of month. <i>Venus:</i> Low in SW evening twilight. <i>Jupiter:</i> Rises early, visible all night. <i>Uranus:</i> Visible most of night in Pisces. <i>Neptune:</i> In evening sky in Aquarius.</p>	<p>PLANETS AT DAWN <i>Saturn:</i> Reappears in dawn twilight late in month. <i>Mars:</i> In eastern morning sky, moving from Cancer into Leo.</p>			<p>30 Planetarium Show (Details on page 8)</p>	<p>1 Planetarium Show (Details on page 8) Astronomy Day Star Party Oak Grove Reg. Park AM: Mars 0.5° S of M44.</p>
2	<p>3 First Quarter 8:15 p.m. PDT  PM: Venus 3° N of Spica.</p>	4	5	6	7 PM: Neptune 6° S of Moon.	8
9	<p>10 PM: Uranus 6° S of Moon.</p>	<p>11 Full Moon 7:07 p.m. PDT </p>	12 Moon at apogee.	<p>13 SAS Meeting 7:30 p.m. Olson Hall 120 UOP PM: Jupiter 5° S of Moon. Saturn in conjunction with the Sun.</p>	14	15
16	17	18	<p>19 Last Quarter 8:32 p.m. PDT </p>	20	21 Orionid meteor shower. AM: Mars 6° N of Moon.	<p>22 ATM 10am-3pm (see page 8) SAS Hwy 4 Star Party (Sunset 6:18 p.m.) Orionid meteor shower.</p>
23	24	25	<p>26 New Moon 12:57 p.m. PDT  Moon at perigee.</p>	27 PM: Mercury 0.2° N of thin crescent Moon.	28 PM: Venus 1.8° N of Moon. Jupiter at opposition.	<p>29 SAS Hi-altitude Star Party (Sunset 6:10 p.m.)</p>
30	<p>31 AM: Saturn 5° N of Spica.</p>					

Stockton Evening Sky for Astronomy Day

Saturday, October 1, 2011 – 7:00 p.m. PDT
(Chart by CyberSky 4.0.7)



Membership Application

Club-rate Discounted Magazine Subscriptions:

Astronomy magazine requires club-rate new subscriptions and renewals to be ordered through the club.

Sky & Telescope requires new club-rate subscriptions to be ordered through the club, but will accept renewals by mail or online or through the club when you renew your membership.

Note also that both magazines offer two-year subscriptions.

Mark the selected category and mail with check (payable to SAS)

to:
SAS
P.O. Box 243
Stockton, CA 95201
 or bring to the next SAS meeting.

Membership & Magazine Subscription Renewal

SAS Membership:

General Rate: \$20/calendar year (Covers all members of immediate family.)
 Student Rate: \$10/calendar year (Full-time student, no age restrictions.)

Magazine Rates:	Club Rate	Standard Rate	Single Copy
Astronomy magazine (1 yr)	\$34.00	\$42.95	\$5.95 ea.
Astronomy magazine (2 yr)	\$60.00		
Sky & Telescope mag. (1 yr)	\$32.95	\$42.95	\$5.99 ea.
Sky & Telescope mag. (2 yr)	\$65.90		

Select Membership/Subscription Category:

One Year (2012)	Family	Student
SAS membership only	___\$20.00	___\$10.00
SAS + Astronomy	___\$54.00	___\$44.00
SAS + Sky & Telescope	___\$52.95	___\$42.95
SAS + both mags.	___\$86.95	___\$76.95
Two Years (2012-13)		
SAS membership only	___\$40.00	___\$20.00
SAS + Astronomy	___\$100.00	___\$80.00
SAS + Sky & Telescope	___\$105.90	___\$85.90
SAS + both mags.	___\$165.90	___\$145.90

Name(s) _____
 Address _____
 City/State/ZIP _____
 Home Phone _____ Bus. Phone _____
 Cell Phone _____ E-mail _____



For new membership or renewal, complete the form above and bring it with your check to the next meeting or mail it to:
SAS, P.O. Box 243, Stockton, CA 95201

Astronomy Day Star Party at Oak Grove Regional Park

Saturday, October 1. Sunset 6:49 p.m.



SAS MEMBER DISCOUNTS

Scope City at 350 Bay Street, San Francisco, offers a huge selection of telescopes, accessories and more. Manager Sam Swiss is offering discounted prices and free shipping to all SAS members and, for new members, an additional \$25 merchandise discount. (*Obtain a receipt from Jerry Hyatt, SAS Treasurer, showing you have paid the \$20 SAS membership dues.*)

To arrange for your merchandise discount, contact Sam personally at 415/421-8800 or at <http://www.scopecity.com>

“What’s Up?”

Don’t forget to check the “What’s Up” Podcast by Jane Houston Jones each month.

Using a combination of NASA images, beautifully clear graphics and her own narration, Jane does an outstanding job of explaining what you can expect to see in the night sky each month.

Bookmark the site:

<http://solarsystem.nasa.gov/news/whatsup.cf>

Stockton Astronomical Society

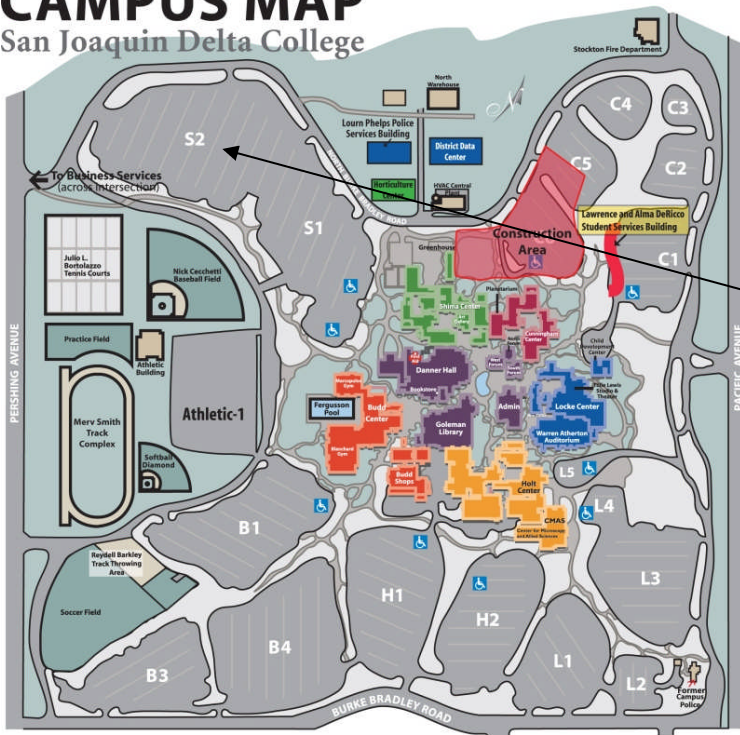
P.O. Box 243
Stockton, CA 95201



**Date Sensitive Material
Please Deliver Promptly**



CAMPUS MAP
San Joaquin Delta College



Astronomy Day Star Party
Saturday, October 1
Oak Grove Regional Park
Nature Center
(Eight Mile Road & I-5)

**Sky Tours on September 30
will be in the
Shima 2 parking lot
at Delta College
(7:30 – 9:30 p.m.)**

Stockton Astronomical Society
October 13 Meeting
Room 120 Olson Hall
University of the Pacific
(See campus map on pg. 2)