

PAStimes

Phoenix Astronomical Society
www.pasaz.org

January 2011
Volume 62 Issue 5

PHOENIX ASTRONOMICAL SOCIETY — ESTABLISHED 1948

January Meeting To Be Held In G147

If you go to the library for the January meeting...you will likely be all alone and wondering where everybody is. Please do not let this happen to you. Go to Room G-147 instead, for the January meeting.

Veronica Ann Zabala-Aliberto has lived and traveled across the United States and Canada. She has had the opportunity to work on NASA's Mars Exploration Rover missions, the European Space Agency's Mars Express mission and was the Coordinator for NASA's Lunar Reconnaissance Orbiter Camera located within the Science Operations Center at Arizona State University.

As Commander of the Family Living Analysis on Mars Expedition (F.L.A.M.E.) from 2005-present, Zabala-Aliberto has gained expertise in lunar and martian analogue studies, human factors adaption and education outreach. Mission highlights included that of commanding international

crews to the Mars Society's Mars Desert Research Station (MDRS) which are noted to be the first lunar and martian studies to incorporate children under the age of eighteen in a series of analogue missions. During her field seasons at MDRS, she accumulated a total of 150 EVA hours with a total of combined lunar/Martian simulation time of 320 hours.

In addition to being an avid adventurer, aviation enthusiast and noted space activist, Zabala-Aliberto spends most of her time educating and inspiring the next generation of scientists, engineers and explorers and promotes robotic and human space exploration and settlement. She has been invited to give keynotes and lectures from various venues such as at the NASA Summer Mars and Robotics Camp to various scientific and leisure conventions and conferences.



Photo courtesy Veronica Ann Zabala-Aliberto

Continued on page 2

PAS Meeting Review Dec 2

By Terri, Event Coordinator

We opened the meeting just a tad later than planned because of announcements. Jerry asked for 5 minutes and went over 5 minutes for his presentation. It was informative and interesting. Tim shared some great info on the Messier Marathon location & gave a bunch of cool info about attending & enjoying the event. Remember, Jerry is making an awesome plaque for the first place PAS winner of the Marathon. You can't win if you don't attend..

The PAS Swap Meet was interesting. Several items were for sale. I didn't see if any were sold. The photos in the PAS Photo Gallery will show what items were for sale. Along with the usual astronomy items for

sale, we also sold meteorites at \$5 apiece, and posters at \$2 apiece. Snacks were brought by Ed Wurst and Sam Insana. Many thanks to the snack providers.

We opened the meeting to Richard Greenberg, our guest speaker, who did an awesome, very interesting, presentation on Europa, with photos and everything. Wow, I didn't know that moon of Jupiter could be so fascinating! (Richard, thank you so much for your wonderful presentation!)

Richard left a little extra time at the end of his presentation to have a book signing. There were a lot of questions during the Q & A. Everyone seemed very involved in this presentation. A \$50 honorarium check

was given to Richard, who literally flew up from Tucson in a rented plane that he piloted. He was then picked up at the Deer Valley Airport by Mike (thank you Mike) and after the presentation, he was given the opportunity to spend the night at Mike's place. Then, he flew home the next morning.

The 50/50 raffle was won by Joe, Congrats! I think that is his first win. \$28 was split between Joe and PAS.

Before the close of the meeting, I told everyone how I met Richard on Facebook. I guess Facebook is good for something. It was a good meeting. We hope to see you all at the January meeting for some more interesting discussions. See you there! ***

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

Upcoming PAS January Events

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

HAPPY NEW YEAR!!! Here's the line up of January events. We hope to see you there!!!

Jan 6: PAS Meeting at PVCC in G-147. It's the new year, bring a friend. Meeting opens at 7pm, starts at 7:30, goes to 9:15. Bring a snack to share. Bottled water will be provided by PAS.

Jan 11: Centennial School Star Party 5:30 - 8pm, PAS Volunteers needed. See article for directions and address. RSVP with Terri to attend. Pizza will be provided for volunteers.

Jan 13: PAS Telescope Workshop & Star Party at PVCC 7pm to 10pm by Telescope Dome. Volunteers needed for a star

party, and Telescope Teachers needed to help public with telescopes. RSVP with Terri to attend.

Jan 22: The PARTY OF THE YEAR!!! PAS Social. Details can be found in this issue and in the forums, so read about it before you attend. Chris's home in Good-year is the location and the time is from 4pm to whenever. Dart game with a plaque for first place made by Jerry Belcher, the White Dwarf Gift Exchange, bring food and drink to share. One guest may be brought by each PAS member, but everyone needs to RSVP their attendance and the food they are bringing with Terri. We are going to avoid duplicate main and side dishes again this year. RSVP your food early so you get your selection.

Jan 27: PAS Meeting of the Minds, we meet in G-147 at PVCC from 7:30 - 10pm for our Business meeting. If there aren't enough topics to hold the meeting, it is canceled. No children please. Bring snacks to share. Each MOM's is a party!

Jan 29: Virtual Star Party at Chris's home in Goodyear. 7pm to 1am. You can read more about Virtual Star Parties (VSP) in the forums at this link: <http://www.pasaz.org/forums/showthread.php?t=322>

Feb 3: PAS Meeting 7pm to 9:30pm in Library at PVCC - Dan Heim is Guest Speaker talking about light pollution and how it affects astronomy. ***

2011 Guest Speaker Line-up

By Terri, Event Coordinator

We have an awesome line up of guest speakers for 2011. We can use some suggestions for our 2012 line up. Your suggestions are always appreciated! Here's a look at 2011.

Feb 3: Dan Heim: CVEMS: The Newest Threat to our Dark Skies

Mar 3: Dennis Young - Topic: TBA

Apr 7: Richard Hill - Topic: TBA

May 5 in G-147: Robert Piccioni - Topic: TBA

Sep 1: Members Night - Sign up to do a 10-15 min presentation

Oct 6: Roger Serrato: Astronomy 101 - How to Buy Your First Telescope

Nov 3: Bob Holmes: Holding a Piece of the Stars & Planets in Your Hand

Dec 1: David Williams - Topic: TBA

Jan 5, 2012 in G-147: Bryan Penprase: The Power of Stars ***

Bookman's Telescope Workshop Review Nov 14

By Terri, Event Coordinator

It was a lovely afternoon. We had no RSVP's but Gytano stopped by. He's a teacher from a school on the west side of town. We will most likely do a star party for

his school. I set up the handouts, three tables worth. We put up a new, awesome Moon poster. John Pulis, Kevin Harcey, Don Boyd, William and I attended and ran

the event. Bette and Ed Wurst came along as well. It was a good get together. We hope for a better public turnout at the December Bookmans workshop. ***

January Meeting To Be Held In G147

Continued From page 1

She currently serves as the Phoenix, Arizona Chapter President for the National Space Society (Chapter President 2000-present, Board of Directors 2006-2008) and

just recently won an election to serve as an At-Large Director for the National Space Society (2010-2014). She has been a Mars Society Phoenix Chapter member (Chapter President from 2000-2006, Chapter member from 2000-present), Jet Propulsion Lab-

oratory Solar System Ambassador (2004-present), Planetary Society State Coordinator (2006-2009), Yuri's Night Coordinator for Phoenix, Arizona (2008-present), and Geological Society of America member (2008-present).

Heimhenge Joint PAS/DFAC Star Party Review Nov 13

By Terri, Event Coordinator
Link to photo of this event:

http://www.pasaz.org/forums/gallery.php?g2_itemId=8304

This event was held at Dan Heim's home in New River. He calls his place Heimhenge and it is an awesome place to go to view the night sky. Several PAS members attended, and those of you who missed this event, really should have made an effort to be there. Attending was Barbara, who is a Mensa member and I believe a member of DFAC, but she didn't have a scope. Sam and Frank were there, as well as new PAS members Dan and Rose Evander, and Tim Besch, another new PAS member. Don Boyd rode up with us, William and Terri Finch, to save parking spaces. And Mike Marron showed up as well. Dan Heim was host of the party and provided the restrooms. His wife Sandi was nowhere to be seen.

It was a chilly, slightly windy night when we arrived at Heimhenge. Mostly everyone was already there. We got parked, out of the way of the scopes, and wandered over to find out what the situation was before setting up. In the few minutes we stood there, we were chilled by the breeze. Quick! Put some coats on!

Shortly after we discovered it was cold out, we set up our equipment. Terri took a little spill, tripping over some things, banged up her knee, and breaking one of her tables. That was the highlight of the night while everyone gave me a hand to get back up off the ground. Tim was just full of funny things to say. He said, after I fell, "So, you really mean to sit down?" And then, because his jacket wasn't very warm, he kept teasing me that he wanted to borrow my jacket. I would have gladly lent it to him, but I am the type that gets a cold chill in my chest, and then catches a cold from it the next day. So, I couldn't lend him my jacket but he had fun teasing me about it. The breeze finally died down. We had arrived about 5pm, and I'd say that by 6pm or 6:30 the breeze had stopped blowing as much. And so we could take off our heavier jackets, if we wanted to.

The sky was awesome viewing. We saw the Andromeda Galaxy, the Persus Double Cluster, the Pleiades, and Ring Nebula. Jupiter was spectacular and the first quarter Moon was absolutely awesome. Don and I tried racing to objects. Originally it was to prove that my star hopping abilities were faster in finding an object than his scope could slew to it. Well, I won the first race to Perseus Double Cluster, just by mere

seconds. Then we raced to Ring Nebula, for which he mis-programmed his Go-To, accidentally, and so I got there first, but I didn't feel it was a fair race. So, we considered that one a draw. Then we raced over to Andromeda, and tied. Then, then we started just going to our own objects, for which I showed Rose and Dan Evander a bunch of really cool things, including a well-filtered Moon.

They left shortly after that, and when the clouds took over the sky around 9:15-9:30, we all sat down and chatted for an hour. It got really cold, and Dan Heim got sleepy, so he called it a night. The rest of us packed up and went home. We got home about 10pm. That was a short, but well worth it, star party with clearer skies than we have seen in a very long time. Thanks to Dan for hosting the event. I hope we can make this a twice-a-year or annual event. Would love to see more PAS members and definitely more DFAC members join the party next time. The turnout was just enough to keep it interesting, without being crowded, and with plenty of parking still available. But we would have loved to have you there, as well. Enjoy the photos in the PAS Photo Gallery taken by Dan Heim. Thanks Dan!!! ***

Message From Heimhenge

By Dan Heim

Terri, Here are the shots I took Saturday night. Great seeing you all again! I'll be doing the same for DFAC, posting the photos in our newsletter, so they can see what they missed. ***

Akimel A-Al School Star Party Review Nov 29

By Mike Marron, PAS Treasurer & Meteorite Man

I was caught in rush hour traffic (does everyone live south of Phoenix?) and arrived at the Akimel A-al Middle School event in Ahwatukee just as it started at 6:30. The event was an Astronomy Night, which

included over thirty exhibitors presenting astronomy and space sciences to the students, their parents, and the community.

I found the only empty table just inside the door, threw down the meteorites, opened the posters, and talked non-stop for

the next three hours. I was the last of the exhibitors to arrive and the last one to leave. I didn't have the time to see what else was going on, but the gym was full of people from other astronomy clubs, the Moon Society, and NASA. Even so, some people said I was the best thing there. ***

Family Space Night

Written by Jon Hutman
Mr. Marron,

Last week I attended a Space Night program at Akimel A-al Middle School, and I was really impressed with your meteorite display. My father and grandfather said that you were the best part of the event, and that they really enjoyed talking with

you (especially about the mine in Canada where they went fishing years ago).

I would like to invite you to a similar event that will be held at Centennial Middle School in Ahwatukee early next year. The night will be filled with many different activities for students and parents to enjoy.

The date of our event is scheduled for January 11th, from 5:30-8:00 pm. Last year we had about 200 people who attended the night, and I'm sure that the numbers would be similar this year.

Thanks a lot for your time, and I'm looking forward to talking with you soon.

CTCA Star Party Review Dec 7

By Joe Collins

Don and I were the primary PAS folks at the star party for CTCA (Cancer Treatment Centers of America) in Goodyear on December 7. Renee couldn't make it because of a chiropractic appointment to address an injury. Steve cancelled the night before because he had a photo job until 9pm; he gave plenty of notice. Don and I had no problems handling the event. I printed off color copies of our handouts/flyers at the CTCA 2nd floor library. We covered the flood lamps and temporarily unplugged Christmas lights to keep down the ambient light pollution. Pretty self-sufficient- we didn't have to involve security or maintenance last night. We arrived early at CTCA, between 3:30-4pm, and Don immediately set up for solar viewing from 4:30-5:30pm.

We took a dinner break and returned to the scopes at 6pm. We ended the event at 9:15pm, I think the earliest ever, still we provided CTCA with 4+ hours of scope viewing time.

For dinner, Don and I enjoyed seafood pasta primavera and cruciferous vegetables in the Cafe via "Meal Tickets" from our contact, Marisa Benincasa. Hot coffee, bottled water and cookies were served at 7pm during the event.

Viewing conditions were nearly ideal, weather was on the cool side - we had to use sweaters/jackets after sunset. The atmosphere was cloudless and clear. Some turbulence was noticeable when viewing the Moon's limb. We were able to see: the Moon; Jupiter and the Galilean moons; the Pleiades M45; the "Owl" Nebula M97; Eta

Cancri, Polaris and other binary stars; the Andromeda Galaxy M31; and the Orion Nebulae M42/M43. Jupiter viewing was just as stunning as last month! The customer attendance was again on the low side for our expectations. We only had ten customers, who included: three patients, three caregivers, and four CTCA workers. One patient, Bill, attended last month's event too; still he was fascinated with M42 and stayed with us for over two hours.

The low attendance was normal for the occupancy at CTCA this week. Marisa provided last-minute flyer advertising at most of the patient and care-giver round-up points: the cafeteria, lobby, Starbucks, and gift shop cash register lines. We also had a 3'x4' ad board on an easel by the elevator which caught the eye of passers-by. ***

Centennial Middle School Star Party Jan 11, 2011

By Terri, Event Coordinator

As you can see in an article written by Jon Hutman, a teacher from Centennial Middle School, when he talked about Family Space Night, Jon would like PAS to be at his school star party. RSVP will be with

Terri, Events@pasaz.org. Pizza and water will be available for the volunteers. Mike is planning to attend. The address is 13808 South 36th Street, Phoenix, AZ 85044. The time of the event is from 5:30 to 8pm. 250

people are expected to participate. EVAC will be there as well. RSVP your attendance so I can let Jon know you will be there. Thanks. ***

Bushnell Scope For Sale

By Terri Finch and Kevin Harcey, for John Pulis

Bushnell 3" telescope. Comes with 2 eyepieces and 3X barlow lens. Has never been out of its box to see First Light. We assembled it for the first time to take the photos, and put it right back in its box. Box is not in best condition, but scope is in brand new shape. Very lightweight. Set up, it stands about 5 feet tall (adjustable height up to 5 feet). Asking \$200. Call John at 623-582-9235 or 623-570-5308 and leave a message. ***



Quick Reminder About Your PAS Dues

By Terri, Event Coordinator

Your dues, if not paid as of yet, are due. The PAS year runs from Jan 2011 to Dec 31, 2011. If you haven't paid them yet, I do suggest you get that to Mike, our Treasurer right away. Here's what happens if you do not....get the dues to him promptly.

Currently, all PAS members have access to PAS events that are Members Only on the PAS Website. And to know how and where these events will happen requires your Member status on the PAS Website to

be current. As of Jan 31, Chris (Webmaster), Mike (Treasurer) and I (Event Coordinator) will be going through the list and comparing the member status using the PAS Roster - with the members on the PAS Website. Those members who have not renewed their dues will lose their PAS Member status on the site and be demoted to Guest. Guests can not access Member Only info. We don't want that to happen to you. Get your dues in, today. Download a dues sheet from this link:

<http://www.pasaz.org/forums/downloads.php?do=file&id=129>. You must use the 2011 form as the pricing has been updated. Then get it mailed, or sneaker net to Mike ASAP. It is so much less work for me to NOT have to remove you from the PAS Website. Plus, Mike needs to have the PAS Roster updated & Current to sign up for the 2011 "Reflector" magazine we get from the Astronomical League every 3 months. We want you to stay with PAS. Let's get your membership renewed today! ***

Park Ridge School Star Party Review 11/17

By Terri, Event Coordinator

If you ever want to visit a school with the most polite people - both kids and parents - attend the next Park Ridge School star party, assuming they have another one next year. It was a bit of a drive, but this night was well worth the time, energy and gas to get there.

William and I got there later than we predicted, due to traffic. William got home from work, and I had already packed the vehicle, and we took off. We arrived about 10 minutes later than set up time.

I struggled to get my scope up and running. William hunted down a bathroom. When he returned he helped set up. In attendance were Tim Jones, William and Terri Finch, Don Boyd, and Mike Marron. Pizza was being served, so I sent William to go get some for me.

We were out in a field, a nice dark location, very nice location. And the main part of the events, where Mike set up inside, was in their auditorium.

We showed quite a few objects, and the weather was great, and the people were awesome. The kids were polite. We really had a great time and hope they invite us back again. Many thanks to those who helped out. I provided handouts and gave away a lot of cool things to the kids who viewed through my scope.

Recall, that after this event, Mike had to run to the Biltmore to do another event. He was exhausted by the time this night was over. ***

PAS Social 2011 Party Plans For January 22

By Terri, Event Coordinator

The 2011 PAS Social is coming up rather quickly and I'd like to take a moment to share with you what we are doing, how we are doing it and how you can be involved and / or enjoy the party with us.

This year's event will be at Chris's home in Goodyear. The address to Chris's home can be found many ways. 1) On line, go to the downloads section of the site, go into MEMBERS ONLY area and download the current PAS Roster. 2) Email Chris at webmaster@pasaz.org, 3) Email Terri at Events@pasaz.org, or 4) catch Chris at an event between now and the Social and ask for his address.

We are opening the party at 4pm. The party goes until all events are done. Here is the list of what we are doing and a possible time frame that is NOT set in stone.

4pm - Arrival & set up

Please sign in. See Terri to trade your White Dwarf Gift for a raffle ticket so you may be included in the White Dwarf Gift Exchange Add your food & drink to the counter space.

5pm - Begin eating

6pm - 6:30pm Begin PAS Dart Game. The plaque that is being made by Jerry Belcher will be on display. You will want to win this one!!! Come compete with your Dart Throwing arm.

8pm - 8:30 - White Dwarf Gift Exchange. Make a circle of chairs, get out your raffle ticket, have a fun game.

When this game ends, possibly 1.5 - 2 hours later, Chris can put on a movie to watch as some of us clean up and prepare to head home.

What do you need to bring?

Everyone attending MUST RSVP. Those who do not, may be left out of the extra game I may create that only RSVP'ing PAS Members will get to be involved in. RSVP your Guests. All PAS members may bring one guest each.

Please bring a dish of food, preferably a main dish or side dish to be shared. If you want to bring snacks, we can eat them while we wait for everyone to arrive. Also bring a drink, and the drink and food should be PER PERSON. One food, one drink per attending person.

Plan to play the Dart Game.

Bring a disguised, wrapped, anonymous Astronomy related gift with the total spent of \$20+. This is for the White Dwarf Gift Exchange and without it, you are not allowed to play the game with us. It is awesome fun, you will want to be involved. Please make it a gift you would want to own. Make it worth while and fun. For instance, A red filtered flashlight might be \$15. So, find a not so expensive NEW book, and wrap the two together as one gift. The cost to you would be about \$20+. The minimum is \$20 to play the game. If you bring a guest, bring a gift as well. Those who choose not to play the game, and wish to observe, please bring a camera, shoot a ton of photos and send them to me for the website.

We hope to see you at the Social this year. It is always a fun event. If you can help out with ice or coolers, please do. Decorations would be nice. This is not a holiday event, so decorations should be ASTRONOMY related, if possible. If anyone has an idea for another game we can play that night, send them my way. I can use something fun to run. Thanks. I CAN'T WAIT! See you there!!! ***

MEETING OF THE MINDS Review 12/16

By Terri, Event Coordinator

Lots of topics!!! I will review them here. In attendance were Don Boyd, Chet Schuler, Frank and Sam Insana, Joe and Renee Collins, Mike Marron, Chris Johnson, Steve Palmer, William and Terri Finch, and Lou Roberts.

We opened the meeting with a discussion of the upcoming Lunar Eclipse happening the following Monday, Dec 20. Frank and Sam said they would be there. Don said he might not make it, and Rod had texted my phone earlier in the evening to let Dave know he can't make it due to work. I mentioned that I heard there was another storm coming in that could cloud out the event.

Then our focus moved to Paid Star Party Thank You cards. A bunch of cool things were thrown my way for the thank you paragraph going on the card. It was also decided that we should only send these cards for paid star parties, rather than for schools. It was decided that we'd make a few cards to hang on to, for the purpose of sending out after a paid event, and the rest

of the star parties we do would be contacted with a thank you email, which I was already doing. I will work on the wording of the cards for approval at the next MOM's. Read more about this topic in the forums at: <http://www.pasaz.org/forums/showthread.php?t=466>

SIGS (Special Interest Groups): This was an interesting topic. It created all sorts of shared ideas. The goal is to create a sub group within PAS of members who want to get together for meetings or activities on their own, regarding a special topic, such as an Astrophoto SIG. Chris mentioned that no one has shown up at his VSP's all year. And that, at these events, if they can't take the photos at that moment, due to bad weather in Mayer, where the two imaging scopes are, then instead they do image processing, which is the other aspect of astrophotography. I told Chris that I know of four members of PAS who are interested in doing this with him, and driving the distance to his home in Goodyear may be a factor as to why some members aren't able to attend. So, it was discussed that maybe the group can meet at PVCC or other locations where

Wifi is available, to do image processing and image gathering. No one has stepped up to "run" this group, as of yet. I was hoping someone would take over and make decisions that would lead this group where it needs to go to become a productive group within PAS. William suggested holding an event that introduces the idea... specifically for the PAS members interested in astrophotography, to see if we can get the group going. No date was picked for that, but it will be discussed in the forums. More info can be read about this topic in the forums at this link: <http://www.pasaz.org/forums/showthread.php?t=478>

Full PAS Star Party – as brought up by Sam. The idea shared here was to hold a star party that invites the whole membership of PAS as well as family and friends. It was suggested that we could do it at any dark sky site, but in the end we concluded we would hold this ALL PAS STAR PARTY at CEO (Cuttin' Edge Observatory) on April 30, 2011. Along with it being ALL OF PAS, we are also opening up CEO as the location for the PAS Messier Marathon. So,

Continued on page 7

PAS Star Tours Star Party At The Biltmore For AIA

By Sam Insana

On Wednesday night, November 17th, 5 members of the Star Tours team braved the late night cold to put on a star party for the Aerospace Industries Association Convention. It was located at the Aztec Patio of the Arizona Biltmore Resort from 10 pm until Midnight. We were challenged by tall trees and buildings surrounding the horizon up to 30 degrees, bright lights, a lot of moonlight, fire pits and heating devices that churned up the air. It was so difficult that we couldn't find the North Star to polar align the scopes and had to find objects using sky charts, binos, and sticking to the brightest objects. However, we did manage to show several good celestial objects.

Frank had his small refractor and showed the Moon, and the Pleiades open star cluster. Leah showed the Moon, the

Orion nebula, and the Double star cluster in Perseus with her 6 inch dobsonian. Leah also had her binoculars on the Moon. Sam showed the Moon, Jupiter, Andromeda Galaxy, Orion Nebula, and Gamma Andromeda double star system, with his 8 inch Newtonian reflector. Joe showed Jupiter, the Moon, and the Orion Nebula with his 11 inch Schmitt Cassegrain telescope. Therefore we had 5 different optical instruments to give the audience a variety of viewing experiences. Mike, after doing an earlier star party across town, drove to the Biltmore and demonstrated his meteorite collection.

Joe and Sam used their laser pointers to show where the objects being viewed were actually located in the sky. Joe also delighted the people by discussing mythology, the distances to the objects and other interesting

subjects.

Although there were around 100 people, probably only half actually used our scopes. The other half were happy to just sit, talk, and enjoy the good drinks and cigars. I would estimate about 30 people looked through my scope, Frank had about 20, Joe had about 20, and Leah had a little less than 20. Mike had a smaller amount of people than normal, mainly because there were no children, and Mike's table was off in a corner. The audience was made up of CEO's from various Aerospace companies, along with some wives and husbands. We also had some waitresses and bartenders and security employees of the Biltmore enjoy some telescopic viewing. Most of the people expressed their deep appreciation of our star party and several had long discussions with us about the night sky.

Thanks From Aerospace Industries For Star Party Nov 17

By Garnett Black

Dear All,

Not sure I answered your email, but wanted to make sure that you all knew how much our members appreciated your efforts

on Wednesday night. Star gazing was a huge success! Thank you all for coming out to the Biltmore and for sharing your enthusiasm and knowledge of the sky with us. Sam, you are a true professional and I en-

joyed working with you setting up the event at the Biltmore. We will definitely keep you in mind for our next year's meeting.

Best wishes to you all for a wonderful Thanksgiving.

MEETING OF THE MINDS Review 12/16

Continued from page 6

bring your family and trusted friends to this event! There is a port-a-john. Everything else is brought by you: food, drink, chairs, bins, scopes, friends. More details will be found in the Messier Marathon discussion in the forums at this link: <http://www.pasaz.org/forums/showthread.php?t=501> and you can RSVP for this event in the calendar at this link: <http://www.pasaz.org/forums/calendar.php?do=getinfo&e=478&day=2011-4-30>

Next, Joe did a brief look at the 2011 CTCA Paid Star Parties. He reviewed a few details we already knew about, and went over the dates we have lined up for next year. To be part of the Telescope Team that does this type of events, you must be signed up with the PAStimes Star Tours group. You can volunteer to help at these events without pay, but only signed-up members of the Star Tours group can be paid. Sign up is free and does not obligate you to take any job you can not fit in your schedule. Contact Terri if you are not already signed up. Thank you, Joe, for the update and the dates of the 2011 CTCA events. More details about these star parties is in the forums at this link: <http://www.pasaz.org/forums/showthread.php?t=417>

We then turned our focus to the upcoming 2011 events.

Apr 2 is when Saturn is at opposition. There are already two events scheduled on that date, so we decided not to add another public event. We have events scheduled at CEO (Cuttin' Edge Observatory) and DBG (Desert Botanical Gardens). For anyone who wants a good view of Saturn, the CEO is the best place to go for dark skies. We hope to see you there.

Aug 12 we had scheduled a Perseids Meteor Shower Party at PV Park, however it will be a full moon on that date, so it was decided to cancel that event.

Oct 21 is the Orionids Meteor Shower Party at PV Park. Again, there is a full moon in the way so it was decided not to have a public or club event on this date.

Oct 29 is Mike's Halloween Party and Jupiter will be at opposition. Details about this event will be updated in this forum link: <http://www.pasaz.org/forums/showthread.php?p=1206#post1206>. We will make it a Halloween party and star party, so bring a scope. There is also a CEO event that night for those who want a darker sky to observe Jupiter.

May 14 we are considering a star party at Dave's place in Portal AZ. More details to come. Portal is a 7-hour drive south. There are no facilities at all, so bring everything you need to attend. Another thought for this date was to rent a building or two at the AZ Sky Village and share the expense. It's \$125 a night and sleeps 7. Anyone interested should let Terri know. A discussion of this is in the forums at this link: <http://www.pasaz.org/forums/showthread.php?p=1207#post1207>

We then talked about our May Guest Speaker. This year, we will have two PAS Meetings in May, and they will both be in G-147. May 5th will be our elections, and if I do not get a speaker for that night, we will have Members Night. On May 19th we will have a special guest speaker coming to us. Both meetings will be a party, however only May 5th will have pizza provided by PAS. As of writing this review, I have sent the email to Robert, our guest speaker, and informed him he is good to go on May 19th!

We then had Mike review the Star Party Insurance policy for those who needed to know about it. Mike gave a copy to Joe to take to CTCA, and a copy to Sam to give to DBG.

We had a brief discussion about having field trips for the club. Places mentioned were Mt. Graham and Mt. Lemon. Anyone interested in helping to set up field trips for PAS can visit the PAS forums and assist in the planning: <http://www.pasaz.org/forums/showthread.php?t=491> I'd like to start an Event Planning SIG or Committee to assist me in making additional planning of events other than the basic events I already create and organize.

In the mail, the day of the MOM's, I got a letter from a 5th grade student who wants to know more about astronomy. At the meeting, I asked if anyone would like the honors of answering this student's letter. It was declined. I was hoping Frank would do it, but it was decided that since PAS has a Question email set up, that Leah should do the answering of this mail. So, I will scan the letter and envelope and get it emailed over to Leah, who can then answer it for all of PAS. Thank you Leah.

PAS Social: I asked if anyone had any other activities they would like to see at the Social this year. It was decided that since we are going to be having many tables again this year, we should do the table decoration game. So, bring ONE table decoration, preferably astronomy related (no holiday decorations, unless it is a tree with astronomy ornaments), per family. Awards will be given out with the main Door Prize after the White Dwarf Gift Exchange. Please read about the Social in this issue of the newsletter. More details can be found in the forums at this link: <http://www.pasaz.org/forums/showthread.php?t=464> Be sure to read about the plans for this year's event before attending so that everyone will be informed. Thank you. We will see you there. RSVP is required with Terri.

The next-to-last topic discussed was the NIGHT SKY NETWORK awards. Some PAS Members don't seem to care if they earn a pin from NSN, but for those of us who do, please take a moment to log your hours for 2010 so that you can be awarded a NSN Pin in March, when we have our NSN Awards Ceremony. If you haven't heard about how this is going to work for 2011, please read about it in the forums:

<http://www.pasaz.org/forums/showthread.php?t=503>

And the last topic I mentioned before closing the meeting is to remind everyone that the January PAS meeting is in G-147. See you there!!! ***

Thanks For Topics For Meeting Of The Minds

By Terri, Event Coordinator

I wish to thank those who worked with me during November to come up with topics to talk about at the Dec 16 Meeting of the Minds. By having the topics organized

at an early date, I was able to get an announcement into the December Newsletter on the back page before it went to print. Therefore everyone seeing the December issue would know that we were definitely

holding that meeting, and what were the scheduled topics. Thanks to all who assisted. Please see the review of the Dec 16 MOM's in this issue. ***

Buckyballs in Space

By Trudy E. Bell and Tony Phillips

Deep in interstellar space, in a the swirling gaseous envelope of a planetary nebula, hosts of carbon atoms have joined together to form large three-dimensional molecules of a special type previously seen only on Earth. Astronomers discovered them almost accidentally using NASA's Spitzer Space Telescope.

"They are the largest molecules known in space," declared Jan Cami of the University of Western Ontario, lead author of a paper with three colleagues published in *Science* online on July 22, 2010, and in print on September 3.

Not only are the molecules big: they are of a special class of carbon molecules known as "fullerenes" because their structure resembles the geodesic domes popularized by architect Buckminster Fuller. Spitzer found evidence of two types of fullerenes. The smaller type, nicknamed the "buckyball," is chemical formula C_{60} , made of 60 carbon atoms joined in a series of hexagons and pentagons to form a spherical closed cage exactly like a black-and-white soccer ball. Spitzer also found a larger fullerene, chemical formula C_{70} , consisting

of 70 carbon atoms in an elongated closed cage more resembling an oval rugby ball.

Neither type of fullerene is rigid; instead, their carbon atoms vibrate in and out, rather like the surface of a large soap bubble changes shape as it floats through the air. "Those vibrations correspond to wavelengths of infrared light emitted or absorbed—and that infrared emission is what Spitzer recorded," Cami explained.

Although fullerenes have been sought in space for the last 25 years, ever since they were first identified in the laboratory, the astronomers practically stumbled into the discovery. Co-author Jeronimo Bernard-Salas of Cornell University, an expert in gas and dust in planetary nebulae, was doing routine research with Spitzer's infrared observations of planetary nebulae with its spectroscopy instrument. When he studied the spectrum (infrared signature) of a dim planetary nebula called Tc 1 in the southern-hemisphere constellation of Ara, he noticed several clear peaks he had not seen before in the spectra of other planetary nebulae.

"When he came to me," recounted Cami, an astrophysicist who specializes in molecular chemistry, "I immediately and

intuitively knew it I was looking at buckyballs in space. I've never been that excited!" The authors confirmed his hunch by carefully comparing the Tc 1 spectrum to laboratory experiments described in the literature.

"This discovery shows that it is possible—even easy—for complex carbonaceous molecules to form spontaneously in space," Cami said. "Now that we know fullerenes are out there, we can figure out their roles in the physics and chemistry of deep space. Who knows what other complex chemical compounds exist—maybe even some relevant to the formation of life in the universe!"

Stay tuned!

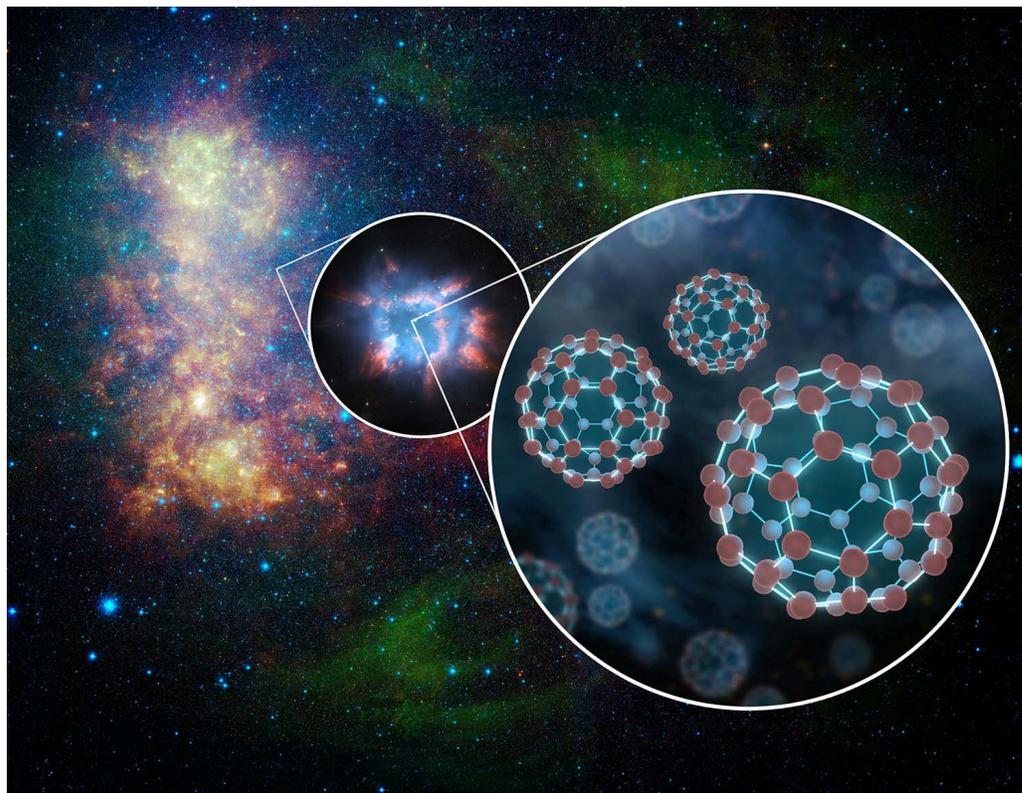
Learn more about this discovery at <http://www.spitzer.caltech.edu>. For kids, there are lots of beautiful Spitzer images to match up in the Spitzer Concentration game at <http://spaceplace.nasa.gov/en/kids/spitzer/concentration>.

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

TABLE DECORATION GAME

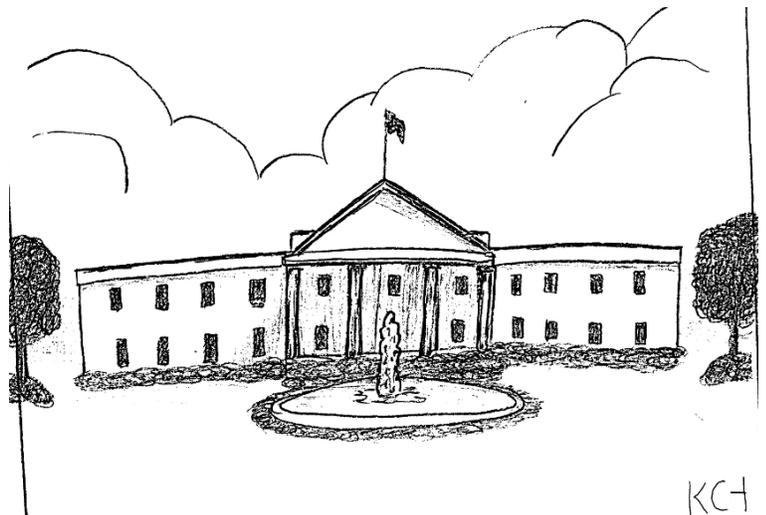
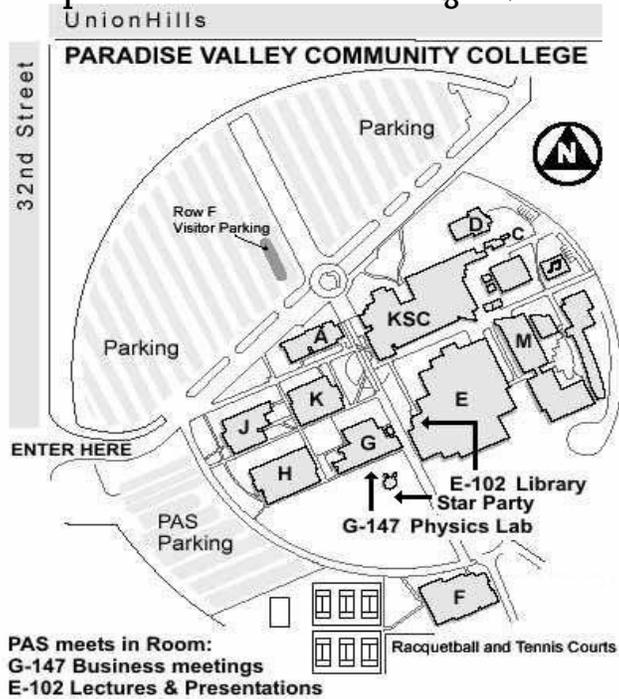
By Terri

This year at the Social we will be playing the Table Decoration Game. Bring an astronomy-related table decoration, then enter it in the game to win a prize - one prize per category. Please note, if it is not astronomy related, it will not be allowed in the judging, but you can still bring it for your table. Some of the categories could be: Most Useful, Cutest, Most Decorative, Best Hand-made, Most Unique, Best Overall and more. If you can think up a category to add to this list, send it my way by Jan 15 to be included in the game. Thanks. In order to be included in the judging of the decorations, you must RSVP your attendance to the Social so I can be sure you are included in the judging. Everyone can be a judge as long as they have RSVP'd their attendance and told me what food they are bringing. See you there! ***



Superimposed on a Spitzer infrared photo of the Small Magellanic Cloud is an artist's illustration depicting a magnified view of a planetary nebula and an even further magnified view of buckyballs, which consist of 60 carbon atoms arranged like soccer balls.

Map to PAS Meeting Location



Mr. President, Congress is taking another holiday break! This one is on January 22 at Chris Johnson's home in Goodyear for the PAS Social!

Please see page 2 for more information

January

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6 PAS Meeting in G-147	7	8
9	10	11 Centennial School info on page4 / CTCA	12	13 PAS Telescope Workshop & Star Party	14	15
16	17	18	19	20	21	22 PAS Social more details page 5&8
23	24	25 CTCA backup	26	27 MOM	28	29 VSP
30	31					

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:

PAS Speaker Line-up for 2011

By Terri, Event Coordinator

Feb 3: Dan Heim: CVEMS: The Newest Threat to our Dark Skies

Mar 3: Dennis Young - Topic: TBA

Apr 7: Richard Hill - 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. ***

PAS is incorporated in the state of Arizona as a non-profit, scientific and educational 501(c)(3) organization. Our newsletter PASTimes is published monthly from September to May and distributed by US PS and the Internet. All Issues are available for download on our website www.pasaz.org Ads for astronomy equipment are provided as a courtesy to sellers and buyers, and do not constitute any endorsement by PAS. All Photos by Don Boyd unless otherwise credited. All articles and photos are copyright their authors or PASTimes.

What's Up For January?

By Rod Sutter, PAS President

Name	Date	Rise	Set
Mercury	01-1-11	07:01	17:09
Venus	01-1-11	03:47	14:41
Mars	01-1-11	08:12	18:06
Jupiter	01-1-11	12:14	00:01
Saturn	01-1-11	01:32	13:15
Uranus	01-1-11	12:18	00:13
Neptune	01-1-11	10:49	21:43
Pluto	01-1-11	07:432	17:23

All Times Arizona Time

January 15 2011

Sunrise: 07:27

Sunset: 17:40

Q3: December 28



New: January 4



Q1: January 12



Full: January 26

