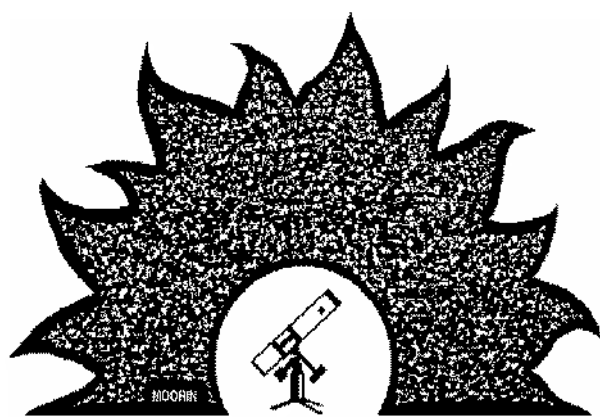




PAStimes

Phoenix Astronomical Society
www.pasaz.org

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PHOENIX ASTRONOMICAL SOCIETY — ESTABLISHED 1948

Astro Systems Dobsonian “Telekit”

Roger Anzini to speak at January 15 Meeting

One very dark evening several years ago while driving home on a lonesome highway, I happened upon a small crowd of people gathered around what appeared to be a cannon set up by the side of the roadway. Overwhelmed with curiosity, I turned the car around and went back to see what the cannon was aimed at.

Standing beside the cannon stood a smiling, scruffy, elderly gentleman hawking bystanders a chance to look 28 million years into the past, for only five dollars. Let me tell you, I'm usually the most skeptical guy in any room but at only five dollars a peek it seemed like the the best Barnum and Bailey deal I had ever been suckered into. But, what kind of a cannon or anything else could show me millions of years into the past ? I almost put the five back into my pocket and turned for home, but a little voice inside or maybe the people

ooohing and aahing kept me waiting my turn in line, what the heck, I happened to have five dollars in my pocket, I didn't even have to ask for change. Reaching the front of the line, the scruffy old gent gave me a wink and a nod, pointing to an eyepiece sticking out the side of the cannon.

Behold.....there in my winked vision was an object twenty eight million light years distant. Like a gleaming sombrero hat spinning in the vastness of deep space.....it was, he explained, M104 the Sombrero Galaxy. Wow, I needed more of this stuff.....

I had never before owned a telescope but that fateful moment set me on a course that would change my life in so many wonderful ways. So come to the PAS meeting on January 15th and I'll show my cannon.....ah telescope and how you can build your very own Dobsonian time ma-

chine.

Terri adds: This is an awesome way to start your new year. Please note the change in date due to PVCC being closed for the holidays. Many thanks to Jenny for letting me know ahead of time, so we didn't have a massive cancel situation like last year.

So, for this first meeting of the year we



(Continued on [page 3](#))

PAS Meeting of Dec 4

By Terri, Event Coordinator

We opened the meeting with a brief vote. This membership vote was announced through the Newsletter and via email, allowing any PAS Member who couldn't attend, to send their proxy vote in to me. Everyone who gave me a Proxy Vote voted Yes. The topic voted on was whether to give Joe Collins, who recently had a stroke, honorary Membership. The stipulation that goes with this honorary membership is that this membership (i.e. membership dues waiver) will be for only as long as PAS Is doing the CTCA events each month. Should that option of extra income from the CTCA events be dropped, canceled, or dis-

continued, the honorary membership will last to the end of that year (the year it was dropped). It was voted that Joe Collins be given Honorary Membership with the above stipulation.

As far as Joe goes, according to his wife Renee, he is healing. I don't know any other details about his condition at this time, but we hope for a speedy recovery and his return to PAS as an active liaison between CTCA and PAS.

Many thanks to everyone who provided snacks for this event and for those who donated to the PAS Snack Fund. Sam brought the popcorn, Bruce brought the



(Continued on [page 3](#))

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January Upcoming PAS Events

By Terri, Event Coordinator, RSVP to Events@pasaz.org

Jan 3: PAS Music Jam in Carefree. Potluck is at 5:30. Jam begins at 7pm. PAS Members only.

Jan 9: School (Private) Star Party.

Jan 11: Free Telescope Workshop at Bookmans, 19th Ave and Northern in Phoenix - 3:30pm to 5:30pm. RSVP is required with Terri. When you RSVP, email the make and model of the telescope you need assistance with. We also assist with suggestions and advice on what telescope to purchase to match your needs. We have no telescopes for sale at this event.

Jan 14: CTCA (Private) Star Party. PAStimes Star Tour Members only. RSVP is with Don.

Jan 15: PAS Meeting in Room LS-205, Doors open at 7pm, Meeting starts at 7:30pm. Read about the Guest Speaker on page 1 in this issue. Everyone welcome. Bottled water provided by President Bruce. Bring a snack to share.

Jan 16: School (Private) Star Party.

Jan 20: Private Star Party

Jan 22: PVCC Free Telescope Workshop at PVCC Main campus, 32nd Street and Union Hills Rd - 7pm to 10pm with Public Star Party.. RSVP is required with Terri Events@pasaz.org. When you RSVP, please leave your first name, and the make and model of your telescope. Bring your telescope and accessories to this event. We

meet in G-147 and by the Telescope Dome on campus. We have no telescopes for sale at this event.

Jan 23: Jovian Triple Shadow Transit (Private)

Jan 28: CTCA Back up date (Private)

Jan 29: 2 Schools (Private) Star Parties. Need more scopes at one of the schools. RSVP today - PAStimes Star Tour members only.

Jan 31: (Private) PAS Social in Carefree. 4pm setup, 5:30 potluck, Activities begin at 6:30pm. RSVP is requested with Terri. All PAS Members welcome. Read about the PAS Social in this issue. ***

Are your dues for 2015, past due?

A quick reminder that your 2015 dues were due by Dec 31, 2014.

By Terri, Event Coordinator

The PAS year runs from January to December, but we start asking our members to renew their membership in September to make it easier for Mike our Treasurer to get the files updated.

The PAS Roster is always available for members to view on our website in the Member's Download section. If you are a current member of PAS, your membership officially ends December 31. This year, there is no extension. Dec 31 is your deadline to get your membership dues current for 2015.

However, at the end of December,

those who have not renewed, will be removed from the PAS website and the PAS Roster. So, be sure to update your membership with Mike. If you are unsure of your status, pop into the Roster at this link: <http://www.pasaz.org/forums/downloads.php?do=file&id=48> to see if your membership shows you are current through 2015 (right side of document). If not, please consider renewing your membership, and soon. We don't want to have to remove you from our list of awesome PAS Members. Also PAStimes Star Tour members must be current before December 31 to receive com-

pensation for helping at a paid event. Convenient ways to pay include: bringing cash to a meeting to give to Mike (be sure to get a receipt), or sending Mike a check with your membership form. Be sure your membership form shows 2015 at the top of the page, as no other dated membership forms will be accepted. The membership form was recently updated and is a full page in length. The PAS Dues Sheet / Membership Form is at this link: <http://www.pasaz.org/forums/downloads.php?do=file&id=129>. The updated version (2015) is available now. §

Mike's Lectures at PVCC

By Mike Marron

Apr 23: Tails of Plasma, Part 2 - Galactic Jets. This lecture takes the powerful concepts developed in part one to reveal the ancient histories of stars and galaxies. Big Bang did not happen. The real history of galaxies and the universe can be observed

and studied much further back into time than a mere 14.5 billion years.

May 14: The Electromagnetic Universe. All matter and energy are related to just the electromagnetic force as expressed

by quantum strings. This is more than unification. All matter was built from neutrinos which simplifies Quantum Electrodynamics (QED) and Quantum Chromodynamics (QCD) down to leptons and their interactions. §

PAS Meeting of Dec 4

(Continued from page 1)

cake and cookies and someone brought (and I don't know who - but many thanks) the veggie tray. That was a very healthy idea. The bottled water was provided (as usual) by President Bruce.

Before the Meeting began, two cards were passed around among the members. 1) a Sympathy Card going to Jerry Belcher's wife, Linda and signed by all PAS members who knew him. It was mailed on that Friday after the meeting. 2) A Congrats Card for Terry Dancer's wedding to happen on Dec 13. It was to be hand delivered but because William and I got sick, really sick, we opted not to go to the wedding, but instead to stay home on Dec 13. I didn't see Terry again until the Dec 29 DBG Luminaria event at which time I gave him this card, a card and gift from William and me, and his 2015

Year in Space Calendar. Congratulations to Terry & Laura Dancer!

Then we turned the meeting over to Eric Steinberg, who did a fantastic presentation about THINGS THAT GO BOOM! This presentation was enlightening, humorous (my favorite kind of presentation), and entertaining. Very well planned and put together. Many thanks to Eric for a fine presentation! It's all about that MASS, 'bout that MASS.

The Raffle at this meeting was won by Bruce Wurst. Before closing the meeting, everyone was reminded that they must have their 2015 Membership Dues paid up by Dec 31 to stay on the PAS website and Roster, and continue to receive the Reflector Magazine. There are many things your Membership Dues do for you.

Many thanks to those who participated in the PAS Swap Meet & Garage Sale this year. It was a lot of fun and quite a few items were sold or purchased and are now being enjoyed!

Congrats to the newest member of PAS David Ricks! May he always enjoy PAS, its members, its food parties, and its many events! Many thanks to all who attended the December PAS meeting to not only hear the fantastic presentation, but also to support our members who do presentations for the club. Everyone needs a cheering section once in a while. Why not be there for your fellow PAS Member. See you at the Jan 15th, 2015 PAS Meeting with another awesome guest speaker!§

January 15 Meeting

(Continued from page 1)

are having a fantastic guest speaker with just the right topic to open 2015. You won't want to miss it. Remember to bring a snack to share - bottled water is provided by President Bruce and if you don't want water, BYO drinks in containers that have a lid, so there is no spillage. If you can't bring a snack to share, donate to the snack fund for next month's snacks. Many thanks to President Bruce for all the past meetings (General, Meeting of the Minds, and Mike's

Lectures) for which he has brought tasty snacks to share with everyone. Many thanks also to Sam who provides the popcorn each month. We hope to see you there! Doors open 7pm, and meeting starts at 7:30, possibly going to 10pm. If you can assist Roger, we need some strong gentlemen to help him bring in (and carry out) his scope for the presentation. See me, at the meeting and I will hook you up with Roger. Those wishing to help with set up, please

arrive by 6:45. Many thanks in advance for the assistance. Many thanks to President Bruce for all the past meetings (General, Meeting of the Minds, and Mike's lectures) for which he has brought tasty snacks to share with everyone. Many thanks also to Sam who provides the popcorn each month, and special thanks to Jenny, who does a spectacular job getting us a room to hold our meetings in. Happy New Year to all !!!

The Planets This Month

By Leah Sapir

The planets will be opening the new year with quite a show for us this month!

Venus and Mercury are moving into the evening sky - together! In the first week of January they will be visible only in evening twilight, setting around an hour after sunset. But gradually they will be staying up longer, until around 7:15 pm (about an hour and a half after sunset) towards the middle of the month. After mid-month, Mercury will start to sink into the sunset,

but Venus will continue to get higher, on its way towards a conjunction with Mars that will take place in February.

Mars will be in the southwest after sunset, setting around 8:30 pm all month.

Neptune and Uranus will be in the west after sunset. Neptune sets around 10 pm at the beginning of January, and 8 pm towards the end of the month. Uranus sets about three hours later.

Jupiter will be up most of the night,

rising around 8:30 pm at the beginning of January, and 6:30 towards the end of the month. In February it will be at opposition.

Saturn is still a morning star, but rising earlier from day to day. Saturn will be rising at 4:30 am at the beginning of January, and 2:30 am towards the end of the month. Th

The moon will be full on January 6, and the next new moon will be on January 20. §

PAS Meeting of the Minds (Business Meetings) of 2015

By Terri, Event Coordinator

The next two Meetings of the Minds (MOM's) happen in 2015 on Feb 12 and Sept 10. I am looking forward to some great discussions, show & tell, mini presentations, snacking, great friends and more. Put

these on your calendar and then sign up to attend and/or contribute. We'd love to have you and your input. Reminder: every adult is welcome at MOM's, but these are business meetings, so no children under 16

years of age, please. Bring a snack to share. This is a Party! More details will be in the newsletter for the month of these events. See you there!§

How to Play the White Dwarf Gift Exchange Game

By Terri, Event Coordinator

At the PAS Social, we gather in a circle in the designated room, probably Mike's living room. There is a table with gifts on it, each one wrapped and disguised so no one knows what is or who it is from. Everyone attending the Social is given a raffle ticket in trade for their wrapped gift. You must provide a gift to be involved in the game. The gift must be of a value of \$20+. There can be more than one item in the box.

We randomly draw a ticket and Player 1 takes a prize from the table. Another ticket is drawn, and player 2 takes a prize from the table OR steals the gift from Player 1. Another ticket is drawn, and Player 3 can take from the table or steal from Player 2 or 1.

Rule 1: No stealing gifts from the person who just stole from you. If Player 2 takes from Player 1, Player 1 can not take the gift right back from Player 2. However, Player 1 can take from Player 3, and Player 3 can then take from Player 2, thus if Player 2 takes from player 1, Player 1 can take from Player 3 and get their original gift

back if they desire.

Rule 2: All gifts must be visible. No hiding gifts behind your legs or under your chairs. Put them out in the open for others to steal.

Rule 3: It is more fun to steal and have been stolen from, than to watch a Player take from the table. STEAL! That's the whole purpose of the game. Fight for the gifts. Just fight nicely - no rough play! And Laugh your head off!

Rule 4: No opening gifts until told to do so.

When all gifts have been taken from the table, a new ticket is drawn. That player will read anything stuck to the top of their package (if applicable), and then open the gift. When the gift is completely opened, and held up for photos, then the player to the Left or Right (to be decided at time of game) will then open their gift in the same manner.

Rule 5: Always allow time for the photographers to get the photos they desire

with your gifts.

When we are all done opening the gifts, if you received a gift you do not wish to keep, you may put your gift on the gift table, and swap with someone else. Meaning... you got a flashlight, for example. You put it on the table, and before you leave for the night, you choose something else from the table that another player left behind. It is a way to exchange gifts.

Please, everyone playing the game, be sure to help clean up the papers from the wrappings on the floor, and put up the chairs so we can then do another activity, or watch a movie. This is a fun game. Remember, everyone playing MUST have a \$20 gift to exchange. No gift, and you do not play the game with us.

If you aren't playing the game and would like to help out, please bring a digital camera that you can take tons of photos of the event and send them my way for inclusion in the PAS Photo Gallery. That would be greatly appreciated!§

Plans for This Year: Pas Social Jan 31

By Terri, Event Coordinator

The PAS Social is the once a year EVENT OF THE YEAR! It is usually held in January or February and is not a Christmas Party, but a Social gathering where by we get to know our fellow PAS Members. You can bring your spouse and immediate family as well as one other guest each.

Location of this event is at Mike's home in Carefree: map, directions and RSVP can be found on the PAS website. The event begins on Saturday January 31, 2015 at 4pm, though we will not eat until 5pm to allow everyone to arrive. Those wishing to help me set up should please be there around 3pm. Thanks so very much!

Here are the plans for this years' event!

1) Food - lots of food. This is a potluck. Please bring a main dish to share, enough to feed your attending party plus 5 people. It is best if each person brings a dish that can feed 10, to assure that there is enough to go around. Please bring a drink to share also - a 2 liter bottle of pop, 6 pack, or some equivalent amount. Please, no alcohol, as kids may be attending. I believe I can also get a case of water for the event from President Bruce or Mike. And be sure to sign up in PerfectPotluck.com. Info is in

the PAS Calendar for this event.

2) We will have the White Dwarf Gift Exchange. What is this? It's a game we play at every PAS Social, whereby you bring a wrapped, disguised astronomy-related gift, worth \$20 or more. Then you put your gift into the pile of gifts on the gift table and we play our game. Game rules will be posted in another article within this newsletter. It's a silly game but fun. Remember, FIGHT for the gift you want!

3) RSVP is Required! I need to know who is attending. If you bring a guest, they must also bring food, drink and a gift for the game (if they are playing it with us). You can RSVP by email Events@pasaz.org or phone 602 561-5398, up to the day before the event. Please wear your PAS Name tags. Those without name tags may end up with a sticky name tag from me. First name is all I ask to be on the name tag.

4) Sign up at PerfectPotluck.com with the main dish, any extras and drinks you will be bringing. We are avoiding duplicates. For example: One person might bring



Dart game of Jan 18 2014 PAS Social Photo by Terri

pizza, so no one else should be bringing that. Something like wings however can come in many styles, so if they are bought from different locations, the variety can be nice. The first to RSVP their food, gets to bring it, so think about it and sign up today. The list will be at PerfectPotluck.com. See the Forum Thread for the login. Try to bring something different and unique: it's

more fun for our taste buds that way.

5) Bring a movie to share on DVD or Blu-Ray, if you plan to stay later after the crowd has departed. This way, we can watch something that will keep our attention as we wind down the evening and do the clean up. Help is requested for the clean up.

6) Dart Game - We hold the dart game in the front yard at Mike's home. Please be careful throwing your darts. Darts will be provided but it would be helpful if we had more dart boards to make the game flow quicker. Also, you may wish to dress warmly. No trophy this year, let's consider a prize given at the Awards Ceremony or maybe one of the donated Door Prizes. Competition is stiff, however everyone should play because it is fun.

7) Bean Bag toss: provided by Sam, who is also providing the prizes for this game, 1st and 2nd place.

Door prizes are needed. If you can, drop me an email to let me know how many you can provide. Door prizes can be anything and don't have to be astronomy related.

ed. Just wrap them and tell me how many you have to donate. Past door prizes have been mugs, nick nacks and other non astronomy-related items. The more door prizes we have available, the more can be awarded.

We hope everyone can attend. It is always so much fun and a great get together. The food and people are a good enough reason to come, even if you don't wish to play the games with us. Come for the so-



White Dwarf Game of 2014. Darlene shares the gifts she won. Photo by Terri Finch.

cializing! Bring food to share. Many thanks goes to Mike Marron for hosting this year's event. See you there!

Bookmans Solar Day Oct 9

By Terri, Event Coordinator

It was a good day for a star party. Katy, our contact at Bookmans had her event from 1pm to 3pm while PAS did the solar event from 1pm to 4pm with the PAS Table and 2 Solar Scopes provided by Sam Insana. Also attending from PAS were Frank Insana (assistant to Sam with his 2 telescopes), Rodney Fong (helper), Mike Marron with meteorites, Terri Finch with the PAS Table (Handouts, Q&A, etc), Kevin Witts (helper) and Paul Facuna (helper). The weather was pleasant with a slight breeze and decent temperatures. Many people took info about PAS and a few said they wanted to sign up, so I gave them the \$5 off Membership Drive form which is good until Dec 31. No one actually did sign up at this event.

Some funny things happened at this event that I wish to share. First, I was talking to someone about the Lunar Eclipse of Oct 8th that just went by, and they asked "Is it the Solar Moon?" I think they meant to say, Is it the Blood Moon, but what they said was more entertaining. Later I was announcing the upcoming Solar Eclipse on Oct 23 and this person asked "Is that in the day or night?" Mike had a crowd around him almost the whole time we were there

which isn't unusual at all - always a hit!

After the event, the PAS group (William, Rodney, Mike, William's Mom Annette, and Terri) went to Shangri La Chinese Food. Either I was super hungry, and not aware of it, or their food was extremely delicious on this day! Many thanks to Sam for providing pizza to the PAS people, thanks to my awesome telescope team and thanks especially to Katy for inviting us to be at her solar event. Looking forward to the next one at Bookmans!



Mike with his Meteorites on the table, and Kevin standing by waiting for people to walk by. Photo by Terri.



A group enjoying the Views of the Sun. Photo by Terri.



A group gathers to view through the solar scopes provided by Sam. PAS Members in this photo are Frank on the left, Paul in the back and Sam on the right. Photo by Terri.

Halloween Party in Carefree Oct 24

By Terri, Event Coordinator

The Halloween party this year came and went so fast I don't know what happened! After a long day at Bookmans for the solar eclipse and then Black Mountain Campus for the Star Party, I was a zombie at Mike's party. And I don't mean dressed as a zombie... I mean, tired, worn out, exhausted. However, it was a fun event! You just can't go to Mike's and not have fun. Attending this private Halloween Party were: William and Terri Finch, Ed and Bette Wurst, Don Boyd, Mike Marron (the Host of the Party), Bob Senzer, Pete Turner and Paul Facuna.

We ate at 5:30pm, planning to do the costume contest at 7 PM, but things were pretty relaxed, so it was 7:20 PM before we got that part of the evening going.

It was a small party with 4 participants in the Costume Contest. Mike dressed as an "Out of Touch Geek," Bette dressed as Mrs. Bucket (from the TV show "Keeping up Appearances"), Rodney dressed as a "Stand Up Comedian" and Sam had "Alien Indigestion." The contest involved doing a little talking, dancing, or whatever your costume required, to make it more interesting to everyone. 5 people were the judges. Why 5? because the contestants and I did not vote. 1 vote went to Mike "Out of

Touch Geek" and the other 4 votes went to Sam's "Alien Indigestion." Sam will be awarded a prize at the April 9th PAS Awards Ceremony. Congratulations Sam! To see the photos of Sam's costume, you will need to attend the Awards Ceremony.

After the costume contest, Don and Rodney set up their telescopes outside and several members did some viewing. Pete had brought his scope but forgot some accessories, so he set up then took it back down when he realized what he had left at home. Sam and a few others joined me in watching another old sci-fi movie in Mike's collection since no one had brought a Halloween related movie to share. The party broke up about 10:30.

I wish to thank all who brought delicious food to this event to share. Everything was terrific! Many thanks especially to those who participated in the costume contest. I think you all did a great job of coming up with something unique. Many thanks to Mike for hosting the party. I look forward to next year's Halloween party!



Rodney, the Stand Up Comedian, competes in the Halloween Costume Contest in Carefree on Oct 24. Photo by Don



Mike, the Out of Touch Geek, competes in the Halloween Costume Contest. Photo by Terri.

PVCC Awards Ceremony for PAS Oct 29

By Terri Finch

It was a hectic evening for President Bruce and me, as following this event we had to rush to our next music students. Attending from PAS were Don Boyd, Ed and Bette Wurst, Bruce Wurst, and William and Terri Finch.

At this event, PVCC gave PAS an award for the various Outreach events PAS does at PVCC including both the Main Campus and Black Mountain Campus events. We had President Bruce accept the award which is a beautiful lead crystal shape, to be housed at Bruce's home for now. Bruce gave a fantastic acceptance speech.

The event was entertaining, well organized and even had hors d'oeuvres. I wish to thank Julie Moore for inviting us to this excellent event.

At the November PAS Meeting, President Bruce shared the awesome award, and

told everyone what we experienced that night. Wish more PAS Members had at-

tended - it was a great event!



President Bruce accepts the award on behalf of PAS & gives a great acceptance speech. Taken by Don



PVCC President: Paul Dale, awards PAS President: Bruce Wurst & PAS Vice President: Terri Finch with a super nice lead crystal award. Taken by Don

CTCA Nov 12

By PAStimes Star Tour Members

Sam Insana writes: During the afternoon, Sam and Don showed sunspots and solar flares to one patient and one caregiver. At night, Sam showed M31 (andromeda galaxy), Almach (Gamma Andromeda double star) to patients and workers. After all the people left, Sam found M2 a globular cluster (a first in his scope), Uranus, and Neptune (another first in his scope). 6 weather forecasters had predicted good weather and 2 predicted cloudy weather, but it turned out to be good for the solar viewing, and reasonable for the night viewing. The temperature was in the low 70's and very pleasant. There were about 20 people who attended the night viewing, looking through Don's, Terry's and Sam's telescopes. They also enjoyed Mike's meteorite presentations. Some visitors saw meteors and we told them about the Leonids coming up in a few days, and how best to observe them. There were also several nighthawks flying overhead all night.

Don Boyd writes: I showed ET, the double cluster and the Pleiades, I looked for the Klingon battle cruiser, but we had clouds on the horizon and they were hiding

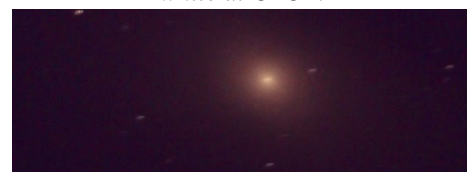
the fainter stars. The goto on my scope was working near perfectly. Terry took some astro photos of the Pleiades and M31 and M32 thru my scope. I took some of the sun as well.

Mike Marron writes: At CTCA we had a good small crowd. One gal was smelling my meteorites, but only the gold rock had a distinct smell from the nickel inside it. Another guy asked how a space program should be made, so I spent fifteen minutes teaching him how to get past our primitive rockets and the best routes to the planets and stars.

Terry Dancer writes: This event had the most people I've seen at CTCA. Usually we only get a couple people that come up to the roof, but tonight we had quite a few. I was able to show the ring nebula (M57) until the high clouds started forming, but by then most of the people had gone. I brought my camera with me - thanks to Don for letting me use his scope for a few minutes to take my first astrophotography photos - I was able to get a couple decent pictures of the Pleiades (M45) and the Andromeda Galaxy (M31).



Solar pic taken by Don Boyd while at CTCA.



Andromeda Galaxy: M31 was a 30sec exposure at ISO200, using Don's Orion 8" Newtonian Astrograph taken and by Terry Dancer

Telescope Workshop Dec 7

By Terri, Event Coordinator

Many thanks to the fine Telescope Team members who showed up to help support this event. We had Howard Moneta, Rodney Fong, Bob Senzer, Don Boyd and William and Terri Finch.

From the public, Varun Maher attended the event to find out what telescope to purchase. Very nice dude. I hope he joins PAS. We spent over an hour with him, giving him advice, letting him know what to expect and mentioning to him he should be sure to attend our events wherein he can

see what each scope does, ask questions and from there decide which one to buy. Many thanks to Varun for attending.

Before Varun arrived and after he left, we had some great conversation about Telescopes, Eyepieces, Filters, etc, among the members.

After the event, we went to Carlos O'Briens. In attendance were William and Terri Finch, Bob Senzer, Rodney Fong, Howard Moneta, Ora Kurland and Diane and Alex Vrenios. Dinner was delicious!



It was a great dinner at Carlos O'Briens, after the Telescope Workshop. Howard (L to R), Alex, Diane, Ora and Bob attended dinner. William & Terri are not shown in this photo. Photo Taken by Terri Finch.

CTCA Star Party Dec 17

By Don Boyd

Mike, Ophelia and I did the CTCA/PAS star tour/lecture on December 17. It was too cloudy to have the scopes set up, so we had Mike give a lecture which had 3 people attending. We started with Mike showing his meteorites and then quickly running through his lecture. One person had to leave at 8 to catch the bus back to the hotel; another person seemed to

enjoy the meteorites but was not really interested in the lecture and left halfway through. The remaining person had been to one of the Star Tours about a year ago and said I had shown her the Butterfly Cluster (M6), and she had hoped to see it again, I did not tell her it was a summer object and even if it had been clear we would not have been able to see it that night.

Mike and Ophelia got there before I did and were near finished eating when I got there. While I was getting my food, 2 CTCA Chaplains came by the table and told Mike they appreciate our being there every month, though they did not stay for the lecture.



Keeping an Eye on Storms and More

By Kieran Mulvaney

In late July 2013, Tropical Storm Flossie barreled furiously toward Hawaii. The question was not if it would strike, but when and where it might do so.

During the afternoon hours of July 29, forecasts predicted landfall later that week on the state's Big Island; however, by the time residents of the 50th state awoke the following morning things had changed. NOAA's Central Pacific Hurricane Center warned that the islands of Oahu, Molokai and Maui were now at a greater risk.

This overnight recalculation was thanks to the Day/Night Band viewing capabilities of the Visible Infrared Imaging Radiometer Suite, or VIIRS, on board the Suomi National Polar-Orbiting Partnership (Suomi NPP) satellite. VIIRS is able to collect visible imagery at night, according to Mitch Goldberg, program scientist for NOAA's Joint Polar Satellite System (JPSS), of which Suomi NPP is a part. That means it was able to spot some high-level circulation further north than expected dur-

ing the nighttime hours. This was an important observation which impacted the whole forecast. Without this forecast, said the Hurricane Center's Tom Evans, "we would have basically been guessing on Tropical Storm Flossie's center."

Polar-orbiting satellites, like Suomi NPP and the future JPSS-1 and JPSS-2 (scheduled for launch in 2017 and 2021, respectively), sweep in a longitudinal path over Earth as the planet rotates beneath them—scanning the globe twice a day. VIIRS, the imager that will be aboard all the JPSS satellites, images 3,000 km-wide swaths on each orbit, with each swath overlapping the next by 200 km to ensure uninterrupted global coverage. This high-resolution, rapidly updating coverage allows researchers to see weather patterns change in near real-time.

Instruments on Suomi NPP allow scientists to study such long-term changes too—things like, "the patterns of sea surface temperature, or coral bleaching," says

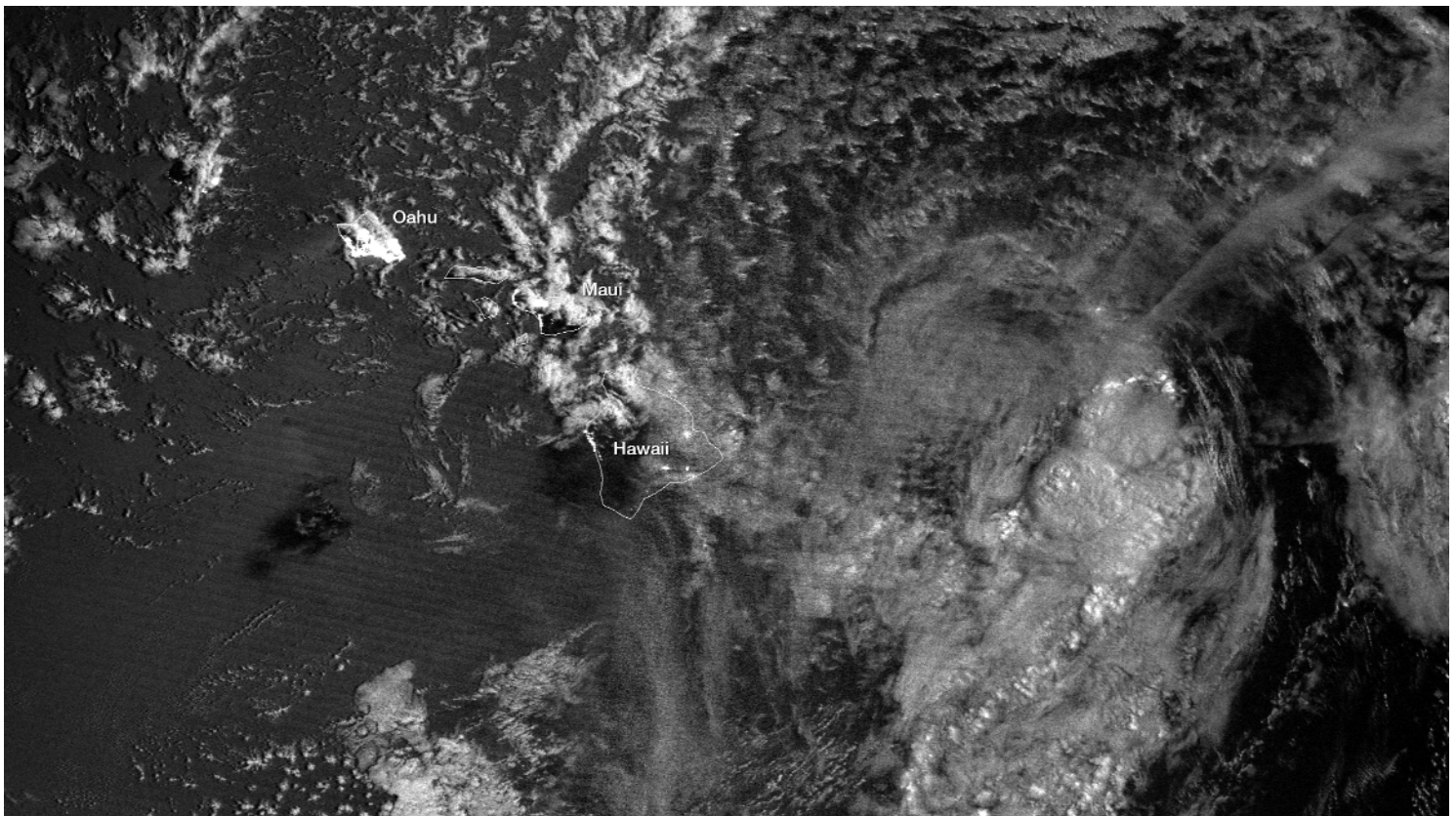
Goldberg. They are even used by the World Bank to determine how much energy is burned off and wasted from natural gas flares on oil drilling platforms.

While scientists are excited by the JPSS series' wide range of capabilities, the ability to address pressing immediate concerns is, for many, the most tangible value. That was certainly the case in July 2013, when thanks to Suomi NPP, authorities had ample time to close ports and facilities, open shelters, activate emergency procedures, and issue flash flood warnings. Despite heavy rains, high surf, and widespread power outages, accidents and injuries were few. By the time the storm passed, Hawaii was soaked.

But it was largely unharmed.

Learn more about JPSS here: <http://www.jpss.noaa.gov>.

Kids can learn all about how hurricanes form at NASA's Space Place: <http://spaceplace.nasa.gov/hurricanes>



S-NPP captured this image of Tropical Storm Flossie heading toward Hawaii using its VIIRS Combined Day-Night Band sensor. Credit: NOAA.

Turkey Day at Mike's Nov 27

By Terri, Event Coordinator

For Turkey Day this year, we had a great dinner at Mike's home in Carefree. I wish to personally and awesomely thank Ofelia Waters for providing the meal. She got some of it from Boston Market and the rest from Albertson's. She provided it and we all pitched in a little cash for the meal. In attendance were Pete and Andi Turner (newer members of PAS), William & Terri Finch, Mike Marron (Host), Don Boyd, Mike's Joe (friend from work, where Mike used to work), Bob Senzer and Rodney Fong. It was a great meal with Turkey, gravy, potatoes, and more. We were stuffed. Many thanks to Mike for Hosting the party and thanks also to everyone who contributed to the food supply, as Bob did with the pierogies.



Enjoying Dinner at Mike's on Turkey Day, we see (L to R) Rodney balancing the Table Turkey, Bob, Ofelia, and Mike. It was a lovely day for a friend get-together. Photo taken by Terri.



At Thanksgiving Day at Mike's home, we had a feast provided to us by Ofelia Waters. In this photo (L to R) we see William, Mike, Ofelia in the background, Andi, Bob and then Joe to the very right with his back to the camera. We totally enjoyed the food, friends and fun!

ASU West Star Party Oct 30

by Paul Schmidtke

Ramblings on the October 30th star party at ASU West: At least five PAS members were present. Howard and Kevin set up telescopes (both SCTs), Terri and William ran the PAS info table, and Mike Marron dazzled everyone with his collection of meteorites. (At last count, nothing was missing, right? Hooray!) In addition, one of ASU's small Dobs (6") was available, allowing viewers to see different telescope designs. Attendance was lower than anticipated (perhaps 50 or 60), but those who came were quite enthusiastic. They seemed to be asking a lot of questions and having a good time! Although the weather was reasonably warm, sky conditions were

rather poor, with bands of passing clouds for most of the evening. Considering how cloudy it was at 3 pm, however, we can be grateful to have seen anything at all! The observing targets included the Moon, Mars, Alberio, M13, M31/M32 (Terri, nice job getting both into the field of view!), Double Cluster, Pleiades Cluster, "ET" asterism, to name a few (I'm sure I'm forgetting a bunch of other ones too)! Thanks to all the PAS members who helped make the night a success. I hope to see you next spring!

Terri writes: In attendance at this event from PAS were: William and Terri Finch with the PAS Table, Kevin Witts

with his 8", Mike Marron with his Meteorites, Howard Moneta with his 8" SCT, and Paul Schmidtke using one of the 6" dobs the school owns. It was a nice clear night. I think about 60 people attended and mostly stuck around through the whole event. Many of the attendees were students of Paul's. It was lots of fun.

Prior to the event, Paul, Howard, William, Kevin and I had dinner at Arby's. Many thanks to Paul for inviting us, hosting this event and for the great night we spent together enjoying the night sky. Great temperature, great people, and we are looking forward to the next ASU West event.

Telescope Workshop at PVCC Nov 13

By Terri, Event Coordinator

This was a great event, even with the clouds. We had two expected RSVP's who did not show up, but we had four other people who did attend. Katie Moore brought her Bushnell scope and was helped by Rodney and William. Rodney was awesome with tons of advice, showing her different things, talking about star charts, and showing her the night sky. One of Bob Ewing's students, Casey Foley, attended and stuck around the whole night, while Dale Greene found us on Meetup. Dale, who has attended Yves Klein's events, joined PAS this night. Welcome Dale! Finally, a friend we made at a previous event at BMC, Jerome Tauble, visited us from Minnesota and hung out for the whole

event. It was good seeing Jerome again. We took out the 16" Lightbridge, but the light pollution was terrible, so we found the shroud, put it on and were able then to view from about 8pm to 9pm. Didn't see a lot of objects but really enjoyed the ones we saw: The Dumbell Nebula (M27), Ring Nebula (M57) and Alberio. We couldn't find Andromeda galaxy or Perseus double cluster. That direction had bad glare from local lights.

Many thanks to the Telescope Team that attended: Howard Moneta, William and Terri Finch, Rodney Fong and Bob Senzer. Many thanks also to Jenny Weitz for letting PAS use the room (G-147) for

this event.

The skies were not very good, and we didn't have any laser pointers (must put this on the list of things to bring in the future) but the event went super well - the people made it worth the time. We could have used a scope operator with better eyes to find more objects, but the group enjoyed what we found, making for a fun event. We look forward to the next event like this one on Dec 18, 2014. Thanks to all who attended! No photos were taken of this event due to everyone being outdoors for the star party portion of the event.

Dale writes: I enjoyed using a different telescope from the one I have.

Lone Mountain Elementary School Nov 14

by Sam Insana

On November 14th, PAS did a star party at Lone Mountain Elementary School in Cave Creek. They provided us with a nice dinner of pizza, veggie tray with dip, chips and salsa with cookies and cakes for dessert. Mike Marron showed his meteorites, while Sam Insana, Kevin Witts, Roger Anzini, Rick Cunningham and Eric Steinberg showed the night sky with their telescopes. Sam showed the Andromeda Galaxy (M31) and Almach (Gamma Andromeda) the double star. Rick showed the Pleiades open cluster (M45) and other stars. Eric showed Uranus and Neptune, Alberio and M57 (the ring nebula). Kevin showed Mars and the Owl open cluster (ET cluster). Roger showed the Perseus Double Cluster and other objects.

There were about 20 adults, teachers and parents and about 30 school children attending. The star party started at 6:30 pm,

but the clouds blocked our views for the first hour. At 7:30 pm we could each show one object through the thinning clouds. By 8 pm the skies were 90% clear and we showed several other objects to the delight of all the visitors.

6 of the 8 weather forecasters predicted heavy clouds until about 7:30 pm, and then light clouds (5-20%) the rest of the evening. The other 2 forecasters said 30-45% clouds all night. The 6 forecasters were absolutely correct, which is what Alex and Sam found in their studies of the cloud predictions. If 6, 7 or all 8 forecasters predict something, you can count on it. If the split in predictions is 5 to 3 or 4 to 4, you cannot predict the cloud coverage for the night. This time the 6 good predictions were from Clearsky, Accuweather, TWC, Intellicast, Weather Underground, and Weather Bug. The 2 wrong predictions were from Skippy Sky

and NOAA. After 8pm, the viewing was so good that most of us wanted to stay longer, but the principal turned on the lights at 8:30 and wanted us to pack up. She said it was a long day for the children and they needed to go home and rest!

The Arizona Science Center was in the Gym doing some space projects with the kids. This worked out well for the first hour when we had thick clouds. Mike also helped out a lot during that first hour. Everyone attending seemed to have a good time, especially the small kids who liked the green laser pointers most of all.

Colleen Neiman (Teacher) writes: It went well. After the clouds cleared we were able to see some things. We had a small turnout, but we were happy with the telescopes and the meteorites. Thanks again, Colleen

Black Mountain Campus Star Party Nov 20

By Various Attendees

Terri writes (but was not in attendance): Attending this event were: Bob Ewing, Rodney Fong, Howard Moneta, Kevin Witts, Eric Steinberg, Dale Greene, and Paul Facuna.

Bob writes: Really nice viewing until about 8:00....then clouds....but we saw some amazing objects before then.

Thanks to all of you who brought out telescopes. Really appreciate it. We had a few students from PVCC and also SCC.

Rodney writes: In attendance at the Black Mountain Campus star party were Eric, Howard, Paul and myself (Rodney) and a new member, Dale. The PVCC scope was brought out. The sky condition was

challenging with sporadic clouds. Regardless, we were able to observe Mars, Uranus, Pleiades and several faint objects such as Andromeda and double clusters. The public turnout was light and the very cold night may have discouraged people from coming out. Cloud conditions worsened by the time we called it a night. Otherwise, it was a pleasant night at BMC.

"Earth Shattering Evolution" Lecture Nov 20

By Terri, Event Coordinator

In attendance at this Lecture from PAS, were: William and Terri Finch, Alex and Diane Vrenios, Don Boyd, Bob Senzer, Sam and Frank Insana, Ed, Bette and Bruce Wurst, and Ofelia Waters. It was great to see everyone there.

We opened the meeting with a few brief announcements after which Mike began his talk a little past 7:00. He started out in a low-key vein, but the energy and dynamism grew steadily for a great presentation. The talk ended about 9:10pm.

We had William and Alex doing Video of the presentation while Don and I (Terri)

did still shots. Between all that media, we hope to get a good copy to post to Youtube. Once we do, the link will be provided in the newsletter as well as in email to the PAS Members.

Many thanks to those who attended, brought snacks and provided Mike with a good size audience. There were no guests at this Lecture. We hope to draw a larger crowd at the next Lecture on Dec 11. Mike also has two more lectures lined up for Spring 2015 (dates are TBA). We look forward to them! To find out what the topics will be, please visit this link in the Public Forums:

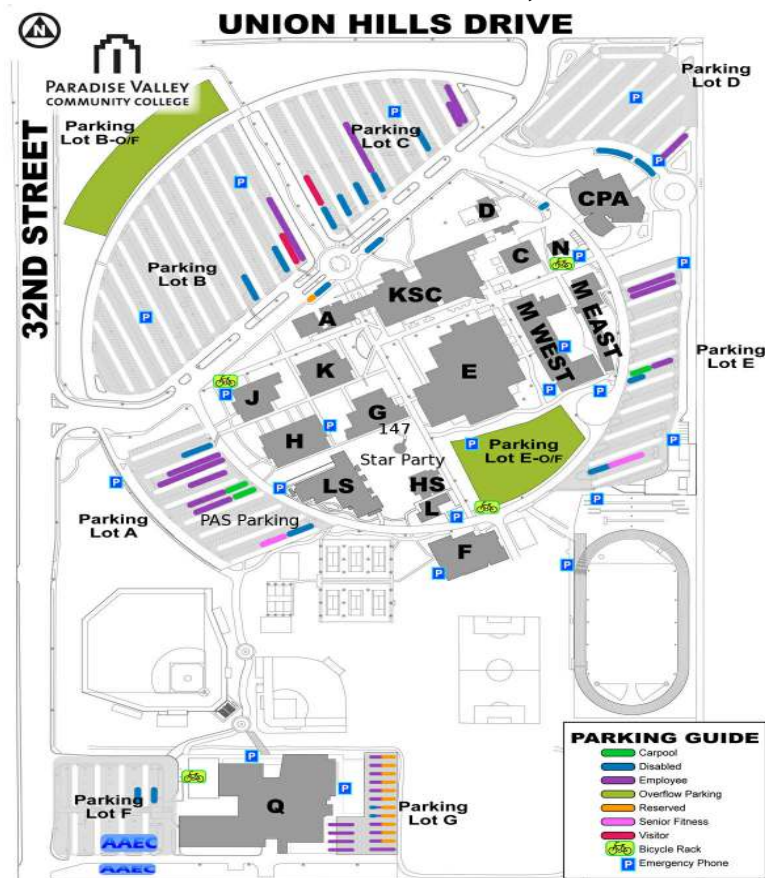


Mike tells us about his past and growing up in an observatory. Photo taken by Terri.

<http://www.pasaz.org/forums/showthread.php?t=910>.

Map of PVCC Main Location

18401 N. 32nd Street | Phoenix, AZ 85032



Jovian Triple Shadow Transit Jan 23 2015

Borrowed from: <http://www.telescope.com/Whats-in-th...S-WITS-January> & RSVP with Terri Events@pasaz.org

This is a private, PAS members-only event that Mike will be hosting at his home in Carefree. RSVP is required. Bring your scopes. Potluck will be at 6pm so be sure to sign up on PerfectPotluck.com with the main dish and drink (no alcohol please) you plan to share and enjoy with your fellow PAS Members. More details will be in the PAS Private Calendar: <http://www.pasaz.org/forums/calendar.php?do=getinfo&e=1578&day=2015-1-23> and the Forum Thread about this event. Viewing begins before 8pm.

On Jan 23, there is a very rare triple moon and shadow transit of Jupiter. View Jupiter through a telescope from approximately 8pm PST to about half-past 12am PST to see three of Jupiter's moons, and their shadows, transit the face of the gas giant planet. The shadows of three Galilean moons Callisto, Io and Europa will cross the face of Jupiter as seen from Earth, followed by the moons themselves. Look for Jupiter between constellations Leo and Cancer. This exciting event provides earthbound observers an opportunity to see three eclipses on the biggest planet in our Solar System, all in one night!

January 2015

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3 PAS Music Jam
4	5	6	7	8	9 School Star Party (Private)	10
11 Free Telescope Workshop	12	13	14 CTCA (Private)	15 PAS Meeting	16 School Star Party (Private)	17
18	19	20 Private Star Party	21	22 Free Telescope Workshop	23 Jovian Triple Shadow Transit (Private)	24
25	26	27	28 CTCA (Private) Back up	29 2 Schools Star Parties (Private)	30	31 PAS Social

Don Boyd
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To:

2015 PAS GUEST SPEAKER LINE-UP

By Terri, Event Coordinator, Events@pasaz.org
Do you have an idea for a Guest Speaker? Email me the details.
Here's the scheduled Guest Speakers at PAS:
<http://www.pasaz.org/index.php?pageid=meetings>
Feb 5: Jeff Stillman: "Art of Astrophotography"
Mar 5: Alex Vrenios "You're So Far Away"
Apr 2: TBA

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Meetup.com - <http://www.meetup.com/Phoenix-Astronomical-Society/>

What's Up For January?

By Rod Sutter, PAS Past President

Planets

Name	Date	Rise	Set
Mercury	01-15-15	08:39	19:11
Venus	01-15-15	08:47	19:14
Mars	01-15-15	09:36	19:36
Jupiter	01-15-15	21:06	09:106
Saturn	01-15-15	03:40	02:02
Uranus	01-15-15	11:22	23:49
Neptune	01-15-15	09:44	20:54
Pluto	01-15-15	06:42	16:50

All Times Arizona Time

January 15 2014

Sunrise: 07:32
Sunset: 17:44



Q1: December 28



Full: January 4



Q3: January 13



New: January 20

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