

PAStimes

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PHOENIX ASTRONOMICAL SOCIETY — ESTABLISHED 1948

"A Peek into Radio and X-ray Astronomy"

The guest speaker at our October PAS meeting will be Jenny Neureuther, who currently teaches astronomy at Paradise Valley Community College. She studied astronomy and physics at the University of California at Davis and Sweet Briar College in Virginia. Jenny was a dedicated researcher before finding her true calling, teaching. In this interactive lecture she shares her research experience looking for radio transients (sources of radio emission that briefly appear and disappear without a pattern) near the galactic center, and x-ray

loud gas (a cloud of gas that is hot and dense enough to emit consistently in the x-ray wavelength band) in a group of galaxies.

Join us on Thursday October 7, at 7 pm in the PVCC library, to learn more about these two interesting phenomena. As always the meeting starts with a half hour of socializing, followed by 15 minutes of club business and then the lecture.

Snacks and water should also be available. We look forward to seeing everyone at the meeting.



Photo courtesy Jenny Neureuther.

Fountain View Village Star Party Aug 20 Review

By Terri, Event Coordinator

It was a hot night. Terri, William and Amanda arrived at the location about 20 minutes prior to the setup time. We got in touch with the proper people and started setting up. Joe and Renee showed up a little while later. Mike had forgotten his cell phone but was able to find the location. Don called for help, he was lost, but got to the event. After setting up, Amanda and William went into the front lobby to find out about the snacks. Fountain View had set up

an awesome display of fresh-baked pastries. They brought some out for me, and we sent each of the telescope operators in to grab some while we watched their scopes. The evening progressed with about 75 in attendance.

Fountain View is a senior living location. Part of the place is set up for assisted living, and the other side of the complex is senior living on your own. It seems like they have some really awesome events at

this location. We were lucky to be one of them. The evening progressed and everyone seemed to enjoy what we had to offer. Some clouds showed up, which was annoying, but Jupiter appeared later in the evening and that was the highlight of the night. We couldn't catch anything setting, as a building was in the way. Many thanks to Rebecca Quinn for inviting and hiring PAS to do this event. We hope to help them with many more events in the future. ***

Review Of Sept PAS Meeting

By Mike Marron, Treasurer

We had a somewhat disorganized September 2 meeting. Bob Senzer will be surprised to learn that he provided the cookies. John Pulis got everyone signed in. I congratulated the brave souls who got through my summer lecture series. Jerry spoke about the large rocket he is going to build.

When our guest speaker, David Williams, finally got to talk to our small crowd, he explained the current and potential space programs. He also covered discoveries on Jupiter and the tidally warmed oceans of Jupiter's moons, but said the outermost Galilean satellite still remains an undifferentiated conglomerate.

Fifteen people were in attendance.



David Williams

<u>President / Librarian</u>	Rod Sutter	602-971-9129	President@pasaz.org
<u>Vice President / Events Coordinator</u>	Terri Finch	602-561-5398	VicePresident@pasaz.org
<u>Treasurer</u>	Mike Marron	480-488-3031	Treasurer@pasaz.org
<u>Newsletter Editor</u>	Don Boyd	480-963-7189	Editor@pasaz.org
<u>PAS Host</u>	John Pulis	623-570-5308	
<u>Webmaster</u>	Chris Johnson	602-456-2456	Webmaster@pasaz.org
<u>Rocketry Liaison</u>	Jerry Belcher	623-328-9290	http://ahpra.org/launches.html

October Upcoming PAS Events

By Terri, Event Coordinator

Oct 1: Parks & Rec Star Party, 6pm -8pm, Location: TBA in S. Phoenix. PAS Volunteers are needed at this event. Joshua, previously from the WOW program, is hosting this event. If you can assist, RSVP with Terri.

Oct 2: Seven Springs Scout Star Party from 7pm to 9pm. RSVP is with Sam for this event. The scouts will be serving food, and a donation may be made to PAS Telescope Team for their participation.

Oct 2: Virtual Star Party. RSVP is with Chris. Event starts at 7pm at Chris's home in Goodyear.

Oct 7: PAS meeting at PVCC library, 7pm to 9:30pm. Bring a friend!

Oct 9: Cuttin' Edge Observatory star party in Mayer. RSVP is with Chris. Arrive 1/2 hour prior to sundown or earlier. Chris will be there by 4pm on Friday, and you are welcome to stick around until noon Sunday.

Oct 12: Cancer Treatment Centers of America Star Party, held in roof garden on 5th floor. RSVP for this event is with Joe. Limited number of scopes needed, so RSVP early. Set up is 7:30pm, event is from 8pm

to 10pm, and dinner can be had prior to event, if you arrive around 5pm and see Joe.

Oct 14: PAS Indoor/Outdoor First-Quarter Moon Event at PVCC, in Room G-147 and near telescope dome, from 7:30pm to 9:30pm. RSVP with Terri to do the star party outdoors, and the hands-on demos indoors. Help is needed. Demos and telescopes are needed as well.

Oct 21: Free Telescope Workshop at PVCC from 7pm to 10pm. Bring your scope and accessories. Meet in G-147 for some indoor, daylight instruction, and then take your scope outdoors and learn to use your scope in the dark. RSVP is required with Terri by noon, day of event.

Oct 22: Public star party to observe the Orionid meteors at PV Park from 6pm to 10pm. RSVP with Terri for this event. BYO snacks, drinks, chairs, binocs. Additional seasonal objects, besides meteor shower, will also be viewed.

Oct 23: Halloween Party / Pot luck at Mike's in Carefree 4pm to ? Come in a costume, bring food and drink to share. RSVP required with Mike.

Oct 24: FREE Telescope Workshop at

Bookmans in their back room from 3:30 to 5:30pm. RSVP is with Terri by noon on day of event. Everyone welcome. Bring scope and accessories and learn to use your scope by daylight.

Oct 26: CTCA backup date, see above Oct 12 date for details.

Oct 28: Meeting of the Minds, PAS business meeting, 7pm to 10pm in G-147 on PVCC campus.

Oct 30: Virtual Star Party at Chris's home in Goodyear. RSVP is required with Chris. 7pm is start time so arrive 1/2 hour earlier.

Oct 31: Possible Halloween star party in the process of being set up. RSVP will be with Terri.

Nov 2: Cancer Treatment Centers of America Star Party, held in roof garden on 5th floor. RSVP for this event is with Joe. Limited number of scopes needed, so RSVP early. Set up is 7:30pm, event is from 8pm to 10pm, and dinner can be had prior to event, if you arrive around 5pm and see Joe.

Nov 4: PAS meeting at PVCC library, 7pm to 9:30pm. Bring a friend! ***

MOON MARATHON in 2011 Planning

By Terri, Event Coordinator

It was brought to my attention that PAS has not held a Moon Marathon in many years. So, I will be planning this event. I've asked Mike to hold it at his home in Carefree. What I'd like to do is have many people in discussion on what to do, how to do it, and any help they can offer. We will most likely make it a potluck, and run it from sundown to a deadline, to accomplish the Marathon.

What is a Moon Marathon? We prepare a handout with a picture of the Moon, a list of features you can find on the Moon, and a

pencil to track what has been observed, found, and noted on the Marathon page. Then, we can plan to have prizes available for those who win. Maybe 1st, 2nd, and 3rd place certificates. Maybe someone would want to donate a Moon Marathon trophy. And I'd like to be able to invite the public, only those with telescopes who would be participating in the marathon. So, if you'd like to help in the planning stages of this event, or donate a trophy, let me know. Or maybe, if no one is able to donate a trophy, we can have PAS pay for one.

We will need one person who isn't in the Marathon to be the VERIFIER. They will go around and confirm that the object was found by the telescope operator. This will be open to all PAS members and some general public, and I think it will be a blast.

So, let's start a discussion in the forums about it, and I'm thinking April or May as a good time for this event, when it isn't too cold at night, but not too hot yet, either. Drop me an email at Events@pasaz.org if you are interested in helping with the planning of this event. Your assistance is very much appreciated. ***

PVCC Star Party Review Sept 16

Mike Marron, Treasurer

At the September 16th PVCC star party, Frank Insana manned the Dobson that Dave Hellman brought out. In the mean-

time, in room G-147, Mike Marron explained about the formation of meteorites and planets. Bob Senzer showed up at the start and end of the event.

About fifteen people showed up, and each family spent at least an hour with us. ***

THE PAS SOCIAL 2011

By Terri, Event Coordinator

We are in the planning stages of the PAS Social. I asked Chris if he'd like to host the party again this year, and am awaiting a reply. If you have an idea for a place to hold the PAS Social, or some input as to whether you want it at Chris's again in Goodyear,

give me some feedback.

I'm planning to schedule the event for either January or February this time. I would love to have some input on ideas of games to play, things you want to do at the social, maybe someone wants to put together a batch of photos of this year's events to

run on Chris's big screen tv... send some ideas my way and we will see if we can make a few changes to the event, and maybe have a really cool party again this year. If Chris accepts the offer to have the event at his place again, I wish to send him many, many thanks in advance. ***

MISSING ARTICLE

By Terri, Event Coordinator

Due to unforeseen time restraints & other "Life" circumstances, Leah's "Arizona Skies" article will not be seen in this issue, but will return in the November issue. Thank you for your understanding. ***

HOW TO RSVP FOR AN EVENT - PART 2

By Terri, Event Coordinator

Last month, you read about how we prefer to receive an RSVP from those PAS members and the public who wish to attend an event, and how important it is to RSVP. Well, this month we are looking at the sources of information available to everyone, so that in the future, when you RSVP for an event, you will know where to find the info you need.

The PAS online calendar is your friend. First, visit the calendar and read about the event. The basics are listed in the calendar, including everything that was known about the event, when I posted the event on the calendar.

After I list the information in the calendar, I also set up a post about the event in the PAS forum. The calendar listing will include a link taking you to the forum entry about that event. Public events will always have a forum entry. Some private events may not, but if there is a lot of set up involved and discussion about the event, then a forum link will be provided. So, after you RSVP in the calendar, jump to the forum link, which is provided within the calendar page info, and read about the event.

My main reason for setting up the fo-

rum link: I have found that the calendar description cannot be changed or updated after RSVP's have been received. Editing the calendar description will delete any RSVP's listed below it, making it seem as if no one is going to attend the event. The forum does not have this problem, so I can make updates as needed to the forum entry, and it won't delete the RSVP info for those who have already RSVP'd on the calendar page.

Of course the forum entry also has plenty of room for additional details and discussion. We can type as much as we want to in the forum, and the calendar page will still look neat and concise.

Therefore, the easy way to get to the info you are seeking is via the link I provide in the calendar for each event. I try not to post that link too soon in the forum, but if there is important info that is needed to be known, I start posting in there so that we all can be on the same page at an event. All questions are answered within the forum. Reading the forum entries for the event you are thinking of attending, is definitely worth your while, because it will enable you to properly prepare for an event.

So, what does this mean to you?

1) Every time you RSVP for an event,

read what's listed in the calendar about date, time, location, what's visible, etc.

2) Then visit the forum link and see additional information and updates about the event. For instance, the forum info might include public RSVP's, or setup within G-147 for an indoor event, or who's volunteering to do what at an event. All this info is important and can be found in the forum. Especially the private forum where only the PAS members can access. Public events are listed in the public forum, and private events are listed in the private forum. (Private meaning that only PAS members can read that forum.)

3) If your questions aren't answered in these two sources (calendar and forum), drop me an email, and we will get the info you are seeking out to the Telescope TEAM through the forums. The best events are those that have everyone seeing eye to eye on what we are doing while there.

4) Feel free to post in the forums, your questions, ideas, plans, etc. All ideas are welcome and all help is appreciated at these awesome events!!!

I do hope this helps everyone in understanding the importance of RSVP's as well as reading all provided info about an event before attending. ***

Tucson LPL Catalina Observatory 50th Anniversary Open Day Saturday May 22, 2010

Review by Joe Collins, PAS member

Not so far away... *You know with a 75mph I-10 Highway speed limit, Tucson is really not that far from Phoenix;* and several times per year the Tucson Lunar and Planetary Laboratories (LPL) Observatory in cooperation with the University of Arizona Sky Center host "Open Day" events FREE to the public. If you have never been to one, I HIGHLY RECOMMEND that you go sometime. It only costs you a phone call or email to RSVP, plus your gas and time. Additionally, several times per year, you can register for dinner and a 3+ hour sky tour for about \$35/\$20 (adults/children). Affordable overnight/weekend packages are available "down the hill" in Marana and Tucson. We (my wife, daughter and I) stayed at the Tucson Windmill Inns. I hope this article below gives you a taste of the 50th Anniversary May Open House that my family enjoyed, and I hope you can attend an "Open Day" or "Sky Center" event in the future. -Joe C.

Prepare to Enjoy. The Catalina foothills are scenic, with several "pull-outs" for photo-ops. Considering the altitude and low local population, Catalina Highway is in excellent condition up to the Summerhaven [pop 73] ski resort [99% of the way]. Caution - the last road mile [and last 1000 ft of altitude] to the Mt. Lemmon summit is single lane and unimproved, so you should only attempt this trip with a reliable vehicle, preferably a truck or car with 4WD; or make car pool arrangements from a parking lot in Summerhaven. Regardless of the season, bring extra drinking water to prevent dehydration, and extra sunscreen to counter the effects of intense sunlight and high altitude [9157 feet at the Mt Lemmon summit]. Also prepare for intense cold after sunset... bring jackets and blankets! If you plan to be there early, bring your camera/telephoto to capture views of Tucson, Kitt Peak and Oro Valley below. *Also, don't forget to bring your red flashlights - light discipline is strictly practiced after sunset because of all of the ongoing research and observing activities.*

"Open Day" Activities. Officially, these were the available activities from noon until six: tours and demonstrations of the asteroid-hunting [Catalina Sky Survey](#) 60-inch telescope, hands-on meteorite displays, solar viewing, displays describing the history

of Arizona astronomy in the Catalina mountains, information about the [Mt. Lemmon Sky Center](#) Sky Nights and Discovery Days programs, images and information from the UA/LPL [HiRISE](#) camera that's currently orbiting Mars, walking tours of the retired Air Force Station on top of Mt. Lemmon, talks and demonstrations describing nature and science in the Santa Catalina mountains. There were educational activities for adults and children throughout the day - hiking/nature tours, a hummingbird exhibit, a local geology exhibit, several tours of the observatory telescopes and of "the highest radar and hardened radio stations" in the continental U.S. [formerly protecting Tucson and southern California during the cold war years]. There were educational games and kite flying for the kids. The staff provided bottled water, maps, and informed tours, and were very generous of their time answering questions and giving several "talks" in classrooms on the premises.

SkyWatch Scoop. Early Saturday afternoon during the "Open House", we got to see a video about the first NEO object of "potential harm" discovered by the Mt Lemmon SkyWatch observatory and predicted to hit the earth: 2008TC3. This object was the size of an eighteen-wheel semi truck, but fortunately, it broke up in the atmosphere and merely pelted the African desert with hand-sized meteorites collected later by University students from Sudan. The NEO discoverer and astronomer, Rich Kolowski, is working at the LPL Observatories on a federal sky survey grant to identify killer NEOs. On this day he reported to us about his most recent discovery, 2010KQ. They were still collecting information about the mass of this object a week after this event, so there was no immediate press release. It looks like it is definitely on a collision course with earth between 2035-2036... but it is no longer anything we have to worry about! It was identified as an artificial object, the upper booster of a Russian Proton rocket, based on the ellipticity of its orbit and the presence of titanium dioxide (major colorant of white paint) discovered in its spectrum.

The views were spectacular. We spent 3pm to 11pm at the LPL Catalina Observatories U of A SkyCenter. Before sunset we looked at the sun through a 130mm Lund

scope and saw an awesome prominence at 10 o'clock position and an equatorial cluster of sunspots. In the first hour of the "night program", which started at 6pm, we were briefed on the night's activities and had a simple sandwich/salad dinner. We had an hour of binocular viewing, were taught how to properly use a planisphere, and heard a lecture on astronomical scales of distance. Afterwards, we moved into the "big dome" of the public outreach 24" RCOS telescope observatory for a 3.5hr night tour of the sky moderated by Adam Block. The observatory has six other scopes on the local mountain ridges, including the 60" telescope dedicated for SkyWatch. Still, the 24" RCOS is such a light-collecting beast, that just for the fun of it, we sneaked in early and looked at several stars an hour before it even got dark. It was a pretty clear night, but not good for viewing surface features of Venus or Saturn. Even though we were over 9000 ft of elevation, there was a lot of upper atmospheric turbulence. However, we did get some great scope viewing time of DSO111, M44, M82, Albireo, NGC3242, M5, M13, the Moon and double star iota-Cancri. By-the-way, it was freezing outside! The SkyCenter staff provided hot chocolate that took the nip off. As a memento of the evening, Adam provided a color printout of the objects we looked at this evening [appended to this article]. He also mentioned that the public telescope experience will only get better in the future as they are planning on replacing the current 24" RCOS with a 36" RCOS by the end of October.

Always Check the Weather beforehand. The atmospheric turbulence Saturday night was a harbinger for high winds the following day; it is a good thing the open house wasn't on Sunday. 65mph gusts blew right where we were at on the Mount Lemmon summit! Much of the surrounding foliage and trees are growing back from the "Aspen" fire of 2003 that destroyed 250 of 700 homes in Summerhaven. Unfortunately, these high winds battered more trees and damaged trails that are still in repair as of this writing. It is always good to check the weather forecast before trekking up the mountain!

A future Speaker for PAS? I met several astronomers from U of A who work at Steward and several other observatories

Tucson LPL Catalina Observatory 50th Anniversary Open Day Saturday May 22, 2010

near Mt. Lemmon. Richard Hill, a senior research specialist also working the Catalina Sky Survey, said he would be interested in delivering a presentation to PAS sometime in the future, so keep him in mind for a future presenter.

Interested? Want more information? If you have questions, feel free to ask or email me (jcollins79@cox.net), but better yet, check out the Catalina LPL Observatory

and U of A Sky Center websites - and check out their calendar for upcoming events. The primary contact for this past event was Mary Guerrieri. Here is her contact information:

Website specific to this event: <http://www.lpl.arizona.edu/forms/openday>
LPL
Website: <http://www.lpl.arizona.edu/css>

SkyCenter Website:

<http://skycenter.arizona.edu/>

Almost nightly SkyCenter handouts: <http://www.caelumobservatory.com/outgoing/skynights/handouts/>

Satellites: <http://www.heavens-above.com>

Weather imagery:

<http://www.rap.ucar.edu/weather/satellite/>

Clear Sky Chart:

<http://www.cleardarksky.com/csk/>

CTCA 9/21 Review

By Joe Collins

Last night there was a very low turnout - only 5 people. CTCA treated us to whatever we wanted from the Cafe, so we took advantage of that and had supper before starting the event. I won't go over the menu, but it was good.

This event was the backup date for 9/7 which was canceled for cloudiness/poor visibility, but that former date was actually better visibility-wise than last night. Early on in the evening we had unobstructed viewing of Venus - in a scope it looked like a big yellow banana in the sky.

Don Boyd, Steve Palmer, Renee Collins, and myself were in attendance. Don brought his reflector, Steve brought his refractor, and I brought my SCT. Renee was greeter. Don and I had problems with our solar filters (his has pin-holes, mine did not fit properly - Orion may have sent me the wrong size) so we did not view the sun. However, that was not really an issue, as the event had not yet begun, since it was advertised for 8-10pm.

The skies looked more and more threatening as the evening progressed. There was a little "haboob" dust storm action going to the south of us by the Goodyear airport, and

we considered breaking down early to avoid the dust storm. But the wind calmed down, so we "stuck it out". It never rained, but the whole eastern sky was blocked with clouds most of the night. At its best we had 45% of the sky visible. At the worst, we had about 15% visibility. We only had intermittent viewing of Jupiter and the Moon as a front moved in from the east. When you could see it, the Moon looked like the opening scene to the "Werewolf"... the way the clouds sped across the bright face of the moon, it looked eerie! Jupiter, at its closest to the earth since the 1960's, looked majestic, when you could see it. The NEB (north equatorial band) was prominent even without filters, and three Galilean moons (Io, Callisto, and Ganymede) were visible as well. The CTCA participants who stayed around long enough for this, enjoyed seeing the Moon and Jupiter.

Steve was able to get a late star alignment and viewed a few star clusters (M6 Butterfly Cluster, M7, and the clusters near the Lagoon Nebula), which we were able to enjoy, but the CTCA participants had already left due to the poor weather. The light pollution did not seem as bad as last time and we could see the jewel-like stellar cores

of several clusters with Steve's APO.

I did not give out any red LED key-chain lights since no kids showed up. I will keep them for the next event.

We called it quits early at 9:30pm because the eastern storm front was getting more ominous.

I will talk with the organizer, Marisa Benincasa, about better hours and publicity. She actually did all she could the day of the event. I think the weather just looked so bad that night, it deterred most folks. I also heard from a few people they wanted to come up, but they were too ill, plus it was very hot at the beginning, about 103+. It only cooled down to a comfortable temperature after 9pm.

I may offer to Marisa to come back on a clear evening with just my scope, to make up for last night's disappointing viewing conditions and low turnout. A personally irritating thing for me last night was that my recently "hyper-tuned" telescope mount now has a problem it didn't have prior to "hyper tuning", so I have to get it back to deep space products - this means I will be out of the running for star parties for about a week or until I can get it fixed. ***

PAS Is Winner Of Lunar Meteorite

By Terri, Event Coordinator

I took a moment one day back in July, and created an event on our calendar and the Night Sky Network calendar, for which PAS has Won! Below is the write up about this scheduled event, and what PAS has won.

The below is posted on the Night Sky Network website and copied here for your information.

NSN site has: Your Lunar Meteorite sample in a gem jar mount. These fantastic specimens are from Northwest Africa,

found July 2006, and are Achondrite (lunar, granulitic breccia). Congratulations the first 50 clubs to list their upcoming public International Observe the Moon Night (InOMN) events for Saturday, September 18, 2010! ***

International Observe the Moon night Sept 18 Review

By Terri, Event Coordinator

Many, Many thanks goes to several people who attended and enjoyed the event on this evening. Let's review what happened on Sept 18. The evening began around 5:30 when Bob Senser was already at the event when Terri & William showed up. We chose a different place to set up this time, however, we had ants. So, it's back onto the concrete next event.

As we were setting up, Wendy Taylor from ASU came. She and her husband dropped off posters, handouts, informational items for our event. Super, many thanks goes to Wendy. She stuck around a little while after Mike showed up with his meteorites. Nike and Wendy's husband talked a long time about evolution and meteorites, and it was probably an hour later before they departed.

The event started, officially at 6pm, but only Terri, Don and Eloise had their scopes

setup. Eloise & Russ brought their scope & shared some views with us. They stayed until about 9pm. Thank you, Eloise for bringing your scope & joining the fun. It was becoming 7pm and others showed up. DonnaLee joined us. She stayed the whole event and we enjoyed her company. Corneliu joined our group. He brought with him a small scope and was viewing the moon for some of the evening. He also made a donation to the club. Thank you so much for the donation and spending time with us, Corneliu. Scott was scheduled to bring 3 with him, but only brought 1, however, we totally enjoyed his company. He wasn't with us that long but it was a very good time.

We viewed many objects, other than the Moon. We found and viewed Jupiter, Andromeda (with some difficulty), Perseids Double Cluster, Venus, Ring Nebula, Alcor & Mizar, and Alberio. It was a very successful evening. I wish to thank the PAS

members who attended: William, Don, Bob Senser, Mike & a visit from Sue Sutter. And I wish to thank those observers who joined us, mentioned above. It was a nice temperature outdoors, clear skies, and except for the Moon being rather bright, it was awesome! Total attendance, plus PAS members was 22. Wish you could have come, too. Maybe we will see more PAS members at the next PAS event. ***

THANKS FROM ELOISE

Hi Terri,

Russ and I had a really fun time. We got some excellent tips for the telescope, fabulous swag, and you all are just good company all around. I love the wide variety of topics thrown around. Bonus!

We look forward to the next get together.

Thanks for a great time,

Eloise Hunter***

Many School Events for 2011

By Terri, Event Coordinator

PAS has been contacted by many schools, to do star parties in 2011. I'm quickly getting each one organized and set up. If you can assist with these awesome,

fun events, please take a moment to RSVP your attendance. You can find all the info you need in this School Star Parties doc. Download it now at:

<http://www.pasaz.org/forums/downloads.php?do=file&id=111>. We hope to see you at these events! ***

Many Thanks To Leah

By Terri, Event Coordinator

Through the years, Leah has been an awesome asset to PAS. She has provided the use of her copier for PAS to make copies of handouts, charging a minimal fee to

make the copies, and her time to do it. Come November, we will no longer have her duplicating handouts for PAS. I wish to thank her so much for all she has done for PAS in the way of providing copies. A new

outlet for making copies of handouts will need to be found. If you wish to help out with this, please let Terri know. Thanks. THANK YOU LEAH!!!! ***

astrophotography for the masses

By Todd Gross

Most of you have read my 2008 post on "astrophotography for the masses".

Basically, the point I was trying to make is that even when you are having "down time" from the telescope.. when astronomy falls off for you, because other things are happening in your life.. you can never really rid yourself of that astro-urge!

A small scope, binoculars, and of course the new wave of digital cameras can go a long way to scratching that itch on an impulse. In the past two years, those cameras have gotten even better.

With the latest digital cameras getting sharper and sharper (even my iPhone now has a 5 megapixel camera) - to the point of 18 megapixels on a digital SLR for under 800 bucks, I just did a "point and shoot" without a tripod of the moon.. ..and sure enough craters and all came out in this shot:

<http://clicks.aweber.com/y/ct/?l=P3gAl&m=1j4mmV9j0UWWsf&b=BiGQzHZr4c62LpFJ6ewx4w>

Not one of my better astrophotos, BUT superb for a regular carry-along 4X zoom, on a regular digital SLR without a scope or tripod! Throw in a light tad of photo processing to sharpen up those craters a tad and wow:

Itch scratched!

Now imagine if this had been a lunar eclipse.. hey no scope needed! This camera has also been great for sweeping starfields, although I did use a tripod for that.

Just a note on the camera used.. it's the Canon T2i. It is astro-friendly since you can leave the shutter open and the ISO rating goes up to 6400, although I noticed "noise" in the background over 1600 to be pretty objectionable.

Next aurora borealis though.. that 1600-6400 ISO is going to come in awfully handy :)

C.E.O. All Club Members Only PARTY!!!

By Terri, Event coordinator
C.E.O. = Cuttin' Edge Observatory
Location: Mayer, AZ
Time: Arrive prior to sundown

This is the big one! PAS Members only... Bring your scope! Let's have a super party at Chris's observatory in Mayer. No children please.

Plan to enjoy a night of dark skies, great people, lots of scopes to look through and enjoy, awesome discussions on astronomical objects, and more. Chris has electricity, porta-johns, internet access. Bring sleeping gear, if spending the night. More details can be found in the Private Calendar for the date of these events. The next up-

coming CEO BIG STAR PARTY is on Oct 9, 2010. There will be more announced.

Definition of "PAS Member:" Your dues pay for you + your immediate family. That is why it is listed under one name per household on the PAS Roster. So, those living in the same household, under one roof, are considered to all be part of the PAS Membership, under your name. However, please note, we prefer not to have children at this event as we are there to seriously observe, enjoy the evening and not have to keep kids entertained. Teens who have an interest in Astronomy are welcome. A scope is preferred, but as long as you are a PAS member, please come join us.

Event starts at sundown, so arrive prior to sundown to not disturb the viewing.

We will see you there. The weather for Oct 9 has a historical record to be only as low as 40 deg, and in the 80's on Sunday.

BYO:
Sleeping gear, chairs. Blankets, snacks and drinks, laptops.

RSVP is required with Chris by day before event via email or calendar RSVP: Webmaster@pasaz.org.

More details will be added to this link in the forums, as they become available: <http://www.pasaz.org/forums/showthread.php?p=1087#post1087>

New Astronomy Community

Written by Chuck Slack, Edited to fit in newsletter by Terri.

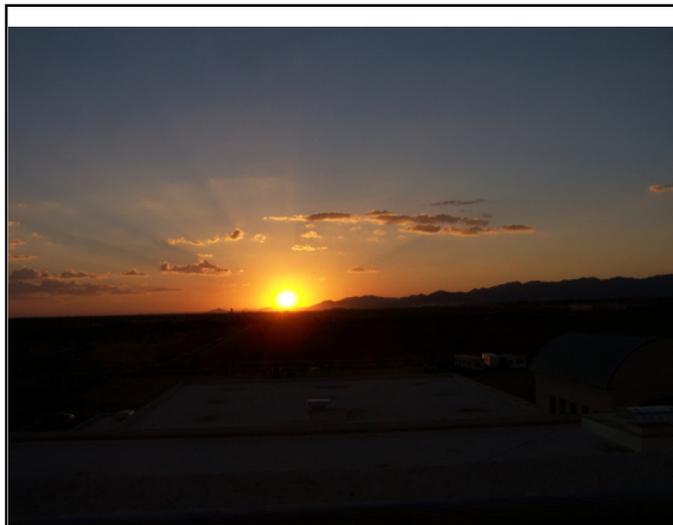
Preserve at Granite Gap, <http://www.granitegap.com>, is an exciting new Community in Southwest New Mexico that is headed by Eugene L. Turner and Timothy McShane, who already have created two developments in the area. The first, Arizona Sky Village, located near Portal, Arizona, contains 350 acres. The second, Rancho Hidalgo near Animas, New Mexico, contains 7,000 acres, including an adjacent lease. Rancho Hidalgo is also the location of the Astronomy Magazine Observatory.

Here is what David J. Eicher, The Editor in Chief of Astronomy magazine has to say about Granite Gap: "Granite Gap will be a unique place where a continuous star party under world-class dark skies goes hand in

hand with rock collecting, mining history, rocket launches, planetarium shows, a mineral museum, birding, horseback riding, and

an exploration of the rich history of the Old West. No other place on Earth blends science, art, history, and adventure in this way." Don't miss the article about Granite Gap by Michael Bakich in the Sep-

tember issue of Astronomy Magazine. Please register on the website for more information.



Sunset over CT-CA September 21. The Sun was one of the few objects visible that evening because of clouds.

Year In Space Desk Calendar

By Terri, Event Coordinator

Every year for the past probably 10 years, PAS members have come together to purchase the Year in Space Desk Calendar, which features beautiful space pictures plus room to write all your planned activities (see <http://www.yearinspace.com/desk-calendar.html>). And they make great Christmas gifts! Get one for yourself, and a few more as gifts!

The 2011 Calendar will be ready for shipping in mid November, and we get a

discount if we buy 10 or more. So, I collect the monies, in cash, for the calendars by the Nov 5th PAS meeting, such that I put the order in a few days after that date, and then we get the order sometime around Turkey Day, giving us plenty of time to wrap it up for Christmas gifts. That's why we have a deadline of the November PAS meeting.

Ten or more calendars are only \$10 each; 2-9 calendars are \$11 each, and a single copy is \$12. So, if you want a good deal, and a great idea for a Christmas gift,

let's get the orders going again this year. I do not order until I have all the cash in hand for at least 10 calendars. Please let me know if you want one or more calendars, and get the payment of \$10 per calendar to me by Nov 5, because payment is required up front when I place the order. You can bring the payment to any event between now and Nov 5, and we will put in an order.

RSVP your order today and let me know how many copies you want! ***

WIGWAM CREEK SCHOOL Review Sept 10

By Steve Palmer

The Wigwam Creek School star party on September 10 was attended by four PAS members: Chris Johnson (5" refractor), Steve Palmer (C-8 SCT), Mike Marron (meteorites) and Gilbert Gomez (C-9.25 SCT). I would say the crowd was around 150 attendees. There was also a teacher there who brought his Meade ~ 11" SCT, which he had already set up. But he had problems aligning it, so he took it down and left around 20:30.

Chris and I arrived by 19:00 and started setting our equipment up. A large crowd had already gathered and were a bit anxious to start viewing immediately.

Eric Santos, the science teacher who organized the event, did a great job of having tables and chairs already set up, with waiting rows for the scopes. This worked out great for crowd control and keeping the participants flowing efficiently. Although as always, the kids were very anxious and impatient. :)

By the time we had things set up, it was dark enough to see Polaris and start our polar alignments. Chris and I were able to perform our polar alignments and begin the viewing by about 20:00. Everyone wanted to view Jupiter, but we had to wait a while for it to rise high enough for us to get a clear view of it. In the meantime, we showed the crowd many objects, including but not limited to: M13 Globular Cluster, M6 Butterfly Cluster (was a big hit with the kids), Lagoon Nebula, Andromeda, and a few more random objects in the sky.

Gilbert showed Jupiter when he finished his set up, and probably showed other objects after that. Chris set up the binos on his refractor later in the evening to view Jupiter. It was an amazing view (even with the light pollution we had).

Eric announced that we would remain with all the scopes until everyone had been able to view through whichever of the scopes they wanted. This was a welcome extension for us to the evening, so that we were not rushed and everyone could take the time to enjoy each sky object. Joe and Renee Collins briefly stopped by later in the evening, after their events to say hi and check out the turnout.

Things wrapped up around 22:00. We packed up and thanked Eric for his efforts, and discussed suggestions on improvements for the next event there. The sprinklers were turned off (yeah), but we had "major" horrendous light pollution problems from the main school building (inside and outer lights). This made it difficult for us to align and view Polaris right above them. Eric is going to bring this up to the maintenance personnel, so that it can be corrected, i.e. lights turned off next time. The basketball court lights were turned off, which was a great help.

Also, we discussed an alternate setup location for future events, in the middle of the field, farther away from street lights and other light pollution issues. This will give us greater room to set up, and will increase the viewing

ability of each scope.

MANY THANKS TO PAS

By Eric, Wigwam School Teacher

Last night really was great everyone. Thank you for coming and doing a superb job. The parents and teachers loved it. We definitely didn't anticipate such a huge early crowd, but you guys handled it very well.

As for numbers - I had 120 families sign in. Considering that many didn't sign in, and that most people had one person sign in for the entire family... I think an estimate of 300 people is not unreasonable.

One note Terri - in addition to the teacher mentioned, there was one more parent who set up a scope and stayed the whole night. He did a great job too, if you'd like I'll email him and see how he feels about joining P.A.S.

Thanks everyone! BTW if you would like to look at pg 3 of the pdf found here:

<http://www.westvalleyviewftp.com/wvvpdf/WVV09102010.pdf> ...This was the article that ran in the paper on Friday. I'll apologize now for the P.A.S. not being published, I must have repeated it 5 times to the reporter. If it's any consolation, my "quote" is strangely lacking in grammar and vocabulary, I'm not going to take credit for that one. At any rate, the publicity surely helped.

Looking forward to our next party in April, where we will make the improvements Steve and I talked about. ***

CTCA Sky Tours PAS Events Update

by Joe Collins

Future CTCA/ PAS Sky Tour Event Dates through 2010:

We still have at least four events left until the end of the year, so I highly encourage you to RSVP with me as a worker or volunteer for one or more upcoming paid events:

Back Up DATE in red

CTCA, Goodyear 5th Floor Rooftop Garden OCT 10/12/2010 **10/26/2010**

CTCA, Goodyear 5th Floor Rooftop Garden NOV11/02/2010.. **11/16/2010**

CTCA, Goodyear 5th Floor Rooftop Garden DEC12/07/2010 **.12/21/2010**

Hours for all event dates: the advertised hours are 8PM to 10PM, though we are welcome to stay until midnight.

Feedback & Info Snippets: I received valuable feedback from PAS members, which we are going to implement at

following CTCA events. The first practical suggestion is to start the event later when it gets darker, i.e. 8pm. Sam Insana provided some helpful advice early on about objects we can target with the current light pollution levels. Steve Palmer made some more suggestions to improve darkness conditions. We may change some of the event dates to either specialize on a 'Moon Madness' night, or to obtain darker viewing conditions. I have red LED key-chain lights to give away at future CTCA-PAS events. We are still seeking some planned activity ideas for the period of time between sunset and astronomical twilight when some of us need to align our scopes. We are hoping that future presentations will hold people's interest as well as Leah's did, and if we get a higher volume of attendees we can set up static displays or have talks on the second floor lounge; and maybe have Mike back again with his meteorite display.

August 3 Report: The August 3rd event was successful, so we cancelled the 8/17 and 8/31 backup dates. Better weather watching was done by following the AccuWeather.com hourly reports for 85338 zip code. A predicted short-lived monsoon missed CTCA. There were no obstructing clouds and surprisingly no wind at the CTCA 5th floor garden terrace! We had only a few minor setup problems: an Inca dove decided to nest and lay eggs on top of a high intensity lamp we block, and the patio had to be cleaned since there were ankle-high dead flying ants/bees in some areas due to a recent agricultural aerial spraying. The evening was very hot/humid, but we elected to not run the cooling "mistlers" to keep the moisture away from the scopes. CTCA provided copious amounts of chilled bottled water and cookies. Patient and caregiver attendance was only 15, but for a good reason: according to our sponsor, Marisa

CTCA Sky Tours PAS Events Update

Benincasa of CancerFighters™, this was due primarily to low enrollment at the hospital this particular week. Our event was properly advertised and is on the monthly patient event calendar. We can expect up to 25 attendees at future events. From the PAS side, Steve Palmer, Leah Sapir, Renee and Joe Collins were in attendance. Leah manned a laptop and gave her edited-for-time presentation on "What Can You See in a Telescope?" Steve brought out his AR6" APO refractor. Joe brought his Celestron C-11/CGEM. Renee was hostess. There were no major equipment malfunctions. We had superb telescopic viewing of Saturn and Venus; and for the few patient souls who waited or showed up after 10pm, Jupiter was resplendent. And next month (September) is when we can expect the best viewing of Jupiter for twelve years. Albireo looked beautiful. We viewed most of the objects listed in the [PAS_CTCA_Ref_8_03_10.pdf](#) event handout.

We looked at several Messier objects, but we had light pollution issues due to the stairwell safety lights. Maintenance could not dim them for us due to safety requirements, so these views were substandard. Regardless, we still got "ooohs" and "aaahs" from attendees. Steve and I think that next time darkness conditions can be improved by "papering over" some windows, by using dew shields on our scopes, and red-taping or covering up the eight or so "mood lights" in the patio area. I estimate these extra measures will take about another half hour of setup time.

In addition to superb viewing of Jupiter, those of us who stayed past ten o'clock got a "free show" again by four resident sky hawks diving and plying the night sky for

their supper.

We did not have any sunset viewing of the Sun this time. I will bring a glass solar filter and photo-reducer for my C-11 in September. Frank or Sam Insana will bring their Coronado solar telescope in October. Leah provided me with questionnaires we can shorten and use in the future. [CTCA patients fill out lots of surveys.] Handout expenses went down from \$26 to \$8 this time since Marisa Benincasa did the two-sided color photo-copying of our event handout in-house for us. Thanks Marisa! And a big THANKS to everyone from PAS who worked this evening!

July Report: No paid events due to inclement weather/monsoons/ cloudiness. Two dates were cancelled: 7/13 & 7/27.

June 8 Report: Thanks to all of you who helped and participated, making the first CTCA "Sky Tour" Event a success. We had 18 attendees: two early on during the solar viewing, twelve who were counted by Terri, three security guards, and one maintenance person who showed up at the very end of the event. Even though we did not have the large turn out initially expected, all the people who viewed through the scopes were excited, they thoroughly enjoyed the event, and had questions. The majority of the attendees stayed for quite a while, indicating that we had captured their interest and hosted a quality event for patients, caregivers, CTCA workers and their families. PAS was well represented. We had five people sharing two "paid worker" fees [Terri, William, and Amanda(Storm) Finch, and Sam and Frank Insana]. And on top of this, we had 4 volunteers [Mike Marron, Chris Johnson, and Joe and Renee Col-

lins], for a total of nine PAS participants! Steve Palmer had also intended to participate, but needed to bow out, understandably, due to illness. However, Steve was able to back us up later at the August 3 event.

Setup for this event was better than we had expected. CTCA Security actually handled the two major sources of light pollution for us by covering two mercury vapor lamps with light blocking boxes, a trick we will remember for following events. Refreshments were provided at 8pm: ice water, lemonade, juice and cookies. A few of us who arrived early got to eat in the dining room and others had box lunch sandwiches, apples, and chips provided by the cafeteria later.

Sam brought his Coronado solar scope and 8" Newtonian reflector with Solar Filter. Frank brought his binos and identified the four birds swooping down overhead after 9pm as sky hawks, not bats as previously thought! Terri brought her 8" Celestron SCT, Joe Collins brought his 11" Celestron CGEM SCT, Chris Johnson brought his TAK120 on a Celestron mount. Mike Marron brought his mobile meteorite collection and display charts. William Finch and Renee Collins were helpers. Amanda (Storm) Finch was hostess. We viewed all of the objects listed in the [PAS_CTCA_Ref_6_08_10.pdf](#), handout used for this event. Additionally, Chris Johnson was able to get some pretty breathtaking views of several open clusters with his TAK.

If anyone reading this article has any other feedback or ideas on improving upcoming CTCA/PAS events, please contact me: Joe Collins (jcollins79@cox.net)

Buyer Beware - Used Telescopes

By Don Boyd, Editor

I have been hearing a strange rumor on Forums in the past month or so, so I decided to check it out. The rumor is that Orion Telescope does not offer parts or repair service on used telescopes sold under its brand name. I emailed Orion and they confirmed that they only offer parts and service to the original buyer, and even then only if the scope was bought from one of their dealers.

For most of their line this is not a big deal, as most of the parts are generic and easily replaced from third-party sources. But for two categories of scopes this could be a big problem. The first category is their line of Maksutov-Cassegrain telescopes. Certain parts for these are only going to be available from Orion. If the focuser breaks and Orion will not sell you one, then you might not be able to find one from another source.

The second category that could be an

even bigger problem is their line of goto scopes. Not if, but when, the electronics go out on these... if Orion will not sell you, say, a new handbox controller, you will be out of luck as nobody else will be able to supply this. The same is probably true of the motors.

So therefore, buyer beware of used Orion telescopes, and know that Orion will not service or sell you parts for your telescope if you are not the original owner.



The Hunt is On!

By Carolyn Brinkworth

The world of astronomy was given new direction on August 13, 2010, with the publication of the Astro2010 Decadal Survey. Astro2010 is the latest in a series of surveys produced every 10 years by the National Research Council (NRC) of the National Academy of Sciences. This council is a team of senior astronomers who recommend priorities for the most important topics and missions for the next decade.

Up near the top of their list this decade is the search for Earth-like planets around other stars—called “extrasolar planets” or “exoplanets”—which has become one of the hottest topics in astronomy.

The first planet to be found orbiting a star like our Sun was discovered in 1995. The planet, called “51 Peg b,” is a “Hot Jupiter.” It is about 160 times the mass of Earth and orbits so close to its parent star that its gaseous “surface” is seared by its blazing sun. With no solid surface, and temperatures of about 1000 degrees Celsius

(1700 Fahrenheit), there was no chance of finding life on this distant world. Since that discovery, astronomers have been on the hunt for smaller and more Earth-like planets, and today we know of around 470 extrasolar planets, ranging from about 4 times to 8000 times the mass of Earth.

This explosion in extrasolar planet discoveries is only set to get bigger, with a NASA mission called Kepler that was launched last year. After staring at a single small patch of sky for 43 days, Kepler has detected the definite signatures of seven new exoplanets, plus 706 “planetary candidates” that are unconfirmed and in need of further investigation. Kepler is likely to revolutionize our understanding of Earth's place in the Universe.

We don't yet have the technology to search for life on exoplanets. However, the infrared Spitzer Space Telescope has detected molecules that are the basic building blocks of life in two exoplanet atmospheres.

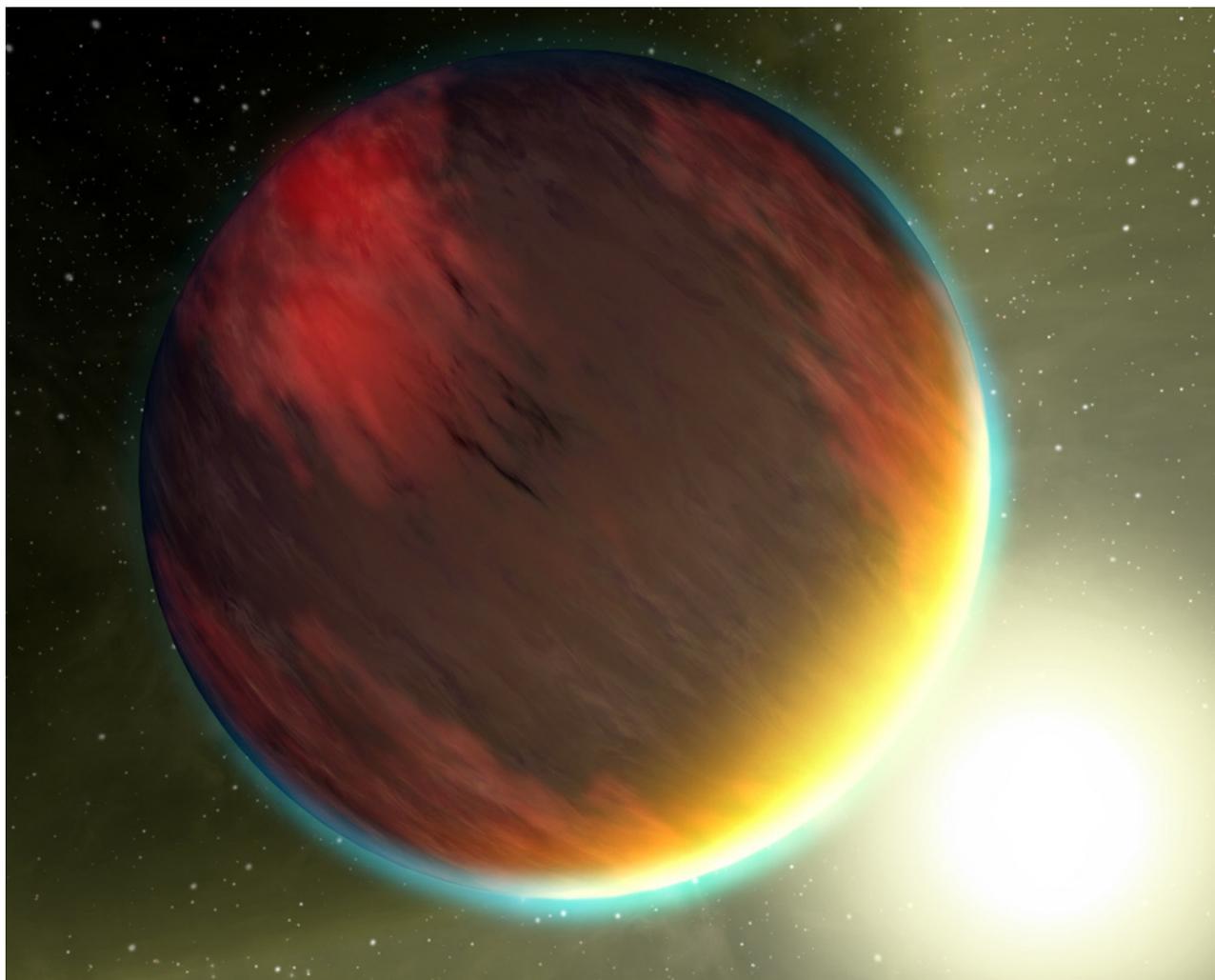
Most extrasolar planets appear unsuitable

for supporting life, but at least two lie within the “habitable zone” of their stars, where conditions are theoretically right for life to gain a foothold.

We are still a long way from detecting life on other worlds, but in the last 20 years, the number of known planets in our Universe has gone from the 8 in our own Solar System to almost 500. It's clear to everyone, including the Astro2010 decadal survey team, that the hunt for exoplanets is only just beginning, and the search for life is finally underway in earnest.

Explore Spitzer's latest findings at <http://www.spitzer.caltech.edu>. Kids can dream about finding other Earths as they read “Lucy's Planet Hunt” at <http://spaceplace.nasa.gov/en/kids/storybooks/#lucy>.

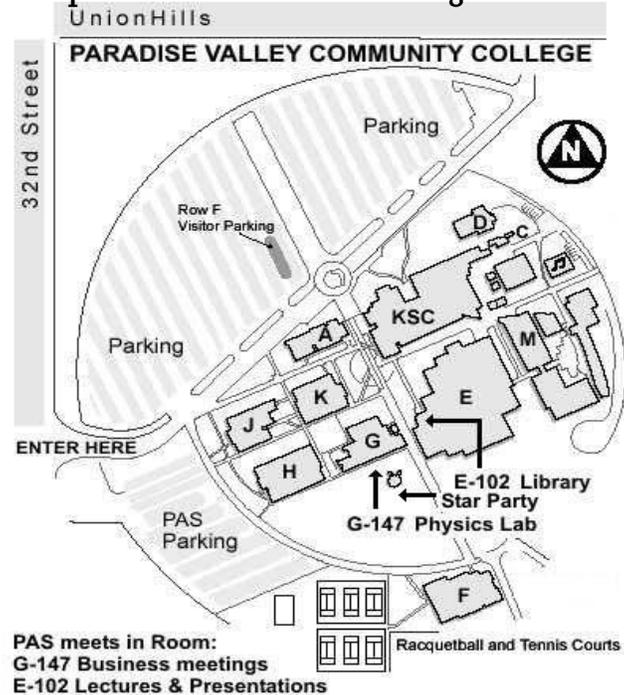
This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.



Artist's rendering of a recently discovered planet whose atmosphere contains the basic chemistry for life. However, since this planet is a hot ball of gas, life would be unlikely.

Map to PAS Meeting Location

Really Awesome Upcoming Events



By Terri, Event Coordinator

Here's a brief idea of some upcoming events you might wish to put on your calendar, attend & be part of. Your assistance, participation & attendance is appreciated!

Jan 22, 2011: PAS SOCIAL - This is the PAS Party of the Year! Make plans to attend. More info will be in the December newsletter, or at this link on our site: <http://www.pasaz.org/forums/showthread.php?t=464>

Mar 10, 2011: PAS INDOOR ASTRO EVENT: Held at PVCC from 7:30 - 9:30 in G-147. Would love to have some extra help indoor with hands on demos & fun displays. RSVP with Terri to be involved in this great event.

Mar 19, 2011: MOON MARATHON: Bring your scopes & your immediate family. Open to anyone with a scope, meet at Mike's for a potluck and Marathon. Prizes will be awarded for those who complete the Marathon. First 3 to complete will get special prizes. See more details in March newsletter & at this link in the forums: <http://www.pasaz.org/forums/showthread.php?t=465>

SUMMER 2011: Join PAS in another exciting Summer Lecture Series / Star Parties starring Mike Marron, at his home in Carefree. Watch for announcements & fliers for these events. ***

Please see page 2 for more information

October

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2 Seven Springs Scout Star Party/ VSP
3	4	5	6	7 PAS meeting	8	9 All Club Star Party
10	11	12 CTCA Star Party	13	14 PAS/PVCC Indoor/Outdoor Event	15	16
17	18	19	20	21 Free Telescope Workshop at PVCC	22 Orionid meteors Star Party at PV Park	23 Halloween Party at Mike's
24 Free Telescope Workshop at Bookmans	25	26 CTCA Backup Date	27	28 Meeting Of the Minds	29	30 VSP
31		2 CTCA		4 PAS Meeting		

Ads in PAStimes

Ads in PAStimes run for a month and may be renewed on a month-by-month basis, if submitted by deadline, space permitting. Ads in PAStimes are FREE to members. All others are asked to make a small donation. Donations are to be sent to the Vice Prez who will forward them to the Treasurer.

Don Boyd
PAStimes Editor
701 W. Del Rio St.
Chandler AZ 85225

To:

{MM:First Name} {MM>Last Name}
{MM:Address Line 1}
{MM:City} {MM:State} {MM:ZIP
Code}

PAS Speaker Line-up for 2010

By Terri, Event Coordinator

Nov 4: Mike Marron Upcoming Astronomical Disasters

Dec 2: Richard Greenberg Unmasking Europa: The Search for Life on Jupiter's Ocean Moon

Jan 6: Veronica Zambala - Topic: TBA

If you have a topic to share, or know of someone who would make a great PAS Guest Speaker, please drop Terri an email with the contact info at Events@pasaz.org. ***

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What's Up For October?

By Rod Sutter, PAS President

Name	Date	Rise	Set
Mercury	10-1-10	05:23	17:44
Venus	10-1-10	09:12	19:15
Mars	10-1-10	08:56	19:40
Jupiter	10-1-10	17:38	05:26
Saturn	10-1-10	06:16	18:14
Uranus	10-1-10	17:40	05:38
Neptune	10-1-10	16:07	03:00
Pluto	10-1-10	12:41	23:06

All Times Arizona Time

October 15 2010

Sunrise: 06:28

Sunset: 17:51



Q3: October 1



New: October 8



Q1: October 14



Full: October 23