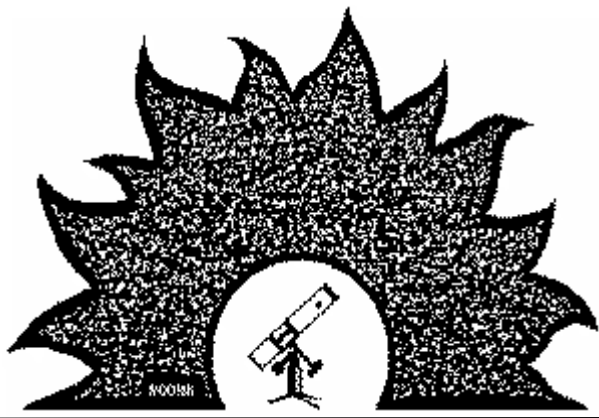




PAStimes

Phoenix Astronomical Society
www.pasaz.org

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PHOENIX ASTRONOMICAL SOCIETY — ESTABLISHED 1948

October 5 PAS General Meeting To Feature Steve Dodder

PAStimes is pleased to announce Steve Dodder of Saguaro Astronomy Club as our October Speaker. Dodder will be giving a talk entitled **Our Sun: An Overview**. The meeting starts at 7:00 PM with a half hour of socializing followed with announcements and a special vote to amend the constitution. Dodder should be starting his talk by 7:45. After his talk there will be a short question and answer period. Cookies and bottled water are usually provided by PVCC and we really appreciate them providing us a room and such fine facilities.

We asked Dodder for an introduction of either himself or his talk and this is what

we received. "Steve Dodder is an advanced amateur, dedicated to sharing his passion for the skies with others. He and his wife Rosie are infamous at the Grand Canyon Star Party, showing the Sun during the day and the stars far into the night since 1999. From his observatory outside of Maricopa, Arizona, he visually estimates variable stars, is a member of the Gamma Ray Bust Network through the A.A.V.S.O and NASA, holds star parties for youth groups, scouts and home schoolers, and does a lot of scope building. One of his current projects, the Bob Goff Memorial Spectroheliocope at Stone Haven Observatory, is in the de-

sign phase. Observing the Sun, our closest star, is one of his greatest joys, surpassed perhaps only by his joy at describing it."

We are looking forward to a very enjoyable evening. We hope to see you there.

Private Space Program

Received from James DeSantis

A man comes home from work and sees his neighbor building a rocket ship in his back yard. He asks him, "What are you doing?" The neighbor replies, "I'm building a rocket ship to fly to the sun." "Won't you burn up?" asks the now puzzled man. The neighbor replies, "Oh no, I'm going at night!"

4 Scopes showed the Night Sky at Amberlea school

Wednesday September 20 PAS held a Star party at Amberlea Elementary School in West Phoenix. The editor could not make this...but we have received 2 reports about this event.

By Sam Insana

We had 4 telescopes, and we showed many different objects. I showed Jupiter, M31 Andromeda Galaxy, M13 Hercules Globular Cluster, Gamma Andromeda double stars, and M57 the Ring Nebula. I explained each object to the many viewers and told them how far away they were and described them and showed them pictures of the objects in a field guide. The other 3 telescopes showed some of the above and even more objects. We had about 100 people, including students, teachers and parents. The wind died down about 7:30 PM, and the whole thing lasted from 7:00 PM until 9:00 PM. We were in a brightly lit area and they

could not turn out the lights. If they could, everything would have looked a little better. Mike showed his meteorites and everyone seemed to have a very good time. They thanked us and wanted us to come out again next year. One student said, something like "I've seen neat things like this on TV but seeing it for real is much better!"

By Jeff Hopkins

You missed a perfect night. There were NO clouds. A very gentle breeze with a just right temperature. I brought my 13.1" DOB. Jupiter was the first object already low in the SW. It showed nicely along with 4 moons. Next I showed Antares the giant red star in Scorpius. I explained how if it were our star the Earth's orbit would be far beneath the stars surface. Next was Vega a great contrast and the home of ET in Contact. Then onto Mizar in the handle of the

Big Dipper. Finally after much searching (stars were very hard to see with my naked eye and I didn't have my binoculars) I found M57. I could see no star in Hercules so M13 didn't stand a chance. To the East from the horizon to around 60 degrees the sky was very bright and NO stars could be seen so Andromeda was out of the question. I think future bright sky star parties should be around first quarter Moon so at least the Moon can be enjoyed. The brightness of the Moon will have no effect on the sky as the Phoenix light are much greater. All in all a great night.

Terri said. "I need to thank our wonderful Team who went down to Amberlea Elementary in the wind and had an awesome star party. I need to thank each person who attended: Chet, James, Jeff, Mike, & Sam. Thank you so very much!"

May 2006 PAS Meeting Review

We had an awesome meeting in May. We had a great turnout and a fantastic speaker.

We opened our meeting with Elections. As you can see from the list on the back of this newsletter, several folk kept their positions this year.

Terri is President again with her awesome Vice, Matt.

Mike took the Treasury again, and after the fantastic job he did last year, I hope he stays Treasurer for a long time. PAS could really use a good one.

Don Boyd became our new Editor. Check out this newsletter, he is doing an awesome job! Everyone gave him advice on

how to make it better than the past issues, and here is the October masterpiece. We are so glad to have Don as our Editor.

Barbara stayed on as Webmaster and if you haven't been to the site in a long time, you might want to check out the additions. Nice work on her part. She is very good at keeping things up to date and communicating with those who have the info she needs to supply to everyone on the website.

Amanda took the Hostess position, however, she got a job and may not be able to keep the hostess position. John Pulis is the back up Host, and will most likely fill in for her as needed.

Rod took over as A/V, but down the road a piece, he also became our Librarian. We hope to have an updated list of library contents to pass around so that PAS members may borrow from the library as they need to.

The meeting turned to Dan who did a 5 minute presentation on some really awesome art work.

The Bob Holmes took over as the speaker for the night. I really enjoyed his presentation about meteorites. There were 31 folks in attendance. You should have been there. Make it to our next exciting PAS meeting on Oct. 5th.! See you there!

June 15th Meteorite Field Trip To ASU Tempe

By Terri Finch

Wow! This was some field trip. You really missed it if you didn't get to take advantage of attending this one.

I set this up with Lora Blecher, our guide for the night. Lora took us on one wonderful tour. We do send our apologies for keeping her out so late that night but the info, the meteorites, the whole night was just so wonderful that some of us didn't want it to end!

So, let me give you a brief on what you missed. ASU, Lora's department, has the

largest university collection of meteorites. We started our tour with a brief slide show explaining the different types of meteorites. Lora did this presentation. Awesome! There isn't a better word for the whole night.

During this presentation we got to Touch a piece of Mars and a Moon rock. After the presentation, we took a tour of a special room where the meteorites are kept.

Lora Blecher was holding the Moon Rock, and Laura Mosier was holding the Mars Rock. In this meteorite room were what seemed like millions of meteorites, most were cataloged and stored away in safe

boxes, but some were not, and waiting to be cataloged and put away.

This was a most awesome evening. I'd like to thank Lora for the tour and the really fantastic evening. I'd like to thank my photographers, John Pulis, Steve Snyder, Leah Sapir, Rod Sutter & anyone else I missed mentioning. If you didn't make it to this tour, you might want to be sure to make it to the next one.

If you think you found a meteorite, you call 480-965-5734.

If you want to know more about meteorites visit the site: meteorites.asu.edu

METEOR SHOWERS

By Terri Finch

Yes, meteors actually do take showers! Just kidding. However, if you like a good show in a dark location with a bunch of really cool astronomers, you will want to attend the next three meteor showers.

The First one will be the meteor shower in October, the Orionids, which peaks on Oct 21/22 and we are holding that star party on Oct 21 at Spur Cross Ranch.

The next one will be November, the Leonids, in which it peaks on Nov 17/18 and we are holding that star party on Nov 18 at Mike's House in Carefree.

And the third star party / meteor shower we wish to see you at, in really dark skies, will be the Geminids in December, which peaks on Dec 13/14 and we are holding that star party at Mike's house in Carefree on Dec 16th. This is really cool, three meteor showers all in a row, and all in very dark Sky locations. You won't want to miss these! ***



Lora Blecher holding the moon Rock

Photo By Steve Snyder



Laura Mosier holding the Mars rock

Photo by Steve Snyder

SEPTEMBER'S MEETING OF THE MINDS REVIEW

We have an awesome meeting. We didn't have that many of us, only 12 of us, but the meeting went smoothly, except for 2 folks who kept chatting longer about topics than we were trying to allow. Thank you two for your input. You know who you are so I won't mention your names. Anyway, the meeting was productive. In brief, I wish to do a review so everyone knows what has been discussed and decided.

Officers exempt from Dues: This topic is in the air, however, it is a topic that needs to be addressed. We have a large sum of money donated last year to us by Matt Kohl and so the club is not financially burdened, as it was previously. So the topic that came up, based on having read something I got in email from EVAC, is that their officers and directors are given a reprieve from dues for the years they serve EVAC. Thus, anyone who serves for PAS in an officer capacity would then be able to skip paying dues either in part or full, for the year. Now, I can see why EVAC would do this. They were having trouble getting people to take officer positions. It is true, PAS has had this difficulty, too. Well, at the meeting we decided to leave it up in the air, and instead, inform the PAS members that we will be voting on this topic at the May PAS meeting. We need your attendance to vote as approved or disapproved, and we need more attendance between now and May at the Meeting of the Minds to decide if this will be for the whole

PAS dues, or maybe a partial amount. This change has to be marked in the constitution and so we have to have a membership vote on it.

We talked about and decided that all star parties that aren't able to be at BCC will now be at Spur Cross Ranch unless there is something really awesome happening and we change the location.

We talked about the very busy week of Oct 2nd, and chose James as our RSVP for the Wow star parties. I'll be sending out the announcement on that and we will see the change of that on line as we get things updated.

Another topic we talked about was offering a WINTER VISITOR MEMBERSHIP. Some of our members are only here 6 months of the year and would like to be part of PAS but they don't want to pay for the full year. So, we have decided we'd like to offer this up for a vote, at the next PAS meeting, that would be October's meeting, to decide if this would be a good change. It has to be changed on the dues sheet and will be brought up at the next meeting as an idea, with a show of hands. It doesn't have to be a constitutional change except for the wording in the constitution. So, here is what we came up with. We want to change the dues sheet to reflect the new offer, and the amount will be \$13 for Six months, starting the month they join, for electronic newsletter. If they get a delivered one, it will be \$16 for the 6 months. Come help us vote on this at the

October PAS meeting, prior to the Speaker.

And we had 2 more quick topics to mention. We are working on ways to make our star parties safer and more fun for others. So, we are seeking good pricing on glow sticks and red balloons. To find out what we want with those items, you'll have to attend a MOM and get the scoop.

And the last topic was about the Mercury Transit on Nov 8th and what day time activities we want to do. If you want to be involved in this event, you need to come to the next MOM and pick out a project to run that day.

I'd like to thank Don and Barbara for their research on maps to our star parties, and Matt for research on the Constitution requirements for voting on items, and I wish to thank Mike who said "I haven't been to the PAS website," which lead us to have Barbara take us on a ½ hour tour of the website. This not only showed everyone how wonderful our site is and what really awesome info we have on it, but it also gave us a chance to go through and see what things needed to be updated or changed. We worked on a list of items for change, and Barbara will take care of that next chance she gets, so watch for the changes to the site. You missed an awesome meeting and we wish to see you at the next one! ***

Articles By Dr. Dee A Must Read

PAStimes has received three new articles from her. We really appreciate Dr. Laurice Dee PH.D.. and her articles and would encourage everyone to read them.

As always the full text of them may be found on our website www.pasaz.org. They may be found on the downloads page by scrolling down.

The first is entitled *Pluto's Current Status: My Thoughts* and as the title sug-

gests, is her thoughts on the "demotion" of Pluto to dwarf planet status. As those of you who read her previous article on Pluto have surmised she is not happy about the demotion.

The Second is called *Glass Eye Studio* and is about a new idea for Christmas gifts. She wants it to be a surprise so we will only say that it involves the enjoyment of anything celestial.

The third is entitled *The Galileo Mission* and is about the 3 year anniversary of the end

of the Galileo spacecraft mission to Jupiter. The reason she wrote this article is the September 21 2003 is the day that Galileo plunged into Jupiter to end its mission. She points out in her article that the Solar System Ambassador Program was originally called the Galileo Ambassadors Program. Galileo was launched in October of 1989 Aboard the shuttle Atlantis and was a huge success and from it we learned much about Jupiter and it's moons.

Special Meeting to Amend Constitution

PAS is calling a special meeting as part of the regular October meeting to amend the constitution so that we can have a *winter visitor membership*. This would be good

for six months and would cost just over half of the regular membership.

This meeting would be before the speaker, and would be by show of

hands with 2/3 majority of those present needed to pass. There will be discussion on this before the vote

SEPTEMBER MEETING REVIEW

Did you miss this meeting? You should not have. We had a very good time. We started the meeting with me asking for help to get things done. I want to thank my helpers for that evenings' help.

Leah took over the 50/50 raffle and we had \$43 in the kitty. Sue won the pot, so she got \$21.50 and PAS got the other half. That was a lot raised for PAS. Thank you all for participating. Dan said he still holds his record of not winning the raffle. However, he must also remember that he almost always wins the Dart game at the Social. So, it evens out.

John was an awesome Host. He went around and got everyone to sign in. Now, I want to put out a quick reminder. Signing in does not say you are bound to be at PAS. All you are doing is letting us know you were there. If I already have your contact info, such as mailing address and email, all you need to do is put your name on the page so I know you attended the meeting. If you are new, give me the info one time, and all future times, just your name will be fine. The email address will be added to the Digest, and if you want to be removed from the digest after experiencing it for a week or so, please just ask. It isn't a problem to take you off the list. I do it all the time.

Sam volunteered to help with the book signing. I really appreciate Sam for doing this. He kept the book hidden from Dan, and we got as many signatures as we could that night and the night before at my home. Sam also led the collection of folks who were doing the mini presentations thanking Dan for his service to PAS. Then when we all had our say, Sam presented the book to Dan. I love this book. I want a copy of it when I leave office. Very nice book. I hope Dan enjoys it.

Steve was the one who fetched the sub. Ed called in the order and Steve went to pick it up. Thank you Steve for making the trip over to Walmart to get it. We all appreciate the food at the meeting. Speaking of Food, Ed and Dave also provided cookies and bottled water. And John brought a small batch of chips. Thank you all for your help with the food items.

Prior to the opening of the meeting, Joshua showed up with a Thumb Drive and asked to put the video on the screen. I told him he could, so we were watching UFO sightings that he caught on video. After the meeting concluded, there was 20 minutes left and I had him put it on the screen again for everyone to see and talk about.

So, we opened the meeting with a few announcements on what PAS does. I've written something up similar to this that was sent out to the Lost Members. I might do another one for the newsletter in the near future. So, I reviewed our meetings, our star parties, our out reach programs.

Jerry did a brief talk about upcoming rocket Events. The last weekend in March will be a 2 day rocket launch in Rainbow Valley. They are trying to make it into a 3 day event. If you are interested in attending, call Jerry Belcher so he can tell you more about it. In July there will be the Nationals in Las Vegas, Nevada.

Then Dan did a brief talk about the PAS Coffee Pot, and I asked him, because several of the folks there wanted to know this info, too, to review what it is his Astronomy Club in Anthem was doing and planning to do. So, he briefly went over some things about the club - Desert Foothills Astronomy Club. His astronomy club focuses on Combating Light Pollution. We hooked him up with Barbara, the PAS Dark Sky Association Liaison.

TRIBUTES: Sam came up first to do the Tribute to Dan. He talked about the fact that Dan has always been there to provide for the club in such things as the Holiday



Terri Finch, Our Prez.



Sam Insana presents Dan Heim with A token of the clubs appreciation.

Socials, the meeting locations, Star Parties at Heimhenge, the A/V and Podium needs for the club. Then we heard from John and Leah. Leah was telling us how, even though her husband has no interest in astronomy, he attended a meeting in which Dan was presenting the Moon and the presentation was so good that it impressed her husband. Bob came up and was telling Dan how he had Dan as his High School Teacher at Brophy and how much he admires him. Jerry talked about the Heimhenge Star parties and wished they could be weekly. And Sam returned to present Dan with a fantastic book we all voted would be a good one to give to Dan to show our appreciation. Dan came up after that and thanked everyone for their kind words.

Then we turned the meeting over to Dr.

Burstein. It was a Q & A session and some of the questions were way over the majority of the attendees heads, mine included. Mike was talking way up there. But Dr. Burstein did his best to answer the questions and it appeared the everyone there was enjoying the conversation. We had questions from Mike mostly, Kevin, Dave H., Dan, Bob, James & Leah. They were very good questions and we were all involved in the answers.

There were questions about Hubble, Pluto, Galaxies, the Great Attractor, Dark Matter, the Space Station, and more. Dr. Bursteins' current work involves Globular clusters in the Milky Way and M31 galaxies. He is studying compact ellipticals using the 24" tele-

scope in China.

And he was asked, "If there was one thing you would want to discover and be remembered for, what would that be?" And he said "Initial Mass Function - with that knowledge I can make galaxies." ***



Dr. David Burstein

PAS Holiday Social...Be There

Now is the time! yes, it is.... We are having the yearly PAS SOCIAL and it is right here in town! Just south of cactus on Cave Creek Road is the location of this once a year fun event.

What do we do there? This is your chance to get to know your fellow PAS Member and their families. Bring with you a food to share, a main dish, or desert, plus a drink to share (we need help with the drinks this year). This is a POTLUCK and so a food is requested, and if everyone who attends brings one drink to share, a 2 liter of pop, or bottled water, or coffee, tea, what ever, that will make it all the more fun. No Alcohol, please.

The other item you want to bring with you is the WHITE DWARF PRESENT. Yes, you will want to bring a few items with you. First, bring your exchange gift. One gift is required per participant in the game. So, if you and your spouse attend and both want to play the game, each of you needs to bring a gift to be involved. White Dwarf, what is that, you ask? Well, you've heard of a White Elephant? In that game you swap and steal gifts that people do not want.

In a White Dwarf, we have a similar swapping and stealing but you purchase an Astronomy related item you would want to own yourself. This could be a calendar, a game, some food snacks named with astronomy names, a toy, maybe a mug with something on it, a piece of clothing, anything you can think up that is creative and astronomy

related. Wrap it, disguise it, make sure no know knows what it is until it is theirs to open.

Bring the White Dwarf Gift to the party, and put it on the special table. There will be no limiting tags this year. If your gift is stolen, you can steal it back as many funny times as you like. The rules for the game will be in the January issue of the newsletter, so watch for them.

The other thing we'd like to see is several folks donating small items to the PAS Social that can be used as prizes. We will be having several games going on that night and the winner of the games gets a prize for winning. but to do that, we need donations of prizes. We are asking for about a \$10+ item for the next few prizes mentioned. A door prize is one prize we need. A dart board game prize, a pool table prize, we also need someone to bring a TV, VCR and DVD player for those wishing to watch a movie that night.

The movie will not be the main attraction this year, but will be available for those who wish to view. Several movies can be played that night if you wish. The plans for this are still being created. The only thing we have schedule for sure is the darts, the pool game, and the White Dwarf game.

The rest is still being planned. At the next Meeting of the Minds, we will be discussing more things about this event. So, you may want to come give your input on it. And we want to see everyone there! ***

'Year In Space' Calendar RSVP Required

By Terri Finch

Nov 1: Deadline to reserve your copy of the "Year in space" Calendar. At the last Meeting of the Minds, I got a few folks added to the list to order a Year in Space Calendar. If you'd like to get on that list, please RSVP with me right now!. I currently have 5 of 10 calendars RSVP'd. Remember, the goal is 10 calendars at a minimum. We save a couple dollars each that way. I have Barbara, Kevin, Terri, Rod and Sonny on that list. Anyone else? The deadline is sneaking up on us quickly. Tell me today if you want one. With a 10 calendar purchase, they will cost us \$10 each. Visit www.yearinspace.com to see what the calendar looks like or ask Terri when you come to any PAS event. She almost always has it with her. Then RSVP President@yahoo.com to reserve your copy. They make awesome gifts for Christmas, too. Remember, to get the club discount, Terri has to place all orders as one big order, so an RSVP & Cash will be required to receive one.

Nov 15: Deadline to pay for your copy of Year in Space Desk Calendar. Terri will be ordering them on Nov 20th so we all get them in time for Christmas. When you RSVP, Terri will let you know the current calendar count. If we reach 10 copies, the cost will be \$10/calendar. See website for more details www.yearinspace.com.

FIRST OF ITS KIND SUMMER INDOOR PAS EVENT

By Terri Finch

This was a spur of the moment event, with a week to plan it. We held this event on August 3rd at PVCC in our MOM's room G-147. The idea was to have a bunch of PAS members bring to this indoor event their expertise and share it with the public in one room, where a slew of activities were going on all at once.



The event itself was entertaining and fun to the PAS folk, but we only had a few public show up. I would like to thank Keith and his Son for joining us that night.

We had Barbara working with a demo on black holes with James assisting her. It seemed like Keith and his son liked this display a lot. Sue was observing the activities and thinking up ways to make it better for next time, I joined her on this.

Dennis Young helped out as well. He came down from Sedona and set up several interesting things. He had a telescope set up that showed the Demise of the Dinosaur. That was interesting. I liked it. He also showed us some laser light reflectivity items, and had many toys to play with including a remote control Mars Rover. Thank you so much, Dennis, for coming down to be with us that night.

Bob and Mike played with Meteorites all night. Ed helped by fetching PVCC info and calendars for everyone there. Don did photos of the event, Steve also did photos

and helped Barbara. John Pulis did some photos as well. Sue took over the Backyard telescope Tubes.

In all I think it was a success but needed more advertising. So, you will definitely want to attend the next special event. Watch for it to be announced. At the MOM we are discussing the next date and you might want to be involved in that decision. Thank you to everyone who volunteered and attended.



Creative Use of Barlows

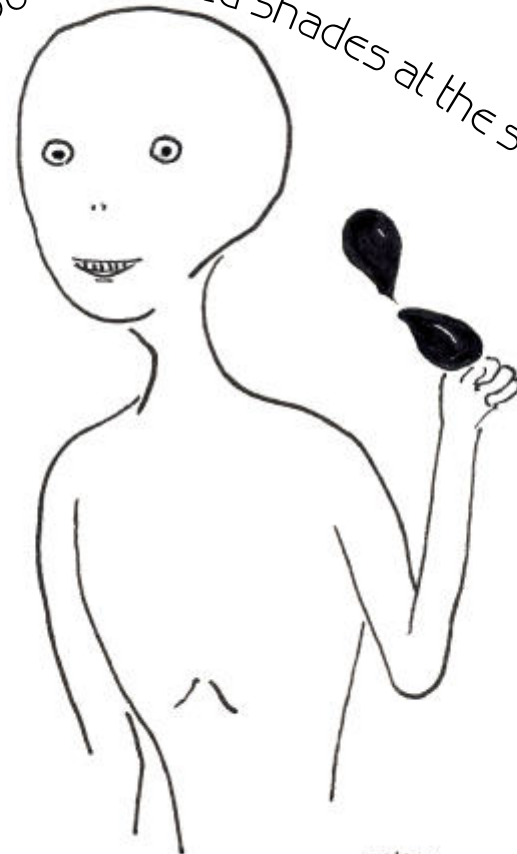
By Todd Gross

Many amateurs, especially ones who are new to astronomy, are still not aware that using a barlow creatively can extend their eyepiece collection significantly. Most scopes that use "star diagonals" will be able to reach focus if you place a barlow, such as a Celestron Ultima Shorty Barlow, before the diagonal, or after. Before the diagonal, the magnification will approach 3X depending on the type of eyepiece you use, after the diagonal, it is approximately 2X. When I go traveling, I take a 30 mm Ultima, a 2X shorty barlow, and a 7mm Nagler. That is it.

I then effectively have 30 mm, 15 mm, 11 mm, 7 mm, 3.5 mm, and 2.4 mm eyepieces, all with just 3 units in hand!

Many folks also aren't aware that extension tubes can be used to reach higher magnification without a barlow on an SCT. It is one of the few scopes that actually changes it's focal length based on it's focus position. You can in effect increase the power 10-20% by adding 2-5" ext. tubes. Similarly, if you view straight-through w/o a diagonal, you can decrease your magnification significantly. This can effectively turn a 12 mm eyepiece into a 10 mm eyepiece if you use a 5" extension. It's a good trick.

You don't need shades at the star party



KCH'06

KCH Cartoon is © Kevin Harcey and may not be reprinted with the explicit written permission of the Artist

Staggering Distance: So You Think Pluto Is A long Way

By Dr. Tony Phillips

Tonight, when the sun sets and the twilight fades to black, go outside and look southwest. There's mighty Jupiter, gleaming brightly. It looks so nearby, yet Jupiter is 830 million km away. Light from the sun takes 43 minutes to reach the giant planet, and for Earth's fastest spaceship, New Horizons, it's a trip of 13 months.

That's nothing.

Not far to the left of Jupiter is Pluto. Oh, you won't be able to see it. Tiny Pluto is almost 5 billion km away. Sunlight takes more than 4 hours to get there, and New Horizons 9 years. From Pluto, the sun is merely the brightest star in a cold, jet-black sky.

That's nothing.

A smidgen to the right of Pluto, among the stars of the constellation Ophiuchus, is Voyager 1. Launched from Florida 29 years ago, the spacecraft is a staggering 15 billion km away. It has traveled beyond all the known planets, beyond the warmth of the sun, almost beyond the edge of the solar system itself.

Now that's something.

"On August 15, 2006, Voyager 1 reached the 100 AU mark—in other words, it is 100 times farther from the Sun than Earth," says Ed Stone, Voyager project scientist and the former director of NASA's Jet Propulsion Laboratory. "This is an important milestone in our exploration of the Solar System. No other spacecraft has gone so far."

At 100 AU (astronomical units), Voyager 1 is in a strange realm called "the heliosheath."

As Stone explains, our entire solar system—planets and all—sits inside a giant bubble of gas called the helio-

sphere. The sun is responsible; it blows the bubble by means of the solar wind. Voyager 1 has traveled all the way from the bubble's heart to its outer edge, a gassy membrane dividing the solar system from interstellar space. This "membrane" is the heliosheath.

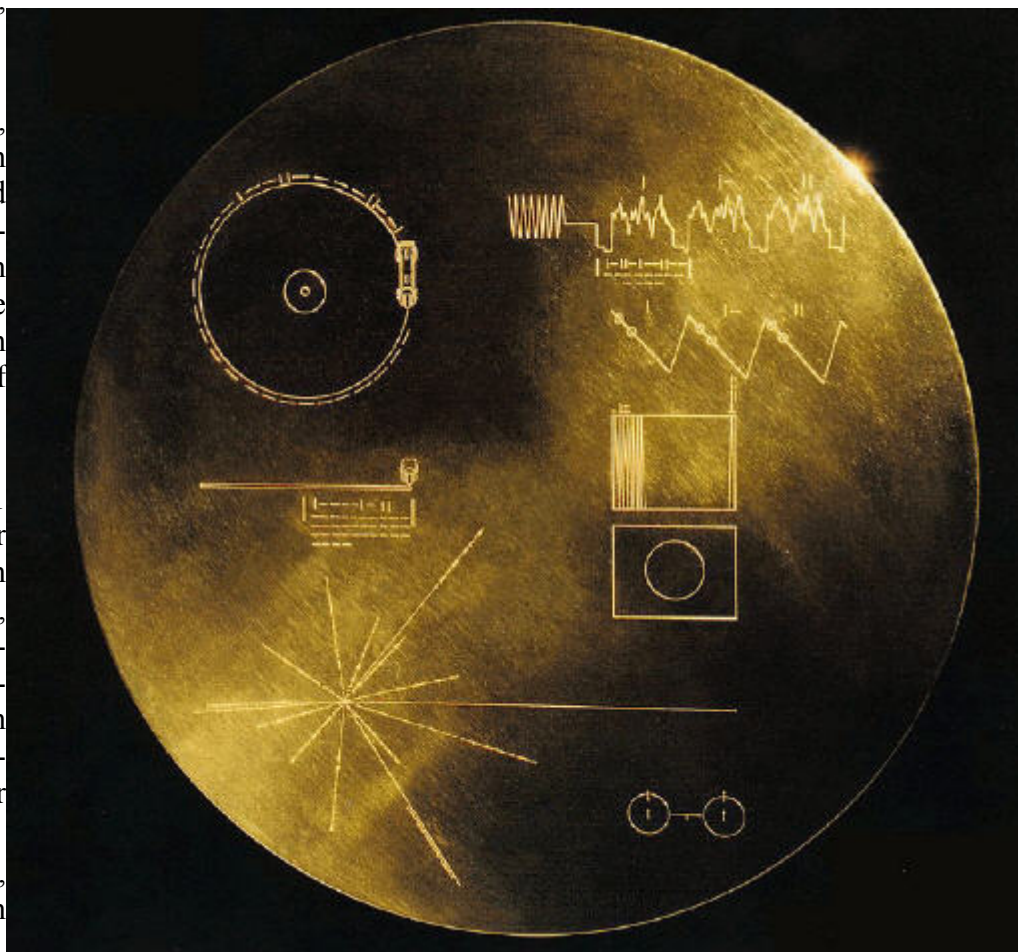
Before Voyager 1 reached its present location, researchers had calculated what the heliosheath might be like. "Many of our predictions were wrong," says Stone. In situ, Voyager 1 has encountered unexpected magnetic anomalies and a surprising increase in low-energy cosmic rays, among other things. It's

all very strange—"and we're not even out of the Solar System yet."

To report new developments, Voyager radios Earth almost every day. At the speed of light, the messages take 14 hours to arrive. Says Stone, "it's worth the wait."

Keep up with the Voyager mission at voyager.jpl.nasa.gov. To learn the language of Voyager's messages, kids (of all ages) can check out spaceplace.nasa.gov/en/kids/vgr_fact1.shtml.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronau-



In case it is ever found by intelligent beings elsewhere in the galaxy, Voyager carries a recording of images and sounds of Earth and its inhabitants. The diagrams on the cover of the recording symbolize Earth's location in the galaxy and how to play the record

October 2006

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1 Free Telescope workshop @ Bookman's 19th Ave and Northern 4:30 to 9:30 PM RSVP with Terri	2 Scottsdale Park Star Party RSVP Terri – Address is 130th Street & Via Linda, Contact name is Betty Matthews. Book signing. 6:30 set up, Star Party 7-8pm	3 City of Phoenix Parks Star Party/ Camp-out *** Volunteers Needed *** 5 pm to 9 pm RSVP James jld314159@yahoo.com	4 City of Phoenix Parks Star Party/ Camp-out *** Volunteers Needed *** 5 pm to 9 pm RSVP James jld314159@yahoo.com	5 PAS General meeting Steve Dodder speaking on "The Sun: An Overview" 7:00 PM	6 Adult Night Out @ Arizona Science Center Public telescope viewing 6 to 9 PM RSVP with Rod	7
8	9	10 City of Phoenix Parks Star Party/ Camp-out *** Volunteers Needed *** 5 pm to 9 pm RSVP James jld314159@yahoo.com	11 City of Phoenix Parks Star Party/ Camp-out *** Volunteers Needed *** 5 pm to 9 pm RSVP James jld314159@yahoo.com	12	13	14 PAS third Quarter moon party @ Spur Cross Ranch Sundown till? RSVP with Mike
15	16	17	18	19 Deadline for submissions to Newsletter	20	21 PAS Dark Sky Star Party @ Spur Cross Ranch Sundown till? RSVP with Mike
22	23	24	25	26 PAS MOM @ PVCC 7:30	27 PAS School Star Party @ All Saints School 6300 N, Central Ave Phoenix 5 to 9 PM RSVP with Terri	28
29	30	31	1	2 PAS General meeting @ PVCC speaker Tim Titus 7 PM		

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

www.pasaz.org

MERCURY

Lowell Observatory Star Tales

Received from Bette Wurst

Like Recent Craters on our Moon, fresh craters on the planet Mercury, also have rays. They are streaks of bright, pulverized rock thrown out of a crater during the impact that formed it.

Additional by Terri, President

Although you won't see the rays on Mercury, like you would on the Moon, you won't want to miss the Mercury Transit major PAS event we are holding on Nov 8th from 2 PM - 8 PM on the PVCC Campus by the Track Field. Bring everyone you know. We will be

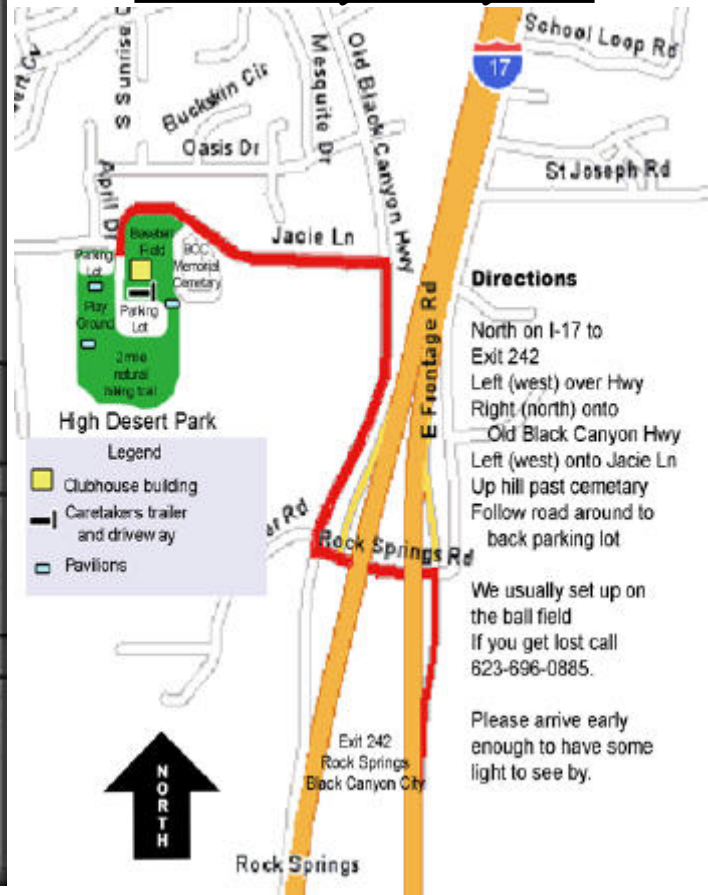
observing the Sun, Mercury doing its transit, having awesome hands-on demonstrations, and having a mini Summer Triangle Treasure Hunt with Prizes (once the sun goes down) for the kids who attend. We expect to see you there! ***

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.



Black Canyon City Site



DUES ARE DUE

By Terri Finch

Yes, it is that time again. Your PAS dues are due by October 31st for the 2007 January - December year. Mike, the Treasurer will be collecting them. I wish to thank Sam for paying for his at the September PAS meeting. That makes the process of working the roster that much easier. Send those dues to Mike right away, or give them to Mike or me at the next PAS event/meeting/star party. We want to get you on the roster as soon as we can. Thanks so much for being prompt. You can download a copy of the dues sheet on line in the Downloads portion of the webpage, or ask Mike or me for a copy of the dues sheet. They will also be available at most of the events that I attend, as I always have them out and available. The rate from last year has not changed, so if you recall what you paid last time, do the same again this year. Thank you for being a part of PAS.. ***

Seeing In a new Light

By Todd Gross

The stars are twinkling, and you KNOW it is going to be a bad night through the telescope, right? Well, not necessarily. It is very difficult to judge exactly what kind of

"seeing conditions" will be out there, unless you look through the scope. However, even then, it gets confusing. Is it the scope? Just how bad is this view of Jupiter tonight? I have found only one way to confirm how rapidly and extensively the sky is "boiling", and that is by using our nearest neighbor: The Moon! When it is available, use it! A quick glance at the moon at high or medium power will instantly tell you what KIND of seeing conditions you are dealing with. For instance, one night, in medium-larger aperture, 14.5", Jupiter did not look very crisp, but many small features were discernible. While I suspected "fast seeing", that is very quickly moving air aloft which works rapidly to defocus the image slightly, I couldn't be sure until I turned to the moon.

Indeed, I was able to see very crisp, contrasty crater shadows, but they were being interrupted by quick defocus/focus. "Slow seeing", or larger waves of in and out of focus images can also be clearly seen when looking at the moon. Once you are certain of just how good, and what kind of seeing conditions you are dealing with, you can make a much more intelligent determination of how well you are doing on the planets or high power deep sky observing.

Are the stars less than pinpoint because seeing is poor, or is it your optics? Having trouble seeing the Cassini division on Saturn in front of the planet? What kind of seeing conditions are fouling you up? The moon can tell you just how much the atmosphere itself is working against your clear window to the stars. Check it out first (but use your other eye so you don't ruin your dark adaptation!)

By the way, don't forget to check out the equipment reviews on www.weatherman.com. Clear skies!

NEW PRESIDENT TO BE ANNOUNCED

By Terri Finch

It comes to us, via the grapevine, that after many, many years of service to the Sirius Lookers of Sedona Astronomy Club, Dennis Young, is giving up his position as President. This is a shock to many. We do wish him the best in his endeavors. And we hope to still see him at PAS events and as our Guest Speaker.

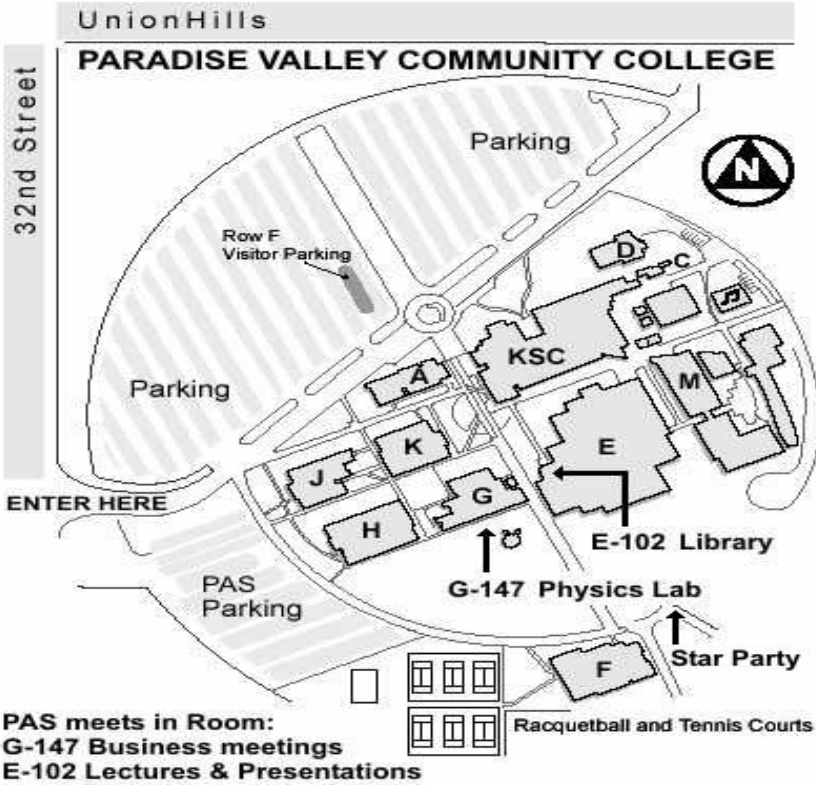
To:

Upcoming PAS Meetings

November 2nd: Tim Titus The History of Astronomy
December 7th: Chet Schuler CCD Imaging Techniques
February 1st: Dennis Young Collimating a Telescope

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.

Map To PAS Meeting Location



October 15, 2006

Sunrise: 6:30
Sunset: 5:55



Q1: September 30



Full: October 7



Q3: October 14



New: October 22

Astro Events

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Rocketry Liaison	Jerry Belcher	623-328-9290	

October 5 Moon .5 degrees from Uranus

October 9-10 Moon Occults the Pleiades

October mercury at greatest eastern elongation
24 degrees from Sun

October 21 Orionid meteor shower expect to
see 15-30 per hour