

# PAStimes

Phoenix Astronomical Society  
[www.pasaz.org](http://www.pasaz.org)

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PHOENIX ASTRONOMICAL SOCIETY — ESTABLISHED 1948

## Rogier Windhorst at May 3 Meeting

By Terri, Event Coordinator

This month we have a special guest speaker. Rogier Windhorst has been an instructor at ASU Tempe for quite a while. I took a class from him, years ago. We would all love to welcome Rogier to the May PAS Meeting.

### Rogier's Bio

(borrowed from

<http://sese.asu.edu/people/rogier-windhorst>, per Rogier's request)

Rogier Windhorst's research lies in astronomy, cosmology, galaxy formation and evolution, the cosmic dark ages and the epoch of First Light, and astronomical instrumentation. Since the early 1990's, his group at ASU has contributed significantly to unraveling the formation and evolution

of distant galaxies with the Hubble Space Telescope. He is one of the six Interdisciplinary Scientists for NASA's 6.5 meter James Webb Space Telescope (JWST) to be launched in 2013. His group at ASU plans to use JWST to map the epoch of First Light in detail.

### Pizza Party

(RSVP your pizza today)

By Terri, Event Coordinator

At the May 3 meeting, we will be having the annual, end of the year, Pizza Party. You HAVE TO RSVP your pizza in order to enjoy the pizza with us. I will be picking up the pizza the afternoon of the meeting. Your RSVP has to get to me by Noon

Thursday May 3 in order to be included. There is no charge for the pizza, however, if you don't RSVP your slices, you will have to wait until everyone has had theirs (end of meeting please) before you may have some. I will be ordering 1 more pizza than is needed. There is a donation box that will be sitting by the pizza if you care to donate back to PAS for the pizza. Donations are optional but appreciated. To RSVP, drop me an email or call with the names of people having pizza, and how many slices they would like. If you want a special pizza made, inform me. Otherwise, we will do 1 or 2 topping pizzas, a variety. I can post in the List Serv what pizzas I plan to order, and get your input that way, as well. Water is being provided by President Bruce.

## PAS Meeting Review of Apr 5

By Terri, Event Coordinator

I wish to start this review with a big apology. I forgot the plates & napkins for the snacks. I'm so sorry. However, the meeting was a great success. Rick Tejera (in photo) was an awesome speaker & shared with us very valuable information about how to read star wheels, star charts & use astronomy programs on your computer. I was very impressed with his presentation.

The meeting began with Bruce opening & then turning it over to Rick. Rick's presentation went to 9pm, & everyone was involved & actively listening. When he concluded, he mentioned we would raffle off a star chart he brought with him. That was very nice of him to do that. I had forgotten he mentioned he would, when we spoke in email. So, we passed out free raffle tickets to all attendees for the star chart.

Chris Johnson won that. Thank you, Rick, so much for donating the star chart.

In attendance were 20 people. Some arrived late. We had a Treasury report from Mike Marron stating that PAS is in the positive, which means the PAS Dues will not go up in September. The rate you paid

for this year, will carry over: \$25 for Internet & \$35 if you want the Newsletter snail mailed to you, to cover postage. We had an announcement from Jerry Belcher that there is an awesome 2 day Rocket Launch Apr 28-29. More details can be found at the website mentioned in the Officer's box on page 2 of this newsletter. Visit the site, & if it doesn't tell you enough, give Jerry a call. Thanks to everyone who brought snacks. Ed Wurst, Sam Insana, Bob

Senzer. And thanks to those who donated



Continued on page 6

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## Upcoming May-Aug PAS Events

By Terri, Event Coordinator, [Events@pasaz.org](mailto:Events@pasaz.org)

Upcoming events list:  
<http://www.pasaz.org/forums/downloads.php?do=file&id=49>

**May 1:** School Star Party (Private) 8am - 3pm. RSVP with Terri to attend. Solar Viewing in Surprise.

**May 2:** School Star Party (Private) 6-7:30pm. RSVP with Terri. Viewing Sun, Moon & Venus b4 dark.

**May 3:** PAS Meeting, PVCC Main Campus, G-146 PIZZA PARTY! Bring snack to share. Water provided by President Bruce. Must RSVP pizza with Terri by noon, this day.

**May 6:** FREE Telescope Workshop at Bookman's 19th Ave & Northern, 3:30pm to 5:30pm in Musical Instrument section of the store. RSVP is required. Please provide type of scope & number in your party, when you RSVP.

**May 15:** CTCA (Private) 8:30 to 10:30pm. RSVP with Joe. PAStimes Star Tour Members only.

**May 18:** School Star Party (Private) 7:30 - 9:30pm

**May 20:** Star Party at Desert Ridge (Private) with Solar Eclipse viewing. RSVP with Terri. 10 scopes needed.

**May 24:** FREE Telescope Workshop & Star Party at PVCC Main Campus in G-147 & in Overflow Parking lot, from 7pm to 10pm. PAS Members may use the 6" Dobs provided by PVCC for the Star Party. I do suggest PAS members bring their own eyepieces for better views. RSVP with Terri is required for the Telescope Workshop. When you RSVP, please include what type of scope you need assistance with & how many are in your party.

**May 26:** Scout Star Party in Phoenix (Private) 7pm to 9pm. RSVP with Terri to

attend.

**May 29:** CTCA back up date for May 15.

**May 31:** PAS Meeting of the Minds, PVCC Main Campus G-147, Everyone welcome, bring a snack to share. It's a PARTY! Public Star Party - Weather Permitting. RSVP required to attend.

### June 2012 Events:

Please note: Phoenix monsoons are from May 15 to Sept 15. Outdoor events are Weather Permitting. Always RSVP so we may notify you if event gets canceled.

**Jun 3:** FREE Telescope Workshop at Bookman's 19th Ave & Northern, 3:30pm to 5:30pm in Musical Instrument section of the store. RSVP is required. Please provide type of scope & number in your party, when you RSVP.

**Jun 5:** Venus Transit & star party. 3pm to 10pm at PVCC Black Mountain Campus, N.W. corner of parking lot. RSVP is with Terri & highly suggested so I have enough handouts for everyone.

**Jun 12:** CTCA (Private) 9-11pm. RSVP with Joe. PAStimes Star Tour Members only.

**Jun 26:** Back up for CTCA Jun 12.

**Jun 28:** PAS Meeting of the Minds, PVCC Main Campus G-147, Everyone welcome, bring a snack to share. It's a PARTY! Public Star Party - Weather Permitting. RSVP required to attend.

### July 2012 Events:

**Jul 8:** FREE Telescope Workshop at Bookman's 19th Ave & Northern, 3:30pm to 5:30pm in Musical Instrument section of the store. RSVP is required. Please provide

type of scope & number in your party, when you RSVP.

**Jul 10:** CTCA (Private) 9-11pm. RSVP with Joe. PAStimes Star Tour Members only.

**July 21:** Star Party / Potluck at Mike's home in Carefree. RSVP is with Mike to attend [Primefactory@q.com](mailto:Primefactory@q.com). Potluck is at 6pm & Star Party starts at 8pm. Event happens rain or shine. Should star party be canceled, a Lecture or movies could happen. This event is Public by Invite, meaning, RSVP or be invited.

**July 24:** Back up date for Jul 10 CTCA.

### August 2012 Events:

**Aug 5:** FREE Telescope Workshop at Bookman's 19th Ave & Northern, 3:30pm to 5:30pm in Musical Instrument section of the store. RSVP is required. Please provide type of scope & number in your party, when you RSVP.

**Aug 14:** CTCA (Private) 8:30-10:30pm. RSVP with Joe. PAStimes Star Tour Members only.

**Aug 18:** Star Party / Potluck at Mike's home in Carefree. RSVP is with Mike to attend [Primefactory@q.com](mailto:Primefactory@q.com). Potluck is at 5:30pm & Star Party starts at 7:30pm. Event happens rain or shine. Should star party be canceled, a Lecture or movies could happen. This event is Public by Invite, meaning, RSVP or be invited.

**Aug 26:** FREE Telescope Workshop at Bookman's 19th Ave & Northern, 3:30pm to 5:30pm in Musical Instrument section of the store. RSVP is required. Please provide type of scope & number in your party, when you RSVP.

**Aug 28:** Back up date for Aug 14 CT-CA. §

# PVCC Black Mountain Star Party Mar 29

By Terri, Event Coordinator

Set up for this event was 6pm. When we left our house, the skies were clear. By the time we had dinner & were driving to the location, the skies didn't look so good. William & I arrived about 5:30ish. We chose our spot to park & set up, and then as the Telescope Team arrived, we directed traffic. By 6:30 we had a crowd, even though the event wasn't to start until 7pm. In attendance was William & Terri Finch, Albert Tucker, Sam & Frank Insana, Bruce Wurst, Tim Jones, Don Boyd, Eric Steinberg, Bob Christ, Mark Levison, Pete Morrissey, and for a few moments, Chet Schuler who left when the clouds took over the skies.

Around Dark, 7:45pm, is when the clouds came in. Up until that time we were showing Venus, the Moon, Jupiter, Orion Nebula, & Mars. Once the clouds took over, it was more Q & A with the kids to keep them busy, and conversing with the attendees. Saturn rose around 8:15, but due to clouds, we didn't see it.

The event was scheduled to go to 10pm, however, the clouds cleared around 9pm and we did some great viewing from then until 9:40 when the security at PVCC turned on the lights. We had 36 RSVP's, for which I believe most of them showed up. We had some extras that arrived. The 80+ 1st graders and the group coming with Paula, never made it. I'd say we saw about 100 total.

The weather was great, as far as temperature. Not too cold. The location was awesome, as there are 5 lights that are turned off to help keep the area darker for viewing. That is very much appreciated. Many thanks goes to all the Telescope Team members. Below, we have reviews written by those attending Telescope Team members who wished to share what they were able to view that night. Many thanks to Jenny Weitz who came out to support the event and Kevin Adams, PVCC Student, who also was very helpful to me. I had it planned that Kevin would do handouts, and then I forgot to grab those handouts. But Kevin helped in other ways. We definitely had enough scopes for the number of attendees, and if it weren't for the clouds taking over, I bet we would have had 5x as many attendees. Maybe the next event. Put it on your calendar. Next PVCC Black Mountain campus star party will be on Nov 15, 2012. See you there!

Bob writes: The cloud-gods were unkind to us during the north campus event. An evening that originally held great promise degraded in a challenging one, yet the attendees thankfully didn't seem to mind as much as we did. The Moon, almost 50% illuminated, cooperated enough to provide some good views, but for the most part it was a planet show-and-tell. Venus displayed its partial illumination that surprised a lot of people that didn't know it goes through Moon-like cycles. Mars was well positioned up high, and actually displayed albedo features when not clouded over. When clouded over, it was still visible, though featureless, as the scope was able to "burn through the clouds." Later, Saturn made its appearance and it is always a stunning image, even when the view is "soft." Opportunistic objects shown when not clouded-over included: M42 and it's greatly diminished extent of nebulosity, the globular cluster M3, and the open cluster M37. And, as we left; the sky cleared. Timing, timing.

Albert writes: The star party at BM was a success. We even had one future astronomer see objects through their scope for the first time thanks to Tim. That alone made the evening worthwhile. Saturn was a favorite also when the viewing improved.

Sam writes: Frank showed the moon and Pleiades to kids in his small refractor. I showed a close up of the craters of the

moon, Venus, Jupiter, Mars, and Saturn. I invited about dozen friends and relatives to come, but then called them off two hours before the event because of the bad clouds. However, one of my friends, Jerry Cochran, still came with his wife, daughter, son in law, and granddaughter. They all had a great time seeing the above objects, plus Orion Nebula in Eric's scope, and seeing the meteorites. The granddaughter loved what Terri was doing and the prize she won (a small red light). It was a rough night, however, since most of the time the clouds made for poor seeing, but once in awhile an object looked pretty good.

Eric writes: A reasonably successful event was held by PAS and PVCC on March 29th. The weather was forecast to be nearly perfect, but turned out to be nearly overcast for most of the evening. We were nonetheless able observe a number of objects with very good seeing. Venus showed a stable view with a very sharp terminator and a sense of tawny color. Jupiter looked good for a short time before it fell into the "muck" and was then covered by clouds. Later, Mars had its darker areas visible along with a minimal polar cap. Saturn was reasonable, but not as clear as I've seen it (still too close to the horizon). Also shown to great appreciation were M42, M37, and later, M3. Overall a pleasant and enthusiastic crowd (along with some cloud "down time") made the event a laid-back success. §



*The PVCC Mascot arrived at our star party. He was enjoying a great viewing session with us on this evening! Photo taken by Terri Finch.*

# Desert Botanical Garden Star Party Mar 31

By Terri, Event Coordinator

The event we did for DBG was a great success. We were set up in the Agave Pit at Desert Botanical Gardens. Emily Morris was our contact and a very nice person to work with. The weather was awesome! In attendance for this event were Sam Insana with his 8" dob, Terri Finch with an 8"

SCT, Frank Insana brought a smaller scope to show Pleiades & the Moon, William Finch assisted in set up and running my scope, and Mike Marron had his meteorites. We had about 12 people in attendance, paying customers of DBG. Since kids were there, I did Q & A. We showed Venus,

Jupiter, Mars, Saturn & the Moon. We also did Orion Nebula, Alcor & Mizar, Pleiades, and a few other items. Sam and I took turns doing a night sky tour... talking about what was visible, using our green lasers to show the way around the sky. I talked about the Big Dipper, arcing to Arcturus, pointer stars

*Continued on page 8*

# Tropper Star Party in N. Scottsdale Mar 30

By Terri, Event Coordinator

It was an awesome night for an event. Scott Tropper had asked us to do this event and he was providing food & many of his friends. In attendance were Don Boyd, William & Terri Finch, Mike Marron, Bruce Wurst, Dennis Young (came down from Sedona to help with this event), & Eric Steinberg. We began our set up at 5:30 when William, Don & I arrived about 5pm at Scott's house. The rest of the team filtered in around 5:30. We parked our cars off Scott's circle drive and used that area around the fountain to set up our scopes. Prior to sundown, Dennis & Don showed the sun through their scopes.

Pizza was the main food with some shrimp that was very tasty. Plenty of drinks in coolers all around the house. Plenty of pizza, as some of it went home with us. Many thanks to Scott for having us at his event. We showed everything we could that night. And Scott was overly impressed with Bruce's 20", Eric's 16", and Dennis's 28" scopes. Many photos were taken of this event, including a bunch of Scott's son,

Blake, so that Scott could have them for his collection. Many thanks goes to Scott for having such an awesome event, with lots of wonderful people to show the night sky to. And thanks to my Telescope Team and Dennis! We hope to do another show for Scott in the near future.

Objects that were viewed through my scope were the Moon, Orion Nebula, Jupiter, Saturn. I searched for but didn't find M101 & M51, as the Big Dipper was in a position that was awesome for searching for these items. It was a fantastic event. We closed up about 11pm.

Dennis writes: The objects shown.. of course the Moon, Jupiter, Saturn, M3, Ghost of Jupiter, 7 Sisters, Venus, Hyades cluster, Coma Berenices Cluster. 90 percent of All constellations at hand during time frame. And last but not least, Our Sun. Scott, was very professional throughout the entire program, his family and friends were sincere, and excited and respectful of all equipment at hand as well as toward each astronomer there.

Don writes: I showed, the double cluster, the ET Cluster...but it was really low on the horizon and hard to make out, Jupiter, Saturn, the Pleiades, and the Beehive Cluster.

Eric writes: On Friday, March 30th, a private star party was held by PAS at the stunning North Scottsdale home of Dr. Scott Tropper for him and a group of friends and family. In attendance from PAS were Don Boyd, Terri and William Finch, Mike Marron, Eric Steinberg, Bruce Wurst and Dennis Young (Sedona by Starlight) with his 28" dobsonian. Once again, skies were forecast to be clear but turned out somewhat cloudy; thankfully we were mostly able to find "holes" and also to look through thin cloud layers to find our targets. On my 16" scope, I was able to show the Moon, Venus, Jupiter (briefly), M42, M37 and M3 to Scott and the guests who displayed a keen sense of wonder and enjoyment at the sights. The party wound down around 10:30 finishing a successful evening. §

# Eric's Messier Marathon

By Eric Steinberg

On Wednesday, the weather for Saturday's Messier Marathon was not looking good. My wife, Ora, said to me "Why don't you just go tomorrow," and Thursday morning I decided to do just that. I arrived at the Hovatter airstrip (not far from the Antennas site) at around 4:30 and began to set up among 17 other vehicles. Though dusty, this site gives a dark-sky 360° view of the horizon with the maximum obstruction less than 2° above the horizon. There was a pretty good breeze blowing which thankfully died down at sunset, though not before making setup a little "entertaining."

I didn't start out planning to do the marathon, but after sunset, I took a look at

SAC's Messier Marathon list. I thought: "Let me just try a few of these." My first attempt was M74 (Galaxy in Pisces), but when I looked over at the horizon, there just weren't any stars visible to line up on. I drove around a bit looking for it, but no luck. Next I tried M77 not far away- there were a few more stars showing and bingo there it was. On deck were M31, M32, M33, M34 and M110, all pretty easy. Not sure what happened after that, but by around 11:00 I was coming up on 50 objects and on a roll. By about 1:30 I started to "run out of sky" waiting for Sagittarius to appear, but simultaneously my body began to insist that it not stay vertical too much

longer. I kept on for a bit and got the last five globular clusters in Ophiucus and Scorpio before completely running out of gas, for a total of 75 objects.

I would credit some pretty good charts and some of the clearest, steadiest skies I've seen with helping for a successful evening. Standout objects were M5, M10 (Black Eye), M76, M81/82, M104 (Sombbrero) among others. Saturn also was particularly pretty with excellent seeing - banding and ring divisions were sharp and steady.

Equipment for the evening: Meade 16" f4.5 Dob; JMI Motofocus; Eyepieces: Agena Astro 38mm wide-field, ES 24mm 82°, ES 14mm 100°, ES 9mm 100° and ES

*Continued next page*

## Eric's Messier Marathon

4.7mm 82° for Saturn. Binoculars for M45, M44, M67.

List of objects: M1, M3, M4, M5, M9, M10, M12, M13, M14, M19, M31, M32, M33, M34, M35, M36, M37, M38, M40,

M41, M42, M43, M44, M45, M46, M47, M48, M49, M50, M51, M53, M58, M59, M60, M61, M63, M64, M65, M66, M67, M68, M76, M77, M78, M79, M80, M81, M82, M83, M84, M85, M86, M87, M88,

M89, M90, M91, M92, M93, M94, M95, M96, M97, M98, M99, M100, M101, M102\*, M104, M105, M106, M107, M108, M109, M110, Attempted/Unsuccessful: M74§

## PAS Elections May 3

By Terri, Event Coordinator

This is our Election night. If you are running for a position within PAS, please inform me prior to Noon May 3 so that I can make up a list of who is on the ballot (in a sense). Elections will happen first, before the guest speaker. Whether you plan to

change positions within PAS, drop from the Officer's list, or Become an officer, bring your POSITION BADGES (President, Vice President, Treasurer, Editor) with you, in case you are voted out of your position. This has never happened, but that doesn't

mean it can't. Be prepared to trade badges, if / when needed. Announcements will happen after the Speaker. We may use room G-147 until 10pm, and we hope everyone can attend§.

## Congratulations: Solar Glasses Headed Your Way

By Vivian White. Night Sky Network Administrator

The Phoenix Astronomical Society won the first quarterly prize of 2012 - a set of 50 solar viewing glasses! Keep an eye out for a package in the next week or so. Five events were selected at random from over 300 events logged this quarter. The glasses were generously donated by the Charlie Bates Solar Astronomy Project, a

Night Sky Network member club. The Night Sky Network provides these prizes each quarter as a small token of our appreciation for all the great work you do! You can see all the winners in the article here: [http://nightsky.jpl.nasa.gov/news-display.cfm?News\\_ID=505](http://nightsky.jpl.nasa.gov/news-display.cfm?News_ID=505) Keep up the great work! And thanks for telling us all

about it . Email Received Apr 9, 2012

If the glasses arrive in time for the Apr 19 Awards Ceremony, I will be making them available to anyone who wishes to have one to view the May 20 Solar event. One per person, please. If they don't make it here in time, I will bring them to the May PAS Meeting. PAS Members get them first.

## Bookmans Telescope Workshop Apr 1

By Terri, Event Coordinator

And it was an excellent April Fool's Day. We held our Bookman's Telescope Workshop in the Musical Instrument section of Bookmans.

I took 110 photos, for which I will post to the PAS Photo Gallery soon. We had 2 RSVP's for the event. Bonnie never showed. But Mike Webb came with his 2 8" scopes and got a lot of assistance. He also joined the club! And Tom brought his 4.5" Orion dob and learned a bunch about eye-pieces & Telrad.

Public... I'd say we had at least 50

visiting people, some were interested in the telescopes, and other were drawn in by Mike's meteorites. Mike Marron, like usual, stole the crowd. The photos show this. We were there from 3pm to 6pm, the event was scheduled from 3:30 to 5:30.

Also in attendance was John Pulis, Kevin Harcey & Bob Senzer was in town from Parker. Telescope Teachers were Don Boyd & William & Terri Finch. It was a very interesting, busy event with lots of great discussion & a crowd around Mike almost the whole time.§



Mike sharing his meteorites at Bookmans.  
Photo by Terri Finch.

## Besch Private Event Apr 1

By Eric Steinberg

On Sunday April 1st, I did a private star tour at the Paradise Valley home of PAS member Tim Besch and his family. Tim has quite a lot of astronomical knowledge, but not a lot of practical experience and so wanted a hands-on look. I did about 2 hours for him, his children and grandchildren, a

really nice and enthusiastic group. Skies were clear with a little bit of wind, but seeing was downright poor, and the moonlight pretty strong, rendering Jupiter as just a blob and even the Moon not super-sharp. I showed them the Moon at various magnifications and locations, Jupiter, Mars, M42,

M37, The Pleiades, Double Cluster and M3. I also gave them a naked-eye tutorial of what could be seen. They were gracious and helpful – I would definitely welcome an opportunity to work with them again.§

## PVCC Telescope Workshop Apr 12

By Terri, Event Coordinator

It was an iffy night for the weather. We arrived under fairly clear skies. Eric Steinberg came along to see if he would be able to set up the PVCC Lightbridge. Don Boyd was there to assist with the Telescope workshop portion of the event. Several of Jenny Weitz's students were there as they were doing an Evening Survival Astronomy. Photos of this can be seen in the PAS Photo Gallery. William Finch and I came along to help out. Sam & Frank Insana were also in attendance.

Jill Loskill was our only RSVP but Don took great care of her. And she enjoyed looking through the Lightbridge that Eric and Frank were sharing.

Mike stole the show, as usual, with his meteorites. The PVCC students were intrigued with his collection & all he had to share about his meteorites. Kevin Adams, a PVCC student, was also there, and helped.

Dave Hellman was in attendance as well. Jenny supplied trail mix to go along with the Evening Survival Astronomy display. There was coffee too, as this was to show how the bubbles react to the air pressure, to predict a storm. The coffee was enjoyed by several attendees.

Eric brought his eyepiece set for sale. Nice set. He should bring it to the Apr 19 and the May 3 meetings.

One of the Evening Survival Astronomy displays was Making Fire Cotton balls. This produced a mini fire in the trash can outside the room. Dave later supplied the student with a way to do the fire / cottonball experiment without lighting the room on fire. I asked the PVCC Astronomy club members if they would set up this same Survival display at the Apr 26 Indoor event, and they agreed.

Many thanks to Jenny & Dave for pro-

viding the room and the scopes to use. And many thanks to the PVCC students who put together the displays.

And thanks to the PAS Team who took care of the RSVP, and helped this even be a great success. See you at the next one! §



In photo (L to R) Jenny Weitz, Eric Steinberg (back to us), William Finch (in green). Photo by Terri Finch

## Canyon Springs School Star Party Apr 3

By Eric Steinberg & Albert Tucker

Eric writes: Our star party at Canyon Springs School began shortly past sunset, after a little wait for their baseball game to finish. Threatening winds and clouds both dissipated around that time leaving us only bright moonlight to contend with. PAS was represented by Mark Levison (with his new 12" Orion Dob), Mike Marron, Eric Steinberg and Albert Tucker. Initially there were a large number of students and parents attending, though the well-behaved crowd thinned out a quite bit by 8pm. With a few exceptions, most of the people attending had never looked through a telescope – their reactions were appropriate, in some cases going in a moment from pre-teen nonchalance to awestruck at what they were seeing. One young lady insisted in looking in the scope tube to “see if I had a picture in there...” I showed the Moon, Mars, M42, M3 (too washed out in the moonlight), M37 and Saturn. Seeing was reasonable, so

views of the planets were not bad. With comfortably warm temperatures, it was overall, a very successful and enjoyable evening.

Albert writes: The Canyon Springs School astronomy event was a success as expressed by everyone that attended. The response from each person was encouraging. Some asked if they were looking at a picture or the real thing. Even Venus was on the list of "wow" objects when viewed through various filters. Saturn was the most popular target of the evening. Some of the attendees expressed that this was the first time they were actually able to see through a telescope. That alone made this event a success. We may have sparked the interest of some potential astronomers. The Principal and Staff of Canyon Springs School were available and helpful throughout the event. It was quite a sight to see when they

opened the barrier and the event began, but it was quickly organized.

Jennifer Soto writes: Hi Terri, I was so fortunate to attend the Star Party at Canyon Springs School last night. I just want to share my feedback with your Society that it was a wonderful experience. I did not catch the names of the three gentlemen who shared their telescopes and knowledge with us, but they were awesome! We got to see so many interesting things. They were so great about explaining what we were looking at, and finding a variety of amazing views. The universe is certainly alive and well...and oh so beautiful! Thank you to the Society for sharing its specialty with the public. I can't wait to attend another event!

Adam Laningham (Teacher, our contact at the school) writes: They (Telescope Team) were great, and the students loved it! Thank you for your help. §

## PAS Meeting Review of Apr 5

Continued from page 1

\$\$ to the snack fund. We will be using the snack fund to pay for part of the pizza at the May 2012 Pizza Party. Many thanks to Jenny Weitz for helping get the guest speaker set up. Many thanks goes to Jerry for bringing the misprinted pages for the

Astronomical Calendars to the meeting for pick up. If you weren't able to come to the meeting, but you bought one of those calendars, give Jerry a call (phone number on page 2) so he can mark one of the remaining copies as yours, before he gives them away

at the SAC meeting. Next important meeting is the May 1 PAS meeting with Pizza Party & Elections! See you there! §



# NASA Helps Europe Study a Comet— Up Close and Personal

By Dr. Tony Phillips

Europe's Rosetta spacecraft is on its way to intercept comet 67P/Churyumov-Gerasimenko. Comets have been intercepted before, but this mission is different. Rosetta aims to make history by landing a probe on the comet's surface while the mother ship orbits overhead.

"Rosetta is the European equivalent of a NASA flagship mission," explains Claudia Alexander, project scientist for the U.S. Rosetta Project at NASA's Jet Propulsion Laboratory. "It will conduct the most comprehensive study of a comet ever performed."

Rosetta's payload contains 21 instruments (11 on the orbiter, 10 on the lander) designed to study almost every aspect of the comet's chemistry, structure, and dynamics. Three of the sensors were contributed by the U.S.: Alice (an ultraviolet spectrometer), IES (an ion and electron sensor), and MIRO (a microwave sounder).

The main event of the mission will likely be the landing. The 100-kg lander, which looks a bit like a cross between NASA's old Viking Mars landers and a

modern microsatellite, will spend two weeks fastened to the comet's icy surface. The European-built probe will collect samples for analysis by onboard microscopes and take stunning panoramic images from ground level.

"First the lander will study the surface from close range to establish a baseline before the comet becomes active," explains Alexander. "Then the orbiter will investigate the flow of gas and dust around the comet's active, venting nucleus."

Rosetta's sensors will perform the experiments that reveal how the chemicals present interact with one another and with the solar wind. Alice and MIRO detect uncharged atoms and molecules, while IES detects the ions and electrons as the solar wind buffets the nucleus.

One problem that often vexes astronomers when they try to study comets is visibility. It's hard to see through the dusty veil of gas billowing away from the heated nucleus. The microwaves MIRO detects can penetrate the dust, so MIRO can see and measure its target molecules even when

other instruments can't.

MIRO is one of several experiments focused on the comet's structural properties. It will determine the comet's dielectric constant, emissivity, and thermal conductivity to determine whether it is made of a powdery loose material, has a detectable layer of loose material, or is hard as rock.

"We want to find out whether comets have retained material from when the solar system formed," says Alexander. "If the ancient materials are still there, we can get an idea of what conditions were like at the dawn of the solar system."

Rosetta enters orbit in 2014. Stay tuned for updates!

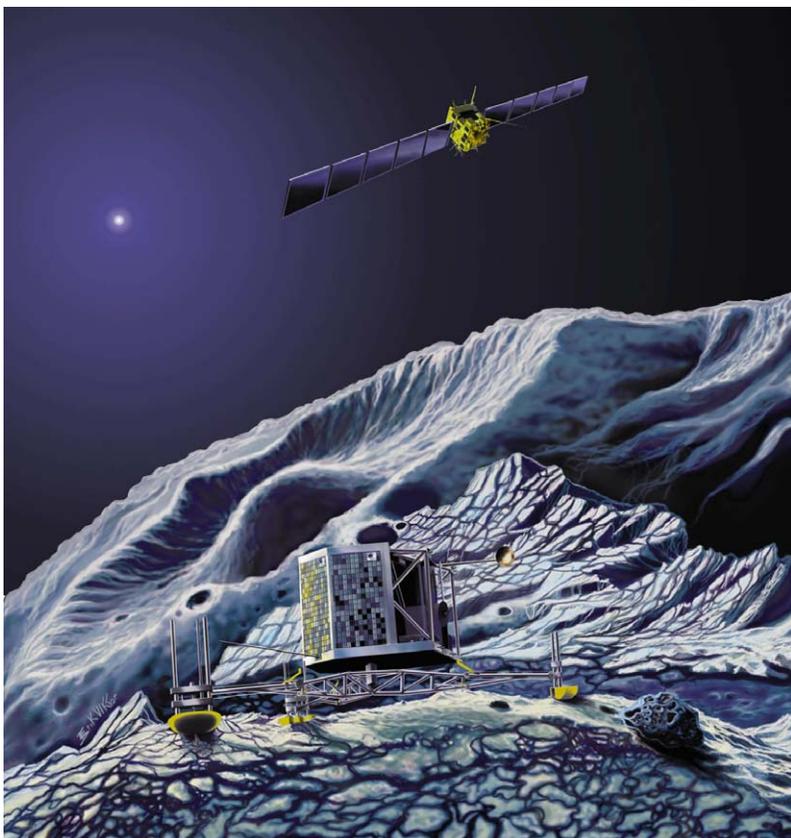
Check out "Comet Quest," the new, free iPhone/iPad game that has you operating the Rosetta spacecraft yourself. Get the link at [spaceplace.nasa.gov/comet-quest](http://spaceplace.nasa.gov/comet-quest).

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

## Thanks to PAS Members

By Terri Finch

Many thanks to all the PAS Members for a PAS Season (Sept – May) well done! Your support is very much appreciated at the many fun events we had this Season. Hope to see you at the fun Summer events we have lined up. \*\*\*



Rosetta's lander Philae will eject from the spacecraft, touch down on the comet's nucleus, and immediately fire a harpoon into the surface to anchor itself so it won't drift off in the weak gravity.



Scott Tropper & son, Blake, viewing through Dennis Young's Solar Scope at the Private Star Party on Mar 30 at Scott's home in Scottsdale. Photo by Terri Finch.

# CTCA/PAS SkyTour Event Tuesday April 10

By Joe Collins

Attendees: PAS members: Don Boyd, Eric Steinberg, Joe & Renee Collins. We had no customers for solar viewing, but eleven attendees [five patients, five caregivers and one child] join us at the CTCA 5th floor garden terrace for the evening SkyTour event.

Conditions: This event was in jeopardy of being cancelled due to wind and cloudiness. There was no consensus of our four main weather forecast sources: Accuweather, SkippySky, ClearDarkSky, and NOAA, so I chose the most optimistic source NOAA this time, crossed my fingers and we just did the event. April 10th was a third-quarter moon date pre-selected for a moonless sky for the duration of the event for best possible viewing of dark sky objects [moonrise was at 11:45pm]. We had wind gusts up to 18mph until about 8:15pm, but the wind settled down, as it often does soon after sunset in Goodyear, leaving us with with a cool breeze for the remainder of the night. Besides the usual city glow light pollution, we had both atmospheric turbulence (noticeable when looking at the planets at high magnification), and lots of particulate haze round about the horizon due to dust kicked up by the wind and residual smoke from fires in southeast Phoenix and Buckeye. The visibility/clarity this night was about 3 out of a perfect 5, still, not bad for this venue. We saw another Magnesium military flare over the Estrella mountain range to our South about 9pm.

Equipment: Don: 4.5" Newtonian Reflector w/Meade ATX goto mount and solar filter. Eric: 16" Meade Lightbridge Dobsonian telescope with 9mm Explore Scientific eyepiece. Joe Collins: Celestron CGEM

11" SCT, binoculars & iPad.

Eric Steinberg <eric@ytdept.com>: The April CTCA star party began around sunset under skies threatening to be overcast all day. Thankfully, the clouds cleared, but around the same time, winds went in about 2 minutes from calm to strong and gusty. This was an evening NOT to use a shroud on a big Dobsonian telescope. In spite of gusts, shaking scopes and the usual light pollution, we were still able to show a good number of objects to about 10 or so very appreciative attendees. In my 16" I showed: Mars, M42, M37, M41, M3, the Pleiades and Saturn.

Don Boyd <azphotog@gmail.com>: I set-up in time for solar viewing, but had no customers. During the night portion of the event I showed several patients and caregivers the Pleiades, Beehive, Jupiter, Saturn, and Alcor-Mizar. I confirmed my problem last time with the goto mount was fixed. As we were tearing down, I decided to take a look at my collimation and noticed that everything looked "good" but wasn't perfectly centered in the secondary, so I adjusted the secondary mirror and re-adjusted the primary afterwards, so now my telescope is good to go for the next event.

Joe Collins <jcollins79@cox.net >: During the course of the evening we viewed all the objects listed and explained in our event handout: We caught Jupiter & Galilean moons before setting and a very bright crescent Venus in the western sky. We viewed Mars, Saturn & Saturnian moons in the Eastern sky. I shared views of Cor-Caroli, iota-Cancri, Polaris, Sirius, Rigel, Tegman and several other lesser known

binary/multiple stars, the core of M31 Andromeda galaxy, the Eskimo nebula, the 'Stargate' asterism, the Great Nebula in Orion (M42), M3 globular cluster, the Pleiades (M45), the Praesepe/Beehive (M44) and the Double Cluster in Perseus. As a future improvement, I suggest (again) someone bring bino-viewers or a 30-35mm wide-field eyepiece, so customers can better appreciate these last three open cluster binocular objects through our telescopes. I discovered with the Celestron NexStar hand controller, the Goto can work for some catalogues, but not work for other catalogues, for example, this night, post 2 star alignment + 2 star calibration. I could slew to any of the above horizon Messier objects, but it couldn't automatically slew accurately to Mars, a solar system catalogued object; yet it would slew to Venus and Saturn accurately! Obviously, the catalogue files can get corrupted; I may have to upgrade to a flashable hand controller.

We extend our thanks to Marisa Benincasa of CTCA for advertising, printing out our handouts and for meal tickets. We also thank the CTCA hospitality staff for providing refreshments. Among the PAS membership, I want to recognize Renee Collins for promoting the SkyTour event among the Tuesday evening CTCA focus, welcome, and social networking groups and I especially want to thank Don Boyd, who showed up on short notice after Mike Marron had to cancel his meteorite display due to throwing out his back! Thanks to PAS members who attended for working and volunteering their time to make this event a success and enjoyable for CTCA patients and caregivers!§

## Desert Botanical Garden Star Party Mar 31

*Continued from page 4*

to the North Star, which is the end of the tail of the Little Dipper. Explained how the North Star is NOT the brightest star in the night sky. Then later that night, I talked about Orion, showing how you get to Sirius, the Dog Star, then the other direction to Taurus, and through to the Pleiades. Showed Betelgeuse & Rigel. I had brought star charts for the families. Emily provided snacks for the guests. It was a great event! And the attendees really seemed to enjoy the night, plus they were very actively involved with us, asking tons of questions, &

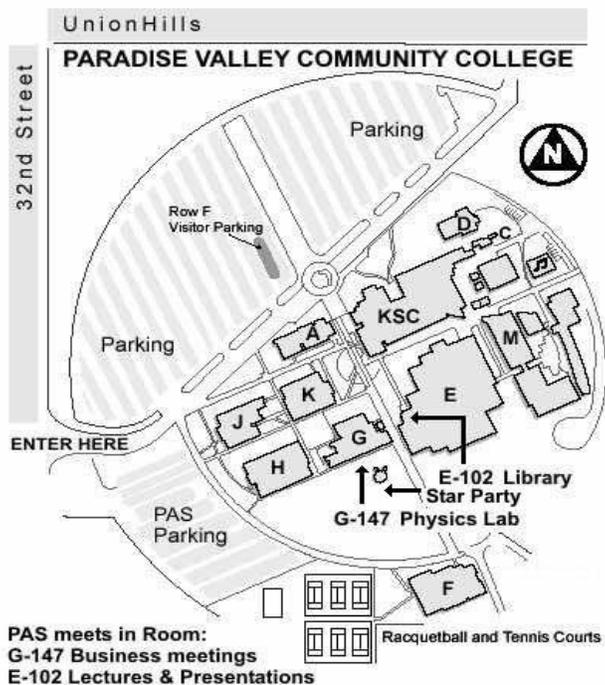
enjoying the night with us. Like usual, Mike stole away a crowd for most of the night. The skies stayed clear & the temperatures were awesome. Many thanks to Emily & her two electric cart buddies. They transported us from the parking lot to the Agave Pit with ease. We hope to do another fun event for DBG, soon.

Sam writes: Frank showed the moon, the Pleiades, and a double star in the big dipper to little kids with his small refractor. I showed Venus, a close up of Archimedes

Crater on the moon, Orion Nebula, Saturn, and M3 globular cluster & Mars. The best object was the close up of Archimedes Crater on the Moon. The worst object was M3 because of the extensive light pollution from the Moon. I also pointed out and described the Orion constellation and the Leo constellation. The kids and parents all seemed to have a good time, and Emily, the new contact at DBG for children education was very nice. Mike was his usual popular self showing off his meteorite collection. §

## Map of PVCC Main Location

18401 N. 32nd Street | Phoenix, AZ 85032



## Map of PVCC Black Mountain

34250 N. 60th Street | Scottsdale, AZ 85266



See page 2 for more information

## May

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 School Star Party (Private)	2 School Star Party (Private)	3 PAS Meeting, PVCC G-147 PIZZA PARTY!	4	5
6 Telescope Workshop at Bookmans	7	8	9	10	11	12
13	14	15 CTCA Private Star Party	16	17	18 School Star Party (Private)	19
20 Star Party at Desert Ridge (Private)	21	22	23	24 Telescope Workshop & Star Party at PVCC	25	26 Scouts Star Party (Private)
27	28 Memorial Day	29 Back up date for May 15 CTCA	30	31 Public Star Party at PVCC		

## Telescope For Sale

The scope is a Meade ETX 90mm with computer hand pad and tripod. The owner (a lady) is asking \$350, retails for \$600. Contact Dave Hellman to view scope and purchase it.  
[david.hellmann@pvmail.maricopa.edu](mailto:david.hellmann@pvmail.maricopa.edu). \*\*\*

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

To:

## ECLIPSE VIEWING GLASSES FOR SALE

By Terri, Event Coordinator

PAS will have, at all upcoming events at PVCC Main Campus & PVCC Black Mountain Campus between now and the May 20 Solar Eclipse, Eclipse Viewing Glasses available for purchase. The monies from the sale of these glasses will go to PAS. Cost is \$2.00 each. The public may purchase these glasses to safely view the May 20th event. Please see Terri to purchase.§

## 2012 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.

Meeting location may be changing from Library to another location on campus. Check September 2012 Issue for updated location.

**Sep 6:** Location TBA: Members Night - Sign up with Terri to do a mini presentation.

**Oct 4:** Location TBA: Dan Heim "Atmospheric Optics"

**Nov 1:** Location TBA: David Williams "Asteroids, Ion Propulsion, & NASA's Dawn Mission to Vesta" \*\*\*

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## What's Up For May

By Rod Sutter, PAS Past President

Name	Date	Rise	Set
Mercury	05-15-12	04:50	18:09
<b>Venus</b>	<b>05-15-12</b>	<b>07:06</b>	<b>21:36</b>
<b>Mars</b>	<b>05-15-12</b>	<b>13:06</b>	<b>01:58</b>
Jupiter	05-15-12	05:01	19:03
<b>Saturn</b>	<b>05-15-12</b>	<b>16:36</b>	<b>06:09</b>
Uranus	05-15-12	03:12	15:28
Neptune	05-15-12	01:14	12:37
Pluto	05-15-12	22:14	08:35

All Times Arizona Time

May 15 2012

**Sunrise: 05:24**

**Sunset: 19:16**



**Q1: April 29**



**Full: May 6**



**Q3: May 12**



**New: May 20**