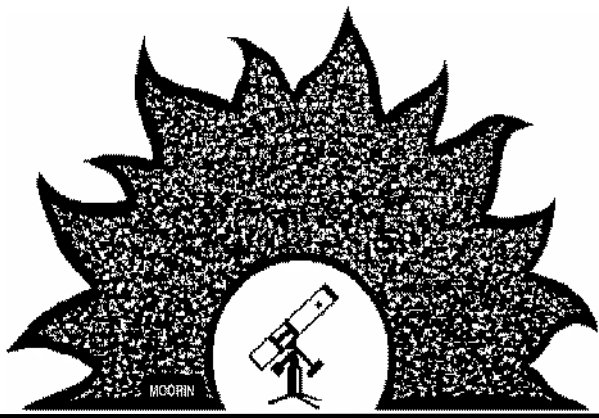




# PAStimes

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PHOENIX ASTRONOMICAL SOCIETY — ESTABLISHED 1948

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## Dr. Larry Wasserman To Be P.A.S. April Fifth Speaker

By Don

Dr. Larry Wasserman of Lowell Observatory in Flagstaff will be the next P.A.S. Speaker. Wasserman earned his Ph.D. From Cornell in 1973.

"Currently, Wasserman is working with the Deep Ecliptic Survey (DES). His primary interest is in measuring the astrometric positions of these objects and computing their orbits in order to meet the DES objective of computing meaningful orbits for at least 500 Kuiper Belt Objects. Wasserman and colleagues believe that it will take something like this number of

objects in order to understand the distribution of orbits contained within the Kuiper Belt. That is, how many resonances with Neptune are occupied, what is the ratio of objects in the various resonances, how many are 'classical', and how many are 'scattered'?"? [http://www.lowell.edu/Research/rstaff\\_wasserman.html](http://www.lowell.edu/Research/rstaff_wasserman.html)

We Asked Wasserman to give a brief summary of his talk and this is what we got. "Since I haven't done the talk yet this may not be exact, but...

"I expect to talk about the Kuiper Belt. What is the current state of our

knowledge of this region of the Solar System? After all, we have only known of the existence of the Kuiper Belt since 1992.

"I expect to talk about how we discover these objects and, equally importantly, how we try to avoid losing them after they are discovered. Astronomers have discovered about 1200 of these objects, but a significant chunk of them (maybe 400-500) are now lost. I will also discuss the structure of the belt and some of the dynamical implications, especially "resonant" KBOs and what they say about the early history of the Solar System."

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## March PAS Meeting Review

By Terri, Prez

There was some excitement around this meeting. Don Garnett, our schedule speaker could not make it to the meeting. He contacted me the day before and informed me he ended up messing up his knee, pretty bad, and was on crutches. So, with him not attending the meeting, Ed and I had to come up with a back up plan. So, first thing I could, I sent out an email asking if anyone would like to do a 10 minutes presentation on some topic. I got a few responses and the rest came from Ed. I also did a bunch of begging of some of them.

So, the meeting went this way. I opened the meeting with announcements, like usual. Then we turned it over to Jerry Belcher who did a few minutes on Rocketry and the rest of his time was on Galileo's Telescope. That was very interesting. Jerry knows his stuff about Galileo's Telescope. We hope to hear a full length talk on that topic in the near future.

Next we had Mike Marron. His topic was, of course, Meteorites to start with. But

then he branched off to the formation of meteorites and then to the formation of planets. What amazed the audience was the speed at which he covered more info than I'd ever seen put into one 10 minute talk. Wow, that was amazing. We might have him do a full length talk on the formation of the planets at a future PAS meeting.

Next scheduled was Casey Durand. She had some technical difficulties and didn't make it in time for her talk.

Then we scheduled the Comic Relief. Steve Snyder did a brief talk about "What NOT to do at the Telescope." He was funny. Remember, WE ARE ALL ADDICTS!

Then we gave the rest of the time, about 45 minutes to George Muncaster. George comes to us as a teacher at PVCC and also a teacher at SCC. He had a very awesome talk about "Sources of Astronomical Data." I found this to be very informative and interesting and he is an excellent speaker.

All of our speakers for the night were fantastic, interesting, and very excited about their topics. I wish to thank George, Mike, Casey, Jerry, and Steve.

After the meeting, we moved over to G-147. Casey had set up to do her talk in that room, as Murphy was giving her a very hard time setting up her talk for the Library. Those of you who left early didn't get to hear her presentation. So, Casey did it there and her topic was so interesting, I'm hoping to schedule her for a full hour presentation at a later date. The topic was "Neutron Beam Therapy." Below I have included some webpages to visit to find out more about this topic.

Over all the meeting was a success and it was that way because we had awesome speakers and I had the help of Ed Rosenthal, at the last minute, to find people to fill in and present something. Thank you so much Ed!

Casey's topic can be reviewed at [www.fnal.gov](http://www.fnal.gov). Check it out! \*\*\*

## PAS Is Invited to Stone Haven

Steve and Rosie Dodder

[sdodder@hotmail.com](mailto:sdodder@hotmail.com)

Visit my web site at

<http://www.stargazing.net/Astroman>

Please join us for our Spring Potluck Dinner/Star Party at Stone Haven Observatory, Saturday April 14th, 2007 from ~4:00 until whenever. Bring something to throw on the grill and something to share. Most times, we have dessert and chips covered, so salads, casseroles or main dishes are good. Bring a chair for everyone, and maybe a small fold-up table, since we're not used to a lot of company. This is an unusual date for us, since it's a very late Moon and also the SAC monthly star party, but there's a reason. Bring your telescope or binoculars, as our skies are similar to EVAC's Vekol Road site, (12 miles to the SW), but

with improvements. I'll have the dome open with the newly refurbished 10" F/7 Newt, plus the C8 in the roll off observatory if you don't feel like hauling your stuff.

Joe Orman will give a slide presentation of his photographs at dusk. He always entertains and promises many new slides, too. The big reason for our late party is this; the Pierre Schwaar 8" F/4 Motorized Binocular Chair will be functional, if not refined for this party. You can visit the ATM pages of my website for some more details. This has been a major project, taking nearly 5 years to complete. The views promise to be spectacular, but some finagling is required for each person, so patience is also required.

Well behaved children are welcome, as we also have a scale solar system model set

up in the yard, and hopefully the wide open space, (3.3 acres) can keep them busy. Badly behaved children (of all ages) are generally carried off by coyotes. ;-)

It may still be cold at night, so bring warm clothes, just in case.

You can email me for attendance and details, or call my cell phone number, which is on the map. I'd encourage you to call also the day of the party to check weather conditions. We'll be there unless it's actually raining, so don't let high clouds in Phoenix discourage you.

We hope to see you there, on this historic occasion! (I'm talking about the bino chair).

Contact Steve for more details, directions, RSVP etc. 602-390-0118\*\*\*

## SIGS - Advertising & Accessories

By Terri, Prez

At the February MOM, we were discussing starting some SIGS. SIGS = Special Interest Groups. What this is is a way for those with certain shared interests can meet, on a time and date other than at the PAS Meeting or the MOM, or even a Star Party, and get together to discuss a topic, share an idea, work on a project... etc. Well, we need to start up 2 of them.

The first one will be the SIG for ADVERTISING. So, our Advertising Sig will be formed of those interested in helping the promotion of PAS. We hope to be meeting at a central location and for those who can't meet, we can do it by email. So, for instance, Barbara wants to be part of the group. She can't come down on, let's say a Sunday, to Bookman's, so we would ask her to get into her email at a designated time when we are meeting at Bookman's and chat with her through email letting her

know what is being discussed here at the meeting. This way we have her input as well. William could bring the laptop, and anyone else who has one can do the same to help out. Then, because it is an advertising SIG, we could do the advertising by email/Internet right there at Bookmans. If you are interested in being part of this SIG, email or contact Terri today so I may start a list of who wants to be involved.

The other SIG we wish to start up is the ACCESSORIES SIG. This is a collection of folks who are ordering or wishing to order and possibly see in person, some of the items that, let's say the Orion catalog has. So, we would make sure the folks who were in this SIG were receiving the catalogs in question, and then those who also receive the Sky and Telescope Magazine or Astronomy Magazine could bring those with them, as well as any other sources of places to get Telescope or astronomy accessories. Con-

tact me for that SIG as well. We are thinking that at the date of the next Bookman's telescope class, we can meet 2 hours prior, cover both of these SIGS, and then do the telescope class afterwards. That would be in April sometime, so if you are interested, get your name with me quickly so that we can start receiving the needed catalogs to be looking at. And, also, could someone/someones, look up different locations to sign up on line to receive catalogs. I'd like to make sure I have every possible one on hand (minus the 2 magazines) when we do this SIG. This is NOT an ordering SIG. This is a discussion SIG. So, if you plan to order items, we'd have to discuss that at that time. Mostly, I want to talk over who has gotten a certain item, how they like it, maybe discuss filters and what they do, etc. Just general stuff and we share our knowledge on this. Watch in the calendar of events for when these SIGS will be.\*\*\*

## SMSS - Send in Your Ideas Today!

Ed and Dave, the designers of the SMSS, for which PAS has purchased one as of the last Meeting of the Minds, would like your input. They are looking for suggestion on how to improve, or enhance the Stations. If you made it to the last MOM on Feb 22nd, you were introduced to these really, awesome, Solar System stations. PAS is now the proud sponsor of one of the stations.

What is an SMSS? Have you been to Lowell Observatory and taken the Pluto Walk? Well, there will be 14 stations on the PVCC campus which include the Solar Sys-

tem, and other items, plus 2 informational stations. These will be erected with the purpose of being permanent. PAS has donated \$500 to one of the stations in exchange for having a plaque placed on the station that says "Donated by Phoenix Astronomical Society." The stations will be accurate in Size and Distance of the planets and contained on the PVCC campus. 2 informational pages will be included at each station that talk about the Solar System object at that location.

Ed and Dave would love input on the structure, the design ideas, and even the informational content of each station. If you wish to contribute ideas, please call or email Ed with those ideas. They will want assistance finding and creating accurate informational pages for these Stations, too. Your input is requested. Contact Ed by email at [ed.rosenthal@pvmail.maricopa.edu](mailto:ed.rosenthal@pvmail.maricopa.edu) or by phone at 602-787-6717 (school phone number). Your ideas are very welcome! \*\*\*

## Sally Ride Festival Review & Thanks 2/25

This was one awesome event! If you missed this year's event, please consider joining us next year. I will be thanking my PAS TEAM throughout this review a zillion times for making this day go smoothly.

It started with getting down to ASU early in the morning. While Ed, Bette, Bruce, William and I were setting up, someone remembered breakfast, so off they went to get some. Thanks to William, I had some breakfast brought to me. I was busy setting up the table. We had a nice display. Bruce took a bunch of photos for me, as I didn't have time to leave the table to do that. Thank you Bruce.



Photo by Terri

We had 3 long tables of handouts, with some really nice table cloths under them (the astronomy ones). One end was handouts, the other end we had games. I had decided to get the girls thinking this year. We do handouts every year, why not get them to think and give prizes for trying to get the right answers.

So, we had handouts across 2 tables and onto the third, but then we had the Solar System game that I had Bruce running. You roll a great big marble up the list of Solar System planets to try to get to Pluto. We had 3 Pluto winners during the day. Bruce was able to get it almost every time, but the girls had a more challenging time at it. For this game, they were given stickers and a PAS bookmark. The next game we were playing was the Constellation Tubes. I brought my set and all they had to do was look through 2 or 3 and try to identify a constellation. The NSN Star Chart was sitting near by and so they used that to find out which constellation it

was. For this, they got a NASA Space Place Calendar or some other item from NSP. I was doing that game and the next one as well. They were told to go down the hill, look through the telescopes, talk to the operators, and then come back up to me with 4 or 5 playing cards. They then played Poker with me. My hand, of course was the lowest anyone could get in poker, so that every one playing the game was a winner. This worked well. We had put stickers on the back of the cards with our club info and website, so that if the cards didn't come back to us, it would still do the advertising portion. We started out with 4 decks of cards, and by the day's end, we were down to 2 decks. For this prize I used the Astronomy Magazine insert we acquired about the Messier Marathon. And then, we also did the PAS Survey.

In exchange for a completed survey, I gave them the Night Sky Magazine. We had a few of those turned in. There really wasn't much time to take a survey and answer questions.

I would say that in total we saw no less than 1,000 people this year. 600 or so were the girls attending the event. These girls were in 5th - 8th grade. I would guess that the rest of the folks were siblings of the girls, and parents. It was a very busy day!

Up at the table we had Bruce running the Solar System game, and my parents, Ed and Bette Wurst keeping the table organized and straightened out. John Pulis was doing his very great job of getting folks to put their email address on the contact page so that we have a few more

people on our Digest list. And we had Jewel Schuler (Che's Wife) with us. That was a treat. She was watching over a lap-top display that Chet had set up on the table showing the Mercury Transit. That was really nice. I would love to see that at the PAS Indoor Astro Event on April 12th.



So, Jewel kept that going. And the other 2 wonderful people we had help us were Denise & her daughter Niya Stephenson. Denise took over the constellation tubes and Solar System game for a while part way through the day. Niya was so interested in everything, we let her enjoy the day. She spent hours with Mike.

We were offered lunch around 1pm. Bette, Ed and Bruce took off to get lunch for the table crew. Everyone else grabbed their own. There was bottle water, chips, and sandwiches. They were ok, it kept us going.

I wish to thank Sue for running between the PAS table and the viewing grassy area to take cards down to the team. She did a splendid job of keeping everyone with cards for the poker game.

Then, down in the grassy area, we had Mike (1) set up with his meteorites and posters. He was very busy and he was 1 of the 5 cards the girls could get for the poker game. We had Rod & Sue (2) with their Canopy down there showing the sun through their Solar scope ( the awesome scope I hope to own one of some day). We had Leah (3) with her solar filter and later the moon. We



Photo by Terri

had Don(4) doing the Sun. And Chet (5) had his Solar Spectrascope box with him. The day offered the Sun, Moon and Venus, but there were clouds later in the day that may have not been agreeable with viewing Venus.

The candy bowl was the favorite of some of the girls. Every year, after collecting candy from restaurants and other sources, I bring the candy bowl. This year it was filled up with more candy than any previous year. We let them take as much as they want, and then at the end of the day, Bruce tries to get anyone passing by to take the last of it. Now what's funny about this year is that there were several stands around us who had candy. And as they were leaving they asked if we wanted it. I told them, put it in my bowl and we will get it out to the girls. So, they did. We got tootsie rolls added to the bowl and chocolates, etc. We just became the candy bowl collection. The other stands all packed up earlier than we did. We hung on till closer to 4. We should have stayed open till 4:30, as the time between 4 and 4:30 is when the last of the kids come around, and i felt bad because we had packed up (I forgot to stay open and was really tired by that time), and they didn't get their prizes for the poker game. Everything was put away. I started cleaning up for the purpose of just getting organized, but then, i was on a roll, fitting things into the boxes, hoping to leave with less boxes

than we came with, but that didn't work. We gave out a ton of handouts, but still had a lot going home with us.

Over all, the people were awesome, the volunteers were fantastic, the day went by very fast, as there wasn't time to think much when we had the crowds. Mike though the lost one of his meteorites, but soon found it. We had a few suggestions going around. Leah thought it would be good to make the poker game more like the treasure hunts. She thought of making a list of people participating and have them check off that the girls saw the item, instead of having cards to pass out. Maybe for next year we can consider this idea. The problem I was having with the idea is that I didn't know who was exactly attending. At the last minute i had of our Team cancel. So, to do that, if someone says they were going to attend, and I made up the page to do the treasure hunt version of the poker game, we'd have to be sure that everyone who said they were coming, does. No one would be able to cancel. Which is usually what happens. We usually get everyone who RSVP'd to be there. Not this time. But, I do like the idea because then we can play Poker or Black Jack or some other card game that is brief, one round of it and be sure the House looses each time. So, I may consider that for next year. Another suggestion was that the music was too loud, so Sue and I took a walk over and asked the DJ to turn it

down. We can't teach over the loud music. He agreed to and the rest of the day was a lot better for us. Another suggestion was given by Bruce having to do with the Solar System game. He said that we designate which prize is for which game. Well, I didn't do that this time because I didn't really have enough prizes for all the games I was running, so i figured we'd go with the flow and adjust as needed. But this was a good suggestion. I'll work on that for next year. Another really good suggestion we ought to consider is one I've also gotten from Jerry Belcher, and that is that PAS should invest in their own Canopy so that when people who have canopy's cancel coming to an event, and we are counting on them to be there, that we have the PAS one to set up and hide under. So, at the next MOM we will discuss the purchase of a very good EZ-UP. We want something super simple to put up and take down and that stores as small as possible. Since Barbara and Rod have one already, we'd probably have someone who doesn't have one store it for the club. It has to be accessible to those needing it for events. It definitely is a life saver when doing daytime events.

I wish to thank all my volunteers. You all did a splendid job, we worked together to make the day very fun for all who attended. In a separate article you will find the results of the surveys. Thank you for all your help! \*\*\*

## Sally Ride Survey Results 2/25

By Terri, Prez

At the Sally Ride Festival, 3 wonderful people (Sejal, Miereille, and Kay) took the PAS Survey in exchange for a Night Sky Magazine. Below are the suggestions from those surveys. Favorite activity?

"Telescope," "Solar Spectrum" (done by

Chet), "Solar Scopes." What can we do to improve these activities? "Tell more people." "Positive comments were made in general about the activities. Thank you for your input. \*\*\*



Photo by Rod

## Bookman's Telescope Class March 18 Review

By Terri, Prez

Hey, this was a great class. We had one RSVP and they showed up. I want to thank Dave Rice for joining us that day! I wish to thank Don, Mike, Kevin, John for showing up to help out. Dave was looking for help with how to Culminate his Telescope, and since he had one similar to Don's, Don took over helping him do that. They had a good discussion and then Dave joined the rest of

us in our discussions. Then, after the culminating, Mike took over with meteorites, and we all worked on a list of what topics and places i should contact to have catalogs sent to my home for the Accessories Meeting we are having on May 13th. We had a good time and we hope Dave found it useful and fun as well. Thank you TEAM for attending. \*\*\*



# Anthem School Star Party March 16 Review

By Terri, Prez

What a blustery day this was. I wish to thank those who drove up to join us on this day. Not only were we fighting wind, but we also had the hot sun on us. I heard later that evening that this was the hottest day so far 99 degrees. No wonder we were all roasting. Thanks to Rod & Sue, Steve Palmer, Don, Mike and Matt, this was a successful star party. We had a bunch of fun activities for the kids. We used the playing cards this time, like we had previously at the Sally Ride event. We also did the constellation tubes, and I had planned to do the demo on the Moon phases, but the



Moon was no where in sight. The day was very good though. I'd say the majority of the school, at least 300 students and their families stopped by the table. We did a bunch of activities and everyone left with a prize. This was, however, the first time that the HOUSE didn't lose as it was supposed to when playing the card game. I actually

had kids, 2 of them, come by with less in their hand than I had for the poker hand. Wow, we have to edit that, for sure. I think we have too many low cards. So, what I did, and their parents thought it was very funny, was, make my higher number leave (I think it was a 7), and so that made them win. I didn't expect that. I do wish to thank Bob and Cindy for inviting us up to the school. Along with our display, there was Mad Science, the Fire Department, a bunch of critters like snakes and reptiles, etc, and much more in activities for the kids to do that day. We really enjoyed it. And thanks goes to who ever supplied the cookies and bottled water. That water was a life saver. Thank you so much. Thank you to Rod for bringing his canopy. We had a good time. Oh, and I must also mention that we got the honor of staying an extra couple hours due to a 3 car pile up south bound on I-17 blocking our route home. So, the TEAM went to dinner at a Mexican place called Nueva Pinata. I wouldn't recommend it due to the cost, and the crowd, however the portions were good and so was the food. The service was not good due to having 7+ people at our table. They knew they would get their tips so the service was not there. But, the TEAM members made the best of it and because of the company (the TEAM) the dinner was good. Good food, good friends, good times. We finally left to return home and unload the vehicle. I was sun burnt, over heated, and under hydrated, but I had a good time. I do hope the rest of the TEAM did, too. \*\*\*



## Orion Telescopes & Binoculars Big Sale

By Terri, Prez

In the current Orion catalog, they have a huge sale. 30% off of 75+ items. You can view this on their website as well, if you don't already get their paper catalog. Some really good deals is the Zoom Eyepiece (page 58). Some of us

already have it but for those who don't, it is an awesome eyepiece for viewing at public star parties. Not too expensive, yet gives good eye relief. And the other item Jerry wanted me to pass along is the Star Diagonal. These star diagonal has 99% light reflectivity. They are called Orion Enhanced Mirror Diagonals & Dielectric

Mirror Diagonals (page 65). If you don't have a current diagonal that is giving you plenty of reflectivity, you might consider picking up one. They are reduced in price which makes it a good purchase. Check it out. It may be worth a purchase. Phone number is 800-447-1001. Sale ends Mar 31st. \*\*\*

## Check Out the Resources At The IDA

By Barbara

Since the Club now belongs to the IDA we need to let everyone know that they can go download the latest IDA newsletter issue #66 at <http://www.darksky.org/news/newsletters/>.

The newest one for Fall (they seem to be a season behind) is not quite up yet. I only briefly scanned it (issue #66) while getting ready to print it, but it looks like a good one - very informative.

Also make sure that everyone knows

they have free rein to use IDA resources to combat the cancer that is light pollution in their own little space on planet earth.

"Remember - Save a star, kill a light" or at least use the right light.

# Early Bird Gets the Worm

## or “Black Hole Breakfast”

By Dr. Tony Phillips

We all know that birds eat worms. Every day, millions of birds eat millions of worms. It's going on all around you! But how often have you awakened in the morning, stalked out in the dewy grass, and actually seen a bird having breakfast? Even though we know it happens all the time, a bird gulping a worm is a rare sight.

Just like a black hole gulping a star...

Every day in the Universe, millions of stars fall into millions of black holes. And that's bad news for the stars. Black holes exert terrible tides, and stars that come too close are literally ripped apart as they fall into the gullet of the monster. A long burp of X-rays and ultraviolet radiation signals the meal for all to see.

Yet astronomers rarely catch a black hole in the act. “It's like the problem of the bird and the worm,” says astronomer Christopher Martin of Caltech. “You have to be in the right place at the right time, looking in the right direction *and* paying attention.”

A great place to look is deep in the cores of galaxies. Most galaxies have massive black holes sitting in their pinwheel centers, with dense swarms of stars all around. An occasional meal is inevitable.

A group of astronomers led by Suvi Gezari of Caltech recently surveyed more than 10,000 galactic cores—and they

caught one! In a distant, unnamed elliptical galaxy, a star fell into a central black hole and “burped” a blast of ultraviolet radiation.

“We detected the blast using the Galaxy Evolution Explorer (GALEX), an ultraviolet space telescope,” explains Gezari. Her team reported the observation in the December 2006 issue of *The Astrophysical Journal Letters*. “Other telescopes have seen black holes devouring stars before,” she adds, “but this is the first time we have been able to watch the process from beginning to end.”

The meal began about two years ago. After the initial blast, radiation diminished as the black hole slowly consumed the star. GALEX has monitored the process throughout. Additional data from the Chandra X-ray Observatory, the Canada-France-Hawaii Telescope and the Keck Telescope in Hawaii helped Gezari's team chronicle the event in multiple wavelengths

Studying the process in its entirety “helps us understand how black holes feed and grow in their host galaxies,” notes Martin.

One down, millions to go.

“Now that we know we can observe these events with ultraviolet light,” says Gezari, “we've got a new tool for finding more.”

For more on this and other findings of GALEX, see [www.galex.caltech.edu](http://www.galex.caltech.edu). For help explaining black holes to kids, visit The Space Place at [spaceplace.nasa.gov](http://spaceplace.nasa.gov).

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

## Volunteers Needed for School Starparties

We Still need volunteers for these school star parties Please contact Terri if you can help.

March 30

Friday 6 PM to 10 PM

Set-up at 5:30 PM

Ahwatukee Foothills Montessori Center

3221 E Chandler Blvd,  
Phoenix, AZ,

April 18

Wednesday 6 PM to 10 PM

Set-up at 5:30 PM

Chaparral High School  
6935 E Gold Dust Ave  
Scottsdale, AZ 85253

April 25

Wednesday 5:30 PM to 9 PM

Set-up at 5

Porfirio H. Gonzales Elem. School  
9401 W. Garfield St  
Tolleson, AZ 85353-1606  
94th Ave and Van Buren

May 2

Wednesday 6 PM to 9 PM

Set-up at 5:30 PM

Arrowhead Elementary School  
3820 E Nisbet Rd  
Phoenix, AZ

May 15

Tuesday 5:30 PM to 9:30 PM

Set-up at 5 PM

William T. Machan School  
2140 E. Virginia Ave  
Phoenix



*In this artist's concept, a giant black hole is caught devouring a star that ventured too close.*

# Sedona Messier Marathon 2007



This is the view at sunset for our Messier Marathon 2007

Text by Rod and Barbara

Photos by Rod

Well the day was finally here, Saturday morning and the 2007 Messier Marathon. Sue and I arrived at the Sedona Marathon Site around 1:00. Scotty and Barbara had just arrived and were starting to set up. We unloaded our things, and set up our canopy next to theirs. That way we had a large sun shade. The temperature was 75°. Which for me was a little warm, but that was what I was hoping for, that would make the night temp stay warm, well for a while any way. We set up the tent, grabbed a snack, and sat around and talked for a little while. Adam from Sirius Looker came over and greeted us. He told us that he was still there from Fridays MM. He said they only had about 8 to 10 other vehicles there on Friday. He said that the night was just perfect, clear, and steady. One of the better nights that he had seen in a while, and of course that's the way it is when members from "The Phoenix Astronomical Society" show up, the clouds always roll in.

We what the heck, were already here and if like in the past most of the time when the sun goes down, the clouds usually clear out. Well for us they moved out, and in, and out, and in, all night long. The seeing was not real good; there was a lot of turbulence in the air. I figured with all the clouds that the Marathon was a bust. So I just started to finish my Messier list that I had started last year. With all the clouds moving in and out, I did manage to finish my Messier list with all 110 objects, but not for the Marathon.



Rod, Sue, Scotty & Barb's campsite.



Adam's campsite and his neighbors.

From Barbara:

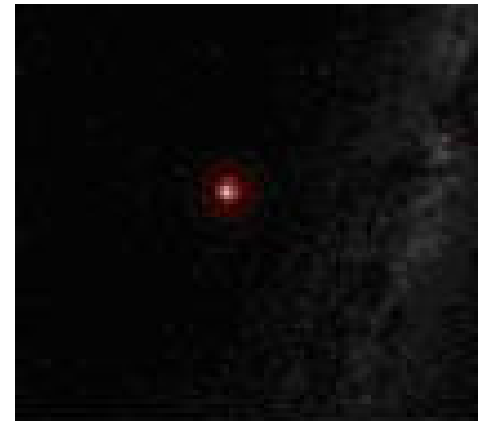
Thank goodness Rod and I remained optimistic because it turned out to be one of the best observing nights of my life. The sky was patchy clouds most of the time, with plenty of holes to look through and at times it was perfectly clear at the zenith. The sky was quite steady, I was able to split the very close double star, Izar (Epsilon Bootes), only 3 arc seconds separation and there it was the beautiful pale yellow of the primary so close to the small ice blue secondary with a definite void between them. I worked on my Caldwell list till about 5:30. When I started writing my notes with my eyes closed I knew it was time for a nap. Beside the sky was beginning to brighten. I had managed to get 10 objects, 10 beautiful amazing and faint objects. Some of which are still visible in my mind's eye. There was this one galaxy that was so perfectly visible that if you blur the picture in my Caldwell book only slightly you will have the view I saw. I also looked at some old favorites, like M57 the ring nebula and I actually saw some color - I blinked and wiped my eyes because I thought - No way!, but there it was subtle color in the eyepiece. At Dennis's urging I looked at a planetary nebula in Hydra that he was showing Rod how to find. He said power up on it, it can take it. Boy was he ever right! I could see hints of the twisted inner structure and it had a beautiful blue-green color. It was such an amazing night.

When can we do it again!

Barbara Hartman

As you can see from the photos above the afternoon was a little cloudy. But once the sunset it did start to clear a little. By around 9:00 it was clear enough to see some deep-sky objects. Dennis showed up around 11:00, and asked me if I wanted to see a really cool thing. He showed me approximately the area to look in; you're looking for

a red star. The star is red because it is one of the 55 carbon stars in our galaxy. The star is just to the lower left of "a" alpha Hydra, or Alphard. He also said that "Ghost of Jupiter" is in the same area. If you want to find it, it's located just below Mu Hydra (u) less than 2 degrees. After a little looking to the area he was pointing, I found it, what a great view. It looks almost like M-57 the Ring Nebula in my scope but a lot smaller. Look real good and it, it really does look like a miniature Jupiter. I couldn't find the carbon star so Dennis took hold of the scope and after a little looking, he spotted it, what a great view, it looks like a plane way off in the distance with its red light on. Now after looking at the crazy little star, I am almost inclined to start my own list for carbon star



This is about the actual size of the carbon star that I viewed with a 15mm eyepiece; this is the actual color of what I saw. Still a beautiful site.

viewing. Even this little star was quite hard to find, the view was just awesome.

Next time I get in the dark, I think it will be worth my while to try to find some of these little know wonders of the sky.



Sorry about this photo of Barbara and Sue, it was getting a little dark and I wanted a shot before it got to dark. It's a little blurry

but what the heck, it's a shot. You can see in the back ground some of the others that were out there with us. All in all it wasn't a bad night. Even around 3:00am the weather was only about 45-50°. It was chilly not cold. That was the best part. I finally hit the sack about 3:30, getting up at 4:00am and staying up till 3:30 was a little tough, but it was fun. Next year we need more of you out there. Barb and I are talking about doing a deep-sky observing campout session near Happy Jack, if you're interested drop us your e-mail and let us know you want more info, and when the time gets near, we'll keep you informed.

Rod Sutter

## Sky Atlas Deadline

Mar 31st is the deadline to let Terri know you want a copy of the Sky Atlas. Please contact her via phone or email right away so you do not miss out on getting your copy. This little atlas is really portable, easy to read, and has a close up view of the night sky on each page. I will be placing the order shortly after the end of March. Get your order in today! Makes a great gift for those observing friends you have who have every other more expensive viewing chart. Barba-

ra has found a way to cancel the shipping on the order, so the expense will be \$19.99 less 10% and no shipping. Don't forget tax. I am placing the order when we have all the money in. So, shortly after the end of March, I will call about the order, find out the grand total based on the number of books being bought, divide it evenly among the purchasers, and then collect from them BEFORE sending in the order. If you want this item, let me know today! \*\*\*

## Special Meeting to Amend Constitution

By Don

PAS is holding a special meeting, to make several amendments to our constitution, Thursday April 26. The purpose is to correct problems with the Board of Directors, change the way directors positions are created and eliminated, allow summer meeting and to allow PAS to call meeting by email. The portion of the Constitution to be amended follow with the words to be eliminated indicated by ~~Strike thru text~~ and additions as ***Bold Italics***

### ARTICLE 2: Officers and Duties ***And Board of Directors***

e. Host ~~*And/Or Hostess*~~: The Host ~~*And Or Hostess*~~ shall be present before the start of each meeting to greet guests, assign name tags, ensure the comfort of attendees, and generally facilitate a relaxed and social atmosphere.

***F. The above named officers shall constitute the entire Board of Directors. The directors named in Article 4 shall not be members of the board of directors. The Board of directors shall have either five or six members***

### ARTICLE 4: Directors and Duties

a. Directorships: These positions shall be created or eliminated, ~~by amendment~~, as deemed necessary by the ~~Officers~~ ***President*** to accomplish specific functions essential to the operation of the Society. Directors may be nominated by any Officer, and shall require approval by a simple majority vote. The term for a Director is one year. There shall be no limit on the number of consecutive terms served. Should a Directorship be vacated, the President shall act to either fill or eliminate that Directorship, or delegate its duties in accordance with Article 3, paragraph f.

~~b. Facilities Director: The Facilities Director shall ensure that the Society's meeting place is open and prepared for monthly meetings, provide audio-visual support for the guest speaker, manage the storage and distribution of Library materials, and arrange secure storage of Society property.~~

~~c. Equipment Director: The Equipment Director shall hold and maintain the Society's telescope and accessories, and make them available upon request to members of the Society.~~

~~d. Homepage Director: The Homepage Director is responsible for maintaining a website for the Society with the goal of increasing visibility and access. The content of the site shall be coordinated with both the Editor and President.~~

~~e. Library Director: The Library Director shall hold the Society's collection of books and other materials, and make them available upon request to members of the Society. The Library Director shall maintain a current list of these materials, updated as necessary, and distributed to members at least once each year.~~

### ARTICLE 5: Meetings

a. Regular Meeting: These shall normally occur on the first Thursday of each month ~~from September through May, inclusive, (June, July and August meeting may be canceled by the Board)~~ beginning at 7:30pm and ending at 9:30pm, with the first half hour ~~allotted, if needed, to Society business.~~ Variations on this schedule are permitted, provided advance notice is given to all members.

c. Special Meeting: Should the need for an additional meeting arise, a Special Meeting may be called by any Officer or shall be called upon written demand signed by six or more members of the Society. Announcement of all Special Meetings shall be made through the newsletter or by individual contact, ***or by electronic (email) means***. Such notice shall give a summary of all matters to be considered and acted on at the Special Meeting. No other matters except those for which summary notice has been given shall be considered or acted upon at the Special Meeting. If deemed practicable by the President, this special business may be accomplished at a Regular Meeting.

## Observing Tips By The Prez

### OBSERVING TIP

In the telescope world, size matters. The aperture of the telescope (the diameter of your telescope's main lens or mirror) determines how much you will see. Larger scopes will see fainter stars and more details. \*\*\*

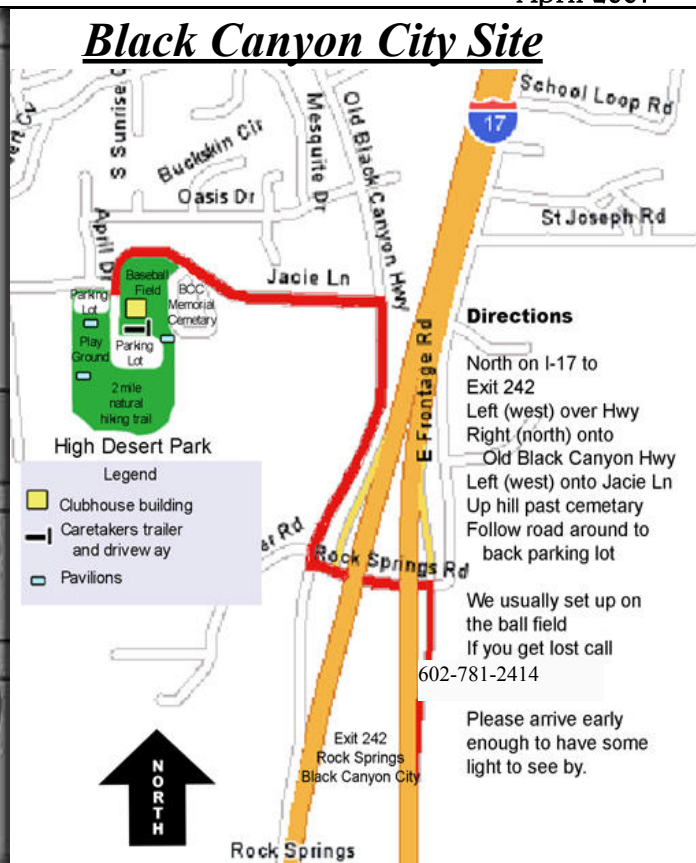
### NAKED EYE VIEWING FOR APRIL

At dusk on the 19th, Venus will be shining above 2 star clusters: the V-shaped Hyades and the dipper-shaped Pleiades. And along with that, a 3 day old crescent Moon hangs between Venus and the Pleiades. \*\*\*

### APRIL METEOR SHOWER

The Lyrid Meteor Shower occurs during

the predawn hours of the 23rd. The waxing 6 day old crescent Moon will be in the sky on that night until it sets around 2am. The Lyrid radiant will be about halfway up the eastern sky. The meteor count should increase as the radiant rises, with a count of 12+ Lyrids per hour. \*\*\*



|                       |                        |                                                            |                                                                                                                                                                                                      |
|-----------------------|------------------------|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| April 5<br>Thursday   | 7 PM to<br>9:30 P.M.   | Paradise Valley Comm. College                              | PAS General Meeting Larry Wasserman, Lowell Observatory "Kuiper Belt Asteroids"                                                                                                                      |
| April 6<br>Friday     | 6 PM to<br>9 PM        | Arizona Science Center Heritage Square                     | ASC Adult's Night Out *** Volunteers Needed *** RSVP with Don Boyd to attend or to help out. * Weather Permitting *                                                                                  |
| April 7<br>Saturday   | Sundown to<br>Moonrise | High Desert Park Jacie Ln<br>Black Canyon City, AZ 85324   | PAS 3rd Quarter Moon Star Party All are Welcome! \$2 per car donation request. RSVP with Barbara Hartman to attend. * Weather Permitting *                                                           |
| April 12<br>Thursday  | 7:30 pm to<br>9:30 pm  | Paradise Valley Comm. College                              | PAS Indoor Astronomy Event Get the Flyer for this Event All are Welcome! *** Volunteers Needed *** RSVP by phone at 602-561-5398 or email Terri                                                      |
| April 13<br>Friday    | 7 pm to<br>9 pm        | Reach 11<br>19224 N. Tatum Blvd. Phoenix, AZ               | City of Phoenix Parks Star Party/Camp-out *** Volunteers Needed ***<br>*Private- Only for children enrolled in the WOW program* Please email Chet Schuler if you can help out. *Weather Permitting * |
| April 14<br>Saturday  | Sundown<br>till ?      | High Desert Park Jacie Lane<br>Black Canyon City, AZ 85324 | PAS Deep Sky Star Party All are Welcome! \$2 per car donation request. RSVP with Barbara Hartman to attend. * Weather Permitting *                                                                   |
| April 14<br>Saturday  | Sundown to ?           | Stonehaven                                                 | SAC Potluck Star Party                                                                                                                                                                               |
| April 18<br>Wednesday | 6 pm to 10 pm          | Chaparral High School                                      | Chaparral High School Star Party *** Volunteers Needed *** See Article page 6                                                                                                                        |
| April 19<br>Thursday  | 6 pm to 10 pm          | Paradise Valley Comm. College                              | PAS/PVCC Public Star Party *** Volunteers Needed *** Planet Quest Telescope Treasure Hunt (hunt for the elements that form planets) RSVP with Rod Sutter                                             |
| April 21<br>Saturday  | 10 am to<br>5 pm       | Arizona Science Center<br>Heritage Square                  | PAS Astronomy Day At Arizona Science Center *** Volunteers Needed ***<br>RSVP with Rod Sutter to attend or to help out                                                                               |
| April 21<br>Saturday  | 5 pm to<br>10 pm       | Anthem Community Park<br>Anthem, AZ                        | PAS Astronomy Day At Anthem Star Party *** Volunteers Needed *** RSVP with Rod Sutter to attend or to help out. * Weather Permitting *                                                               |
| April 25<br>Wednesday | 7 pm to<br>10 pm       | Porfirio H. Gonzales Elem. School                          | Porfirio H. Gonzales Elem. School Star Party *** Volunteers Needed *** RSVP with Rod Sutter * Weather Permitting * See Article page 6                                                                |

For more details and the latest information please visit the events page of our website

[www.pasaz.org](http://www.pasaz.org)

## 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 Editor who will forward them to the Treasurer.

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

To:

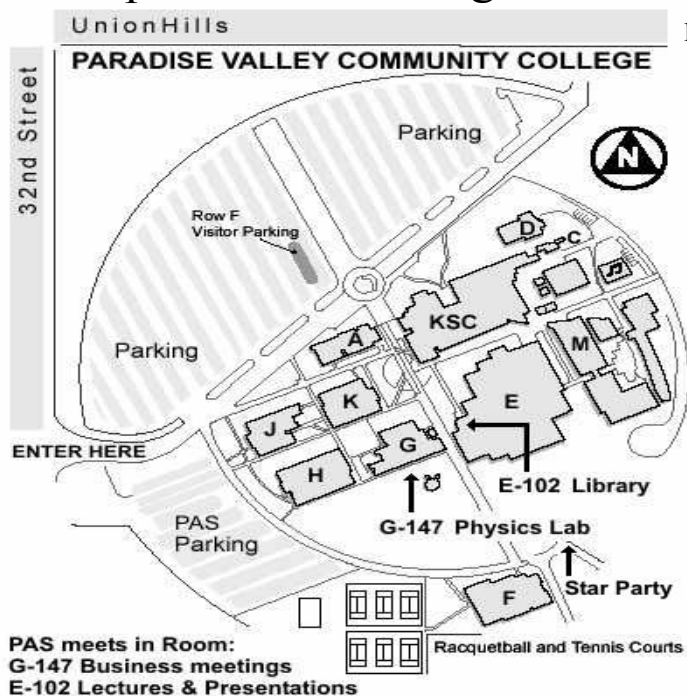
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{MM:Address Line 1}  
{MM:City} {MM:State} {MM:ZIP Code}

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](http://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.

### Upcoming PAS Meetings

April 5: Larry Wasserman, U.S. Geological Survey "Kuiper Belt Asteroids"  
May 3: Steve Dodder "Cataclysmic Variable Stars"

### Map To PAS Meeting Location



April 15 2007

Sunrise: 5:57

Sunset: 6:59



Full: April 18



Q3: April 26



New: April 4



Q1: April 11

### Phoenix Astronomical Society Contact Info

|                                 |                 |              |                                                                                |
|---------------------------------|-----------------|--------------|--------------------------------------------------------------------------------|
| President                       | Terri Finch     | 602-561-5398 | <a href="mailto:President@pasaz.org">President@pasaz.org</a>                   |
| Vice President                  | Matt Kohl       | 623-221-2261 | <a href="mailto:VicePresident@pasaz.org">VicePresident@pasaz.org</a>           |
| Treasurer                       | Mike Marron     | 480-488-3031 | <a href="mailto:Treasurer@pasaz.org">Treasurer@pasaz.org</a>                   |
| Newsletter Editor               | Don Boyd        | 480-963-7189 | <a href="mailto:Editor@pasaz.org">Editor@pasaz.org</a>                         |
| MultiMedia Director / Librarian | Rod Sutter      | 602-971-9129 | <a href="mailto:MultiMediaDirector@pasaz.org">MultiMediaDirector@pasaz.org</a> |
| PAS Hostess                     | Amanda Sallas   | 602-547-2420 | <a href="mailto:PAHostess@pasaz.org">PAHostess@pasaz.org</a>                   |
| PAS Host                        | John Pulis      | 623-570-5308 |                                                                                |
| Webmaster / Dark Sky Advocate   | Barbara Hartman | 623-374-5364 | <a href="mailto:Webmaster@pasaz.org">Webmaster@pasaz.org</a>                   |
| P. R. Director                  | Steve Snyder    | 602-686-3334 | <a href="mailto:PRDirector@pasaz.org">PRDirector@pasaz.org</a>                 |
| WOW Contact                     | Schuler Schuler | 480-551-7066 | <a href="mailto:Chetsch@cox.com">Chetsch@cox.com</a>                           |
| Rocketry Liaison                | Jerry Belcher   | 623-328-9290 | <a href="http://ahpra.org/launches.html">http://ahpra.org/launches.html</a>    |

### Astro Events

April 8: Jupiter 6° north of the Moon  
April 16 Mercury 5° south of the Moon  
April 20 Venus 3° south of the Moon  
April 22 Leonid meteor shower  
April 25 Saturn 1° south of the Moon  
April 26 Regulus 1° south of the Moon