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PAStimes

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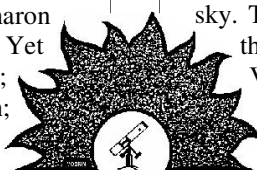
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UTTERLY ALIEN

by Dr. Tony Phillips

There's a planet in our solar system so cold that in winter its nitrogen atmosphere freezes and falls to the ground. The empty sky becomes perfectly clear, jet-black even at noontime. You can see thousands of stars. Not one twinkles. The brightest star in the sky is the Sun, so distant and tiny you could eclipse it with the head of a pin. There's a moon, too, so *big* you couldn't blot it out with your entire hand. Together, moonlight and sunshine cast a twilight glow across the icy landscape revealing . . . what? twisted spires, craggy mountains, frozen volcanoes? No one knows, because no one has ever been to Pluto. "Pluto is an alien world," says Alan Stern of the Southwest Research Institute in Colorado. "It's the only planet never visited or photographed by NASA space probes." That's about to change. A robot-ship called New Horizons is scheduled to blast off for Pluto in January 2006. It's a long journey: More than 6 billion kilometers (about 3.7 billion miles). New Horizons won't arrive until 2015. "I hope we get there before the atmosphere collapses," says Stern, the mission's principal investigator. Winter is coming, and while it's warm enough now for Pluto's air to float, it won't be for long. Imagine seeing a planet's atmosphere collapse. New Horizons might! "This is a flyby mission," notes Stern. "Slowing the spacecraft down to *orbit* Pluto would burn more fuel than we can carry." New Horizons will glide past the planet furiously snapping pictures. "Our best images will resolve features the size of a house," Stern says. The cameras will also target Pluto's moon, Charon. Charon is more than half the size of Pluto, and the two circle one another only 19,200 kilometers (12,000 miles) apart. (For comparison, the Moon is 382,400 kilometers [239,000 miles] from Earth.) No wonder some astronomers call the pair a "double planet." Researchers believe that Pluto and Charon were created billions of years ago by some terrific impact, which split a bigger planet into two smaller ones. This idea is supported by the fact that Pluto and Charon spin on their sides like sibling worlds knocked askew. Yet there are some curious differences: Pluto is bright; Charon is darker. Pluto is covered with frozen nitrogen; Charon by frozen water. Pluto has an atmosphere;



Charon might not. "These are things we plan to investigate," says Stern. Two worlds. So alike, yet so different. So utterly alien. Stay tuned for New Horizons. Find out more about the New Horizons mission at pluto.jhuapl.edu. Kids can learn amazing facts about Pluto at spaceplace.nasa.gov/en/kids/pluto.

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

A FEW POINTS ON THE SUMMER TRIANGLE ASTERISM

Received from Bette Wurst

by Kevin Schindler

from The Arizona Republic, July 2004

Astronomers break the night sky into 88 regions, with each region represented by a different constellation with specific stars. In addition to these familiar groups of stars, many more informal star groupings are recognized. Known as asterisms, these groupings consist of patterns of stars that do not comprise entire constellations. Perhaps the most well known asterism is the Big Dipper in the constellation Ursa Major, the Big Bear. Many other well known asterisms exist, including the Summer Triangle, which is a highlight of the summer sky. The Summer Triangle is made up of the brightest stars of three different constellations - Lyra, Cygnus and Aquila. Vega, in Lyra the Harp, is the brightest star in this asterism and the fifth brightest star in the night sky. It is visible in



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the northeastern skies just after dark, and by 11pm will be nearly at zenith. If you were to draw an imaginary line passing through the zenith and connecting the poles of the Earth, the resulting curved line would define the local meridian, which is used to define the terms "a.m." and "p.m." The former stands for ante meridian, meaning before the meridian. This refers to the sun being positioned ahead of the meridian, which occurs in the morning. As the sun maintains its apparent movement across the sky, it passes through the meridian at about noon, then past the meridian; this is now p.m., or post-meridian. Vega is also important as it occasionally serves as the North Star. The Earth spins on its axis once a day, and revolves around the sun once a year. Additionally, it wobbles like a top, a motion known as precession. Each wobble takes about 26,000 years to complete. As this wobble progresses, the Earth's polar axis points at different points in the sky, resulting in different pole stars. Thirteen thousand years ago, Vega was the North Star. When the great pyramids were built, 4,000 years ago, the star Thuban, in Draco the Dragon, was the North Star. Today, the honor goes to Polaris, the brightest star in Ursa Minor, the Little Bear. The second point of the Summer Triangle is the star Altair, in Aquila, the Eagle. The third point is Deneb, the brightest star in Cygnus, the Swan. Deneb means "tail" and refers to the tail of the swan. Just south of Deneb is a row of three prominent, but not as bright as Deneb, stars. The middle star is the swan's body, and the outside stars represent the prominent portions of the swan's outstretched wings. An imaginary line drawn from Deneb through the middle star will continue to a fainter but still distinct star; this is Albireo, and represents the head of the swan. Albireo is fascinating in its own right; through a telescope it's seen to be a double star. Over half of the stars visible with the naked eye in the night sky are members of multiple-star systems, but Albireo is one of the most fascinating to see through a telescope, as its two bright members contrast each other well, one being yellow and the other bluish. Deneb is a useful reference not only for outlining the shape of the swan, but also for finding an asterism known as the Northern Cross, which is about three times longer than the well-known Southern Cross, seen in the southern hemisphere. The Southern Cross is very distinct, yet is the smallest of the 88 constellations. Looking at the Summer Triangle, you may notice that it seems to be in the middle of a white streak of sky that is oriented in a northeast/southwest direction. This streak is the central portion of our Milky Way Galaxy. We, on Earth, are toward the outside of the Milky Way, looking in towards this central disk. The Summer Triangle is one of the easiest groups of stars



Here we have Mike Marron, who, at this time, was getting over a concussion, set up at the Sally Ride event. We were set up under canopies because it was due to rain, and it did rain a little on us. Mike always has an interesting display.



We had Mike set up on the left, then we brought 2 table of our own to add to the one they supplied us with, and then we had Barbara and Scotty on the end doing Solar Viewing through Big Red. We had handouts galore and by the end of our time there, we were down to very little handouts left. All the Sky and Telescope magazines were gone. The kids just ate those handouts up like crazy. It was a chilly, slightly rainy day but I believe those who helped out, had a good time.

completed. We handed out all the magazines that day. We estimated that there were 80 X 3 issues = 240 copies handed out that day, plus more people came by who didn't get a magazine. Everyone took our PAS handouts as well.

to find tin the night sky, and contains many interesting astronomical objects. It is a highlight of the summer evening skies, and may be enjoyed by everyone. ***

SALLY RIDE THANKS PAS

by Kristen Greenaway

Many many thanks for your support of the Sally Ride Science Festival at ASU. We totally appreciate your support and it was a real pleasure seeing all the team and the hard work you all put into making science fun for the girls. Thanks again.***

THANKS TO KRISTEN GREENAWAY OF THE SALLY RIDE FESTIVAL

I wish to take a moment to thank Kristen Greenaway for setting up and organizing the Sally Ride Festival for which PAS has participated in for 2 years. We have enjoyed the people we meet at the festival, and enjoyed the other vendors/booths. We've also enjoyed the lunches provided to us and the great WELCOME we get when we are there from those who really want us at that event. We hope to do this event again next year. Thanks so much Kristin. You do an awesome job putting that event together. And PAS enjoys being a part of it. I also LOVE Kristen's accent.***

SALLY RIDE FESTIVAL REVIEW

It was an awesome day. Yes, it said it was going to rain, and yes, it did. But it didn't rain heavy and once it stopped raining, the wind came up, but only for a bit. We were fed during the event, and we had a great time. I wish to thank Mike for making the trip down, and for Barbara for bringing her telescope and showing the Sun Spots. Our display table ended up to be 3 tables long, because they supplied us 1 table and we brought 2 with us. We had 2 gazebo's over us, one we brought borrowed from LaDien Steelman, and the other one Barbara brought and we were thankful for both of them because they saved us from the Sun, when it was out, and the Rain which could have ruined all our handouts. We were very successful. The kids who stopped by not only enjoyed tons of candy, but also took the Sky and Telescope Magazines we had available thanks to Sean Ryan of Sky & Tele who gave them to me after his event at the Biltmore Star party was

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Hopefully this will generate more interest in PAS and Astronomy. We also got the chance to see the other exhibits. When they heard it was going to rain, they moved to another location under a breeze-way. We had to walk quite a ways to get over there and check it out. The day was a great success and I need to thank Bette, Ed and Bruce Wurst for helping and Matt Kohl. It was fun and we might do it again next March. The food was good and talking to all those kids was great fun. Come help us next year!***

MOON MARATHON @HEIMHENG REVIEW

by Dan Heim

The weather was predicted clear and windy, only half of which was true. The sky was quite clear for lunar viewing, but the wind waned to zero and temps were in the 60s. Great weather for astronomy! Members present included: Dan Heim (host), Kevin Harcey (with his new Astroscan knockoff), Don Boyd (with his trusty newtonian), Disa Holly (with her new refractor), Georg Koester (with binocs), and Dave Coleman (new member still learning his instrument). Dave spent most of the night mastering the intricacies of a "goto" scope and decided not to participate in the Moon Marathon. All others present completed the entire list of 30 lunar features and will be awarded the official Moon Marathon certificate at our next meeting. In addition to the scheduled lunar features, we had a chance to see two remarkable features due to favorable librations. On that night (March 26th) > there was a 6 degrees east libration that brought into clear view the rim of Mare Orientalis. In addition, a 1 degree south libration allowed a rare view of Epsilon Peak, a.k.a. "The Mountain of Perpetual Light" on the Moon's South Pole. Both features were viewed by all present through Dan's 5" Takahashi apochromat at 200x. The seeing was excellent. At around 10pm the weather turned cold and we shut down for the night. It was a great Moon Marathon. We hope to continue this event on an annual basis. Be there for the next Heimhenge Moon Marathon!***



Here we see Mike Marron sitting at M's desk which was seen in the James Bond exhibit at the Arizona Science Center. THE RED PHONE: This call must be very important!

this event. Christine invited us to enjoy the event complementary. This is one of the perks of having been a volunteer for the Science Center for Adult Night Out, every 1st Friday of the month. We gathered in a group and went in together. LaDien, Mike, Matt, William and myself. It wasn't a big group but it was fun. We walked through the exhibit, took

BOND. JAMES BOND REVIEW

Did you not get the chance to go to the James Bond event? We went on March 12 at 11am. Actually, by the time we waited for all our people to show up, it was more like 11:30am but I didn't want to leave anyone out of the chance to enjoy

over 2 hours with all the reading and quizzes and movie pieces to watch. They had a nice exhibit, and along the way you interact with different computer scanning systems to try your luck at knowing the answers to Bond films. Matt started out as a Super Agent and stayed a Super Agent. William and I started out as a General Agents and were both promoted to Super Agent. LaDien stayed at her same starting level of General Agent. Mike got demoted from Super Agent to General Agent only because he didn't take all the tests. You keep your card and can look up more info on Bond on line. The closing date for this event is April 24, so if you haven't had the chance to attend, then please try to get down there before it ends. We enjoyed it. Plan to be there 2+ hours. It was a very interesting time. Thanks goes to Christine for arranging it for us.***

MESSIER MARATHON REVIEW

March 29th, 2003

@ Two Trees site, Sedona, Arizona
w/ Sirius Lookers (Sedona Astronomy Club)

by Adam B. Bloomer

Rob Martin and myself decided Thursday night, March 27th, to attend this event instead of the one in Arizona City. A couple of reasons for attending the Sirius Lookers Messier Marathon were; at 4000 foot elevation there's not as much dust in the atmosphere. Most everyone knows how dusty it is at the Arizona City site, and with the wind we had Thursday and the forecast of more wind Friday and into Saturday, we knew there would be a lot of dust in the atmosphere. Another reason was it was closer for Rob to drive to Sedona instead of Arizona City. The other reason had to do with light pollution. AZ City is between Phoenix and Tucson. Lots of light pollution. Having been to the Red Rock Star party last year, I knew it wouldn't be as bad in Sedona. The only disadvantage we could think of was how cold it would be up there. I went up to Sedona Friday afternoon and set up camp. It was very windy all day Friday and I had a very hard time setting up my tent. About 7pm Dennis Young, John and Aria (forgive me, I'm real bad with names and forgot their last names) from the Sedona Sirius Lookers Astronomy Club showed up. As my scope was already set up we started to look for M77 on the low western horizon. I was trying to get a head start on the Marathon. Without luck. Dennis set up his little goto telescope and he found it just on the horizon. Now I knew where to look for it. I should have studied more though. We played there after, looking at this and that until Dennis decided to set up his new 18" Dob. It took all four of us to set this beast up. Dennis needs to make several modifications to it to make it easier to set up. We spent the rest of the night looking through it. I did get to use a few of Dennis's eyepieces on my 10" Dob. It was really cold out, and I'll bet that with the wind chill factor it was about 10 degrees above 0. So about 1am everyone left and I went into my tent to try to sleep. Now I haven't camped out in a very long time and the wind was blowing the tent around some, making all kinds of weird noises. It took a long time to get to sleep. Just to the west of the Two Trees site there is a model aircraft airport. Dennis warned me Friday night that they start flying model airplanes at about 8am. Well, right at 8'oclock they buzzed my tent and woke me up. I didn't get much sleep. I took my tent down, to make room for more telescopes and then decided to try to sleep some in my car. I slept on and off the rest of



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the day until other people started showing up around 3:30 or so. Needless to say I was very tired and I had a full night ahead of me. To our great relief the winds died down around 5 PM or so. I think we had about 20 or 30 scopes set up, and members of 4 different Astronomy clubs there for the Marathon. Rob Martin showed up around 6 o'clock and set up. It started at dusk. As the sun sunk and friendly night started, we raced to find the hardest 6 evening objects. M77, M74, M33, M31, M32, & M110. Even finding M77 the night before and knowing where to look didn't help much. It still took a while to find it. I couldn't find M74 at all. I did find M33, but this took way too long. M31, M32, & M110 were way too low to see now. I should have studied more. The rest of the night went by rather quickly. I lost M72, M73, and M30 in the early morning skies. Padraig Houlahan of Flagstaff's Coconino Astronomical Society and his 10" Dob. got all 110 objects. I got 103 of them. The rest of the observers got anywhere between 20 and 50 objects. What a night! I came in second place for this Messier Marathon. Not too bad considering I've only been using a telescope for a little less than a year. It was very hard to do, but it was a very rewarding experience. I think we should all try it sometime.

Finding all the Messier objects is one of the many steps we need to take to gain a better understanding of the night sky. I must thank everyone who attended for the support and friendship they showed us. Especially Thom and Ellen Walczak who brought one of the most important things, a big heater. Even without the wind it was still very cold out and that heater was just the thing to keep us going. I would find a dozen or so objects and then go over to it and warm up and then start again. Also Rob Martin, who brought me some coffee and gave me very valuable encouragement during this whole night. If it wasn't for these 3 people I don't know if I would have made it through the night. Thank you all for a great weekend.***

SOME IDEAS FOR DISCUSSION

I was just thinking, and thought I better share this thought with you all. We used to, when we met over at Valley Academy Charter School, meet for dinner, prior to the meeting at a near by restaurant. Well, I have that info available on the website, a place for it, but nothing to stick in it. And I was wondering if anyone wanted to put their 2 cents in and let us know where there is a decent, fairly inexpensive place to eat prior to the PAS meetings. I know there is a Safeway across the street, but did anyone check out to see if there is a restaurant we can meet at as a group? It is a nice thought to have the Speaker meet us there at 5:30pm and have dinner, or a snack, and then we all meet over at 7pm at Foothills Academy. Come on, let's brain storm. If you have any ideas, email them over to me. Provide a name of the location, address if possible, and I'll write something up and invite everyone over there for next month's meeting. We will more than likely chat about this at the next Meeting of the Minds as well, so your input is needed. Thanks for the brain storming. Please share your ideas. :) Next Meeting of the Minds is March 31 at

Denny's. Let's get a head start. Do you have something that needs to be discussed that PAS is doing or not doing, that you think will improve the club? Bring it to the next Meeting of the Minds on March 31 at Denny's at I-17 and Dunlap, or email the idea over to us so that we can start a discussion about it prior to the meeting. In fact, if enough people want to, we can talk about it in our PAS-Members Yahoo group prior to the meeting, and I can bring everyone's ideas with me to the next Minds meeting. Start thinking this up today, and let's get it going. Another topic that needs discussion is the Public Star Party PAS should hold sometime in June, after the Astronomy Day event has taken place, so that we can invite the public to it. I can make flyers for it, and we can enjoy a night with the public, and promote our favorite pastime. Do you have a location in mind? Send it my way.... do some research and see if it is a good place, free for our use, and if it is available that night. Let me know so I can make that flyer and let everyone else know. Ideas are welcome. And along those same lines, we are still looking for a location for the Dec 31 star party. Yes, new year's eve, away from the possible fire works, yet, someplace where all three astronomy clubs, if they care to be involved with us, can meet and do a massive star party. we can invite the public, or not. Let's

get that info going around so we have an idea. Do you have a house that isn't in down town Phoenix lights? Like for instance, Mike's place would be a great location if he didn't mind the other club members joining in (EVAC and SAC). But

that is up to him. And it has to be someplace where one can come in from the cold, to warm up and have bathroom facilities. So, let me know your ideas so we can share them around and vote on a location. Thanks.***

YAHOO GROUPS

If you aren't involved in PAS through the YahooGroups, you might want to consider it. You need a Yahoo ID to do it, and then you just join the groups listed below.

Those of you who are current PAS Members and want to make a little extra cash showing the public or a party the night sky, need to be on the Yahoo group **PAStimes-Star-Tours**. I post to those who are interested in making a little money on the side. It doesn't cost anything to join the group. And you can set it so you don't get any email - however this group is important to get e-mail's to you. And the first to reply, saying they can do it, gets the job. So, get over there and sign up.

The next group you should be on is **PASAZ-NL** This is again open to all PAS Members. This is where you get your notice of when the newsletter is ready for download. This group involves an invite. So, email Matt at coeditormatt@yahoo.com and let him know you'd like to get the newsletter. If you aren't a current member but would like to get the newsletter for 2 months for free, and haven't already been in the group to do that, then request and he shall add you to the list. The current newsletter has all the info you need to be involved with PAS.



The **PASAZ-ProjectDiscussion** list is for those who wish to help out with projects that PAS is doing. The current discussion is on how and what we are doing for Astronomy Day at the Arizona Science Center. You don't need to be invited to this list. Just come, read the notices, and help us make decisions. You don't have to be a PAS member, either. Your input is valuable to us.

And one more list is important and recently added to the group, **PASStarPartyVolunteers** is a list for anyone, you don't have to be a PAS member, but if you wish to be involved in helping out at star parties, then get on this list so that we have a centralized way of getting info to you. Even non members are invited to assist at star parties. Anyone can. We love the assistance and we enjoy the groupness of it. Get on that list today. Does not involve an invite, either.***

SPECIAL INTEREST GROUPS - STARTUP

Another thing we want to implement prior to the summer coming along, is the SIG groups. At the next several PAS Meetings and Meeting of the Minds, we want to discuss the SIG groups. Which ones should we start up and who wants to be a member, and who can help in the planning of the groups, etc. We had a request to do an Astronomy Computer group, and Barbara was interested in a Faint Fuzzies group. If you have a group idea and would like to help run it or be in charge of one, let me know so



At the High Desert Park Star Party on March 12, we saw several PAS members setting up their telescopes as the sun was setting on Black Canyon City. Don is adjusting his scope and in a few moments Barbara will be hunting for Mercury. In the background was a group of people who came to see what we had to show them during that night's viewing session.

I can get the info out. A Yahoo group should be made for discussion and planning purposes, as well as announcing the next meeting of these groups. If you wish to run one of these groups or another one of your making, give me the info. And let's get these organized prior to the summer. Thanks.***

ANOTHER SUCCESSFUL BLACK CANYON CITY HIGH DESERT PARK STAR PARTY

Did you miss this one? Well, we are planning on another one soon, and would like a big turnout of scopes. I'll post



Here we see Barbara and William setting up the tables for our potluck. This potluck didn't turn out as scheduled as past ones because we had the honors of showing the kids from the Clogging group some really cool things in our telescopes. So, we didn't get to eat very early, but when we did stop to eat, the food was great. This gives you an idea of the type of "hole" we are in, in this park, which is why the horizon has NO city light glow to it. The area around us, all the way, is up about as high as you see it behind William and thus, we have awesome "dark sky" viewing. You have to come to this star party next time we have it, which is June 4th, and experience the awesome "darkness" of this location. See you there!

that was, tracked it down, and used Don's go-to to find out if we identified it correctly. It was really a nice set of stars and Barbara and I named it the Clown Cluster. It doesn't seem to have a common name. The night packed up around midnight, as the air was just too cold for all three of us out there. Georg had stopped by around 10pm and only stayed a little while. He was fighting a cold, and so was Don. So we decided to call it quits for the night and left earlier than we had planned, but we were all frozen. It was an excellent observing night with clear skies, great friends and we wish you could have been there to have fun with us too. Maybe next time.***



The night sky was creeping up on us rather quickly. We were all hurrying to get our scopes together while there was still light. The star party was a great success and we hope to have more folks attending next time.

NIGHTS WITH CLAY THOMPSON

by Leah Sapi

Many of us enjoy reading Clay Thompson's daily column on the "weather" page of the Arizona Republic. (And for those of you who don't know about it - it's worth looking for! It's

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informative and entertaining. You can read it either in the printed edition of the Republic, on the back page of the "B" section, or you can read it on line. Clay's books are enjoyable to read too!) A while back, Clay mentioned in his column that he had received a complicated telescope as a gift, and was trying to figure out how to use it. Mike Marron brought this up at a PAS meeting, and suggested that maybe PAS could help advise him. And so I volunteered to do it, since Clay and his family used to be our neighbors. I wrote an email to Clay, but it was a while before we were able to get together to work on the telescope. Besides various holiday seasons, we also had that unusual rainy season back in January, that kept the sky cloudy. But eventually we found a clear night, and Clay brought his telescope over. It turned out to be a vintage 60 mm Meade refractor, that a friend of Clay's had found in the attic. It had lots of "accessories", some of which were useful, some less so. For example, I advised him that the lunar filter might be useful, but he should discard the "solar filter" - it was the old-fashioned kind, for use at the eyepiece after the telescope has already focused the sun's rays - dangerous both for the eyes and the lenses! The eyepieces were 0.965", including a 22 mm (useful), 4 mm and 2.5 mm (not very useful with a scope of that size). It also had a star diagonal, an inverting lens for terrestrial viewing, a Barlow lens, and a reasonably-steady wooden tripod with an equatorial mount. And, of course, a detailed instruction book explaining how to connect part "A" to part "B" at the side of part "C", etc. I started to read the assembly instructions, but I could see that it would take a while to get through them. So, in the meantime, I brought my own telescope outside and showed Clay a few nice objects - Saturn, the Orion nebula, the Pleiades, etc. I realized that Clay didn't have hours to sit around while I read the assembly instructions, so I suggested that he would leave the telescope with me temporarily, and I would let him know when I got it up and running. And so, after he left, I sat down with the telescope and the instruction booklet, and gradually put it all together. The instructions suggested adjusting the finder scope in the daytime, by aiming at a terrestrial object; but I was hesitant to wait till the next day because rain was predicted for the rest of the week. I looked around for a terrestrial object that would be visible at night, and found a street light a few blocks away (visible through my living room window) that enabled me to adjust the finder scope. Then I was ready to try for some more interesting objects, so I brought the telescope outside. By this time Jupiter was up and Saturn was a little west of the zenith; I aimed at each of them, and I was glad to see that both showed up sharp and clear, though small, through Clay's telescope. I could see Saturn's rings, and two faint stripes on Jupiter, and all of the Galilean moons. So these were the objects of the little telescope's "first light" - or, at least, "first light" after a long hibernation in an attic. The next day I wrote to Clay with the good news, but it took a few more weeks till we were able to find another clear night. Clay came over again and I showed him how the telescope worked. This time I wasn't able to get Saturn in view, though - it was very high in the sky, and hard to aim at. After trying for a while, we aimed at Orion instead, and were able to see the Orion nebula very nicely. Jupiter hadn't risen yet, and the moon was in 3rd quarter, so it wasn't due to rise till at least midnight. But, I told Clay when he would be able to see the moon in the early evening, and how to find Jupiter and Saturn on his own. (Right now it's very easy to describe, because Saturn is right near Castor and Pollux, and Jupiter is near Spica -

and it's easy to describe those locations, starting from Orion and the Big Dipper respectively.) I also gave Clay lots of PAS material - our newsletter, and upcoming events, etc. - and told him that he's welcome to join us at a star party, where he can see lots of nice celestial objects through the larger telescopes of the PAS members.

Excerpt from Clay Thompson's article, March 3: I saw the Orion nebula the other night. It was pretty neat. If you have never seen it, I strongly recommend it. Or perhaps this is not a big deal to you. Perhaps you see the Orion Nebula as often as you change your socks. But I'd never seen it before. It was cool.***

LETTER TO THE EDITORS

by Leah Sapir

Terri and Matt, thanks for mentioning me in the newsletter. But you are very modest, you forgot to mention how much you two have saved for PAS by putting the newsletter on line. Only a few years ago, the newsletter used to cost about \$37 in postage every month, for 100 copies - besides the printing cost (e.g., \$18 for 100 copies of an average 12-page newsletter)! But now, since Matt and Terri put the newsletter on line, and also - they have it ready on time to give out copies at meetings (instead of mailing, for those who come to meetings but don't have their own computers) - our printing cost for the same size newsletter is about \$5 a month (printing only 30 copies instead of 100), and the postage cost is about \$3-\$4 (for about 10 copies that need to be mailed). Now multiply that by 9 newsletters per year, and you can see that PAS is saving about \$400 per year due to the efforts of Matt and Terri. So I think that somebody ought to mention that!***

STARS OVER CHINA

Here is a bit of info I got via U.S.P.S. I have 1 copy available. First to come ask for it gets it at the next PAS meeting. STARS OVER CHINA Amateur Astronomers Grand Tour of China. It takes place Aug 30 - September 12 2004 (14 days/12 nights); Cost is \$2850. It sounds awesome if you can afford to go. I have the whole thing in print. So, if you are interested, get it from me Thursday. There is a website as well www.chinadiscoveries.com which probably has the same promotion. So, if you miss getting it from me, please see the website. ***

SURVEY RESULTS 2005

The following questions were asked and the answers I received, from those PAS members who cared enough to return the survey to me, are below. I appreciate the answers of those who participated and hope we can adjust PAS to fit the majority's needs. You know what you wrote. I just took all of the answers and made them make sense. We have a couple different responses. The letters (A-F) below are dividers. There is no relation between the first answers of each question. For example: If I put in my 2 cents in answer A on 1 question, it doesn't mean all answer A's are my answers. I scrambled them.

1) How can we improve PAS for you?

A) We need to keep our meetings on schedule. That means open the doors by 7pm, start the business and intro stuff by 7:30pm, start the speaker by 8pm and let the speaker know they have a 1 hour time slot (including Q&A) for their presentation, and

See SURVEY, p. 7

close the doors by 9:30pm (this leaves a little extra time for the inevitable overruns). We must be more respectful of our Speaker's and Members' time.

B) No need to, it's already perfect. :)

C) I'd like to see more involvement from the club members. The Officers should not be the only ones doing the bulk of the planning, organizing and running of the club. Those who care about the club should be more involved.

D) 3 phases: 1. Meetings, 2. Short Newsletter, 3. World wide online club. It would be a money maker with T's and other stuff. Also it would have texted speakers and video from universities and other science organizations.

E) Email newsletters. I can't get on through Yahoo.

F) Schedule more star parties farther north. We already do a bunch, I know, but this is all there is to improve it for me. I really enjoy it now.

2) Why did you join an astronomy club? 1) Learn Astronomy, 2) See objects in night sky, 3) Learn about telescope.

A) I love science.

B) For its social aspects.

C) All 3, plus Halley's Comet, and to associate with other people who enjoy astronomy.

D) Originally it was to make contact with like-minded individuals and learn more about astronomy. This has already happened. Now I remain to hear good speakers talk about current astronomy events and also to volunteer to help others become interested in astronomy.

E) All of the above

F) I joined a club because I feel that I don't know enough on my own. I wanted to learn the night sky better and thought that if I went out with those who know, I could learn from them. I also joined PAS specifically because they were the friendliest to me and the most supportive. I visited the other two clubs in town and didn't like their "cold" attitude towards me, even when I didn't already belong to PAS.

3) What would you like to receive from your astronomy club?

1) Learn more, 2) Do more, 3) Great Speakers.

A) All of the above.

B) Now that I'm familiar with the night sky, my main goals are viewing and hearing good speakers. but if there are beginning members who need guidance in getting to know the night sky, I can show them how to find their way around.

C) Great Speakers are always nice. Perhaps more viewing at meetings.

D) To me an astronomy club should provide the social portion where the people who are in the club love the same thing I do - astronomy. The club has been very good for me and I enjoy being part of it.

E) See #1 and #4

F) All 3

4) What would you like to receive from you astronomy club newsletter? 1) Cartoons, 2) Articles, 3) Reviews.

A) The newsletter is fine, I enjoy all parts of it.

B) Upcoming Events, Review, Cartoons, all good. Articles from other sources often redundant given the other astronomy sources I usually read on my own. This is, after all, a club NL, not an astronomy magazine. Smaller

would be better and save on printing costs.

C) It should be a two page letter (4) sides with NASA and world space agencies photos and maybe (1) cartoon with Net links and science links with 4 or 5 short space and club articles the Prez & VP & print/web Editors only. Treasury should be a paid forum.

D) It is fantastic. I like all of it. I just wish I could get a copy.

E) I really feel that the newsletter is a vital link among those not-so-active members. Those members who read the newsletter but don't actually get that involved in what PAS is doing. We have several of that type of newsletter contributor (\$). And if we didn't have a newsletter, we wouldn't have the membership we do. I do agree that it could be trimmed down a bit, however, the photos of what we do at meetings, parties, etc, I feel are important for those who missed the events. And the review articles are a must because if I missed an event, I would want to know what I missed so I could be sure to attend the next one. We could leave more of the "news" items out, but what about those folks who don't have internet access, don't have Sky and Telescope Magazine coming in each month, and only hear their news limitedly? This is the place for really cool stuff to

be printed for the whole membership to enjoy. And we do get a few good submissions to put in the newsletter every so often.

F) I like it all. The astro news is good. The cartoons are a must have. Perhaps a photo contest at the end of the year with all the members pix that were submitted during that year. I enjoyed the Round Robin story too. Now, what will we do with this data? At the next collection of Meeting of the Minds, throughout the summer, we will be discussing changing some of the things that are mentioned above. We know that when Dan takes over as editor for 2006/2007 year, the newsletter will be smaller and more precise. In the mean time, we have to discuss how we want to continue its production. And as far as club activities and such, we are working on a fantastic line up of

speakers for next season. So, watch for these changes. And come to the Meeting of the Minds to be part of the group that makes the decisions about YOUR ASTRONOMY CLUB.***



HANDOUTS AT THE NEXT MEETINGS

Please come to the next few PAS Meetings and Meeting of the Minds to pick up the updated handouts we will have available there. I've updated the April and May items in the Upcoming Events Maps page, and you may wish to grab a copy at the next meetings. Also, there could be more FREE Sky and Telescope magazines there for the taking as well. We hope to see everyone at the April and May PAS meetings. Remember, to bring your telescope to the May meeting and share the night sky with us.***

ASTRONOMY DAY AT THE ARIZONA SCIENCE CENTER VOLUNTEERS NEEDED

Morning events: We are looking for anyone who wishes to bring a display or run one of mine for the day time from 10am to 5pm. If you can't stay the whole day, that is fine, but we need volunteers to run the displays. Bring your own lunch. There is food in the food court, but remember it costs more than going to a normal Taco Bell. And we need a few telescopes for the



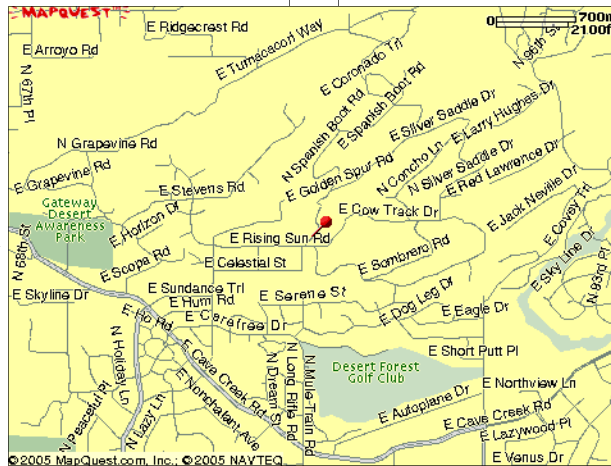
See SCIENCE, p. 8

Telescope display. We will have every portion of our event right there on the first floor by the wall of the Flynn Theater. Evening event: Bring your telescope and from 6-10pm join PAS in showing the night sky. RSVP separate for this event, but you can do both if you wish. I will be there all day doing the whole thing, so anyone who can join me for the full day will definitely be appreciated. Thanks in advance.***

HISTORICAL COWTRACK RANCH CAREFREE STAR PARTY AT MIKE'S HOUSE

2 Day Event - Sleepover
Fri & Sat Apr 29-30 Dark to Sunday

Bring what ever you need to survive 2 days of hanging out at Mike's home. We will begin Friday night at his house with Telescopes (bring your scope) and possibly games, etc. Bring bedding as he is limited on where we can sleep. Bring snacks as well. And some cash would be handy so we can split a pizza on the first night, and maybe go eat someplace on the second night. Any current PAS member is able to attend. Those with families may bring them as well. We want to have a great time. There is limited couch space, so bring your own chairs for watching movies. During the day, plan to be hiking or visiting Carefree, so bring proper footwear. A jacket is a must, as it is colder up there than down here in Phoenix. You do not have to feel obligated to stay the whole 2 days. Plan on Friday night, and then depart Saturday morning and then return Saturday night to stay to Sunday if you wish. Some of us will be spending the whole time up there. Bring games to play for daytime activities. Mike has tons of fun things to do, and plenty of history to share with you about his home. We expect a great time and you are welcome to join us. See map below or pick up a map from Mike at the next meeting. Let's have a fun observing session and a great time with Mike in Carefree. You'll love his dark skies! Mike's address, incase you want driving directions from Mapquest.com is **Michael Marron** 8030 E Golden Spur Ln Carefree, AZ 85377 and his phone number in case you get lost on the way is 480-488-3031***



MARCH 17 ST. PATTIE'S DAY

Yes, we had two wonderful star parties planned for that night. we had the Rancho Solano Private School and the Children's Hospital star parties. But, the clouds took over and neither of the star parties took place. However, we will be rescheduling both of those star parties and will let you know when they will happen. Rancho Solano has asked us to do a summer star party for them. The date isn't in hand yet, but watch for it in email. And Jerry is working on the next Children's Hospital star party, too. We hope to have a bunch of wonderful volunteers for those upcoming star parties.***

THANKS TO SEAN RYAN

Sean Ryan is an awesome dude. Sean is with Sky &

Telescope magazine. He came to Phoenix to be involved in an event at the Biltmore (read article about Biltmore Star Party). While there, he gave PAS the remaining magazines he had brought with him for the event. He also offered to send us more if needed. So, I've asked him to supply us enough extra magazines for the Anthem star party and the Astronomy Day at ASC. I've gotten 2 boxes so far and if he sends the rest, we will be all set. I want to thank him for the magazines as well as the posters he gave me for a raffle, and for the gifts we will be receiving soon for assisting him at the Biltmore. A copy of this newsletter is being sent to Sean to thank him personally. THANK YOU SEAN!***

THANKS TO NANCY LEON

Nancy is one fantastic lady. She has been my contact at NASA SPACE PLACE for quite some time, years I believe. And in that time, she has sent us so many really cool things to give away at our events. Recently I received a box of goodies. Previously I've gotten posters and card games, etc. In exchange, Nancy wants to see the NASA Space Place article in our newsletter, monthly. This issue has the most current article from NASA Space Place. I do hope you enjoy it and look forward to it each month. Matt and I want to thank Nancy for all she does for PAS and to let her know how much we appreciate her. A copy of this Newsletter

will be sent to her soon after it is completed. THANK YOU NANCY!***

NEXT TWO PAS SPEAKERS

For the April meeting we have Mike Marron who will be discussing the most interesting things "you never knew" about the Sun. You won't want to miss that one. For the May meeting, we hope to have Dennis Young come down, do a mini 30 minute presentation and then help us with our observing session out back of the school. Bring your scope and bring everyone you know to look through his 28" telescope. May is also the elections, so read the article "Officer Positions" to find out how you can help PAS's future.***

MARCH MEETING REVIEW

Hey, did you miss this meeting? It appeared quite a few people didn't make it. We missed you there. Here are the folks who didn't make this meeting and should have: Mark Stephenson, Richard Guthrie, Ed Garbero, Kevin Harcey, and John Pulis. I do wish to thank Barbara Hartman for taking over as PAS Hostess for the evening. We opened the meeting with Dan sending many thanks to Sean Ryan of Sky and Telescope magazine for the wonderful gifts we are to receive for helping him out on February 27th at the Biltmore. Dan read off the list of gifts we could choose from and we made our choices that night. Thanks to Sean. Please see article about the Biltmore star party and the thanks we send to Sean. Then Jerry introduced the present Officers, and we had a few visitors Ashley was a young lady who attended

See MARCH, p. 9

MAY 2005

PAStimes

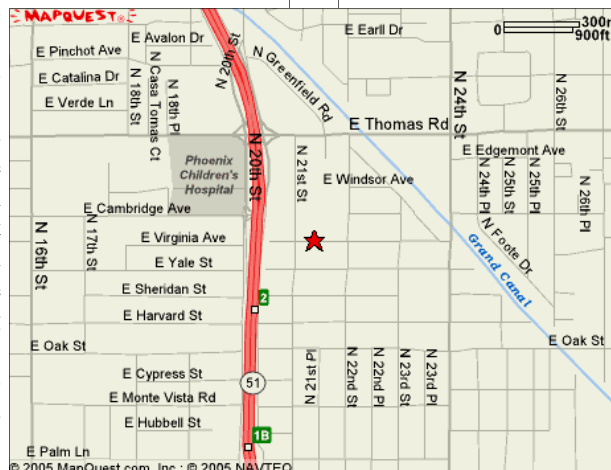
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and is from Dan's class right there at Foothills Academy. Jerry then let the new people talk about themselves as well. He then went into the sale of zoom eyepieces he has available and an accessory sale at Orion that is going on right now. He then mentioned the PAS Stickers. These are stickers he had made to stick to the inside page of any magazine and leave it behind at a Doctors office or someplace where people might be reading magazines while they wait for service. Jerry then turned it over to Terri who talked about upcoming events and the signup sheets. At the April and May meetings those sign up sheets will be there again. If you can assist, either call, email or signup at a meeting. RSVP is good to get an idea how many people will come assist prior to having the star party. Then Jerry presented, to Kevin, who wasn't there, but the Finches have delivered the item to him, an inexpensive way to make a Solar Telescope. He covered this info for a few minutes telling us about the 60mm Tasco telescope he picked up. He donated it to Kevin who will make a mount for it so that at future solar events, we can have a scope there for the kids to see sun spots and eclipses. Jerry was mentioned how he wants Kevin to have this scope ready for the 2006 Transit of Mercury. I guess Kevin better get working on it. Then we had Dan do his presentation. The topic was "Multimedia on the Internet." This was a fascinating topic. It is a 20 year hobby of Dan's and a 4 year job he has had. He gave us ideas on what sites to visit and where to find the items. He went through a whole bunch of really cool things having to do with that topic. For the end of his presentation he went through some sounds. What does it sound like to be standing on Mars in one of the Martian wind storms? If you weren't at the last meeting, you won't know unless you find it on the internet. We then did the drawing for the 50/50 raffle and Dr. Greg Coons, a long time PAS Member, won. He won \$9 that night. I wish to thank Barbara for being our Hostess. She did a fine job. I wish to thank anyone who didn't notice I forgot my camera and I didn't get to take any photos of this meeting. Thus there are no photos this month. Sorry, but it happens. I wish to thank Sam Insana who brought popcorn to snack on and the Wursts who brought a cake. The snack fund raised \$2 for the April meeting's snacks. We had quite a few snacks this time due to having plenty of money to get them. It was a good meeting and closed up early. Mike was making his way around with his concussion and we hope he is feeling better. OH, and John Pulis had called me just after this meeting to say he was headed into the hospital again. If anyone wants to give him a call and check on him, that would be appreciated. Thanks. Thanks to everyone who came to the meeting and for everyone's help in setting up the desks and taking them back down when we were done.***

ADULT NIGHT OUT - VOLUNTEERS NEEDED

Have you wanted to do something rewarding with your telescope? Well, I have just the thing for you. Every First Friday of the month, the Arizona Science Center would

like to have PAS members come down with their telescopes and show the night sky to anyone who passes by. We usually park right there in Heritage Square and unload and use our telescopes right there. We haven't been actively doing this due to the weather, but it happens every 1st Friday and volunteers are welcome to come to the talk prior. The evening starts at 5pm to 7pm with socializing and wandering around the science center - without kids - hence the name ADULT NIGHT OUT. Then from 7-8 a well known speaker, of something science related (not always astronomy) does a presentation. These presentations have been wonderful. I've attended several so far. Then from 8:15 to 9 there is a Film or Planetarium show you can attend. They close down about 9pm. However, we are usually set up and viewing till 10m or until the people stop coming. If it is warmer out, they tend to keep coming till about 10pm. Cooler nights we have closed down around 9:15. In either case, we'd love to have your assistance with your scope. Use me as your contact, and call before you go down to these events. I tend to leave my home around 5:45, to get there about 6:15pm. So, if you need to know the situation and if anyone is going, use me as the coordinator of that event. We'd love your company and we'd love to have your help. Join us at the next several dates: April 1, May 6, June 3, July 1, Aug 5, Sept 2, October 7, November 4 and Dec 2. If the sky is clear, we will be there. See you there!***



MAY 19TH ELEMENTARY SCHOOL STAR PARTY - VOLUNTEERS NEEDED

On May 19th, 2005, PAS would like your help. We will have a large crowd at the William T. Machan Elementary School located at 2140 E. Virginia Ave. I've looked it up on the map (see map) and it is located S.E. of the Children's Hospital around 20th Street and Thomas. We would love to have anyone, with or without a scope come assist in this star party. There will be refreshments served. And we will be doing a slew of handouts and could really use your help. Bring your family and friends as well and let's have a super observing session that evening. See you there!***

ADULT NIGHT OUT AT THE ARIZONA SCIENCE CENTER Review for March 4, 2005

This was an interesting night. First off, I have to say that it is the first time we have gotten down to the Science Center since May, to be involved in the Adult Night Out. Every 1st Friday, the clouds seem to take over the night sky and we can't do anything astronomy related. Thus, this night was the same but because of the speaker at that night's event, I wanted to go anyway. Matt, William and I were the only ones to attend. I picked up the James Bond tickets from Christine that night. Please read the article THANK YOU CHRISTINE. The 3 of us went over to see the presentation done by Fr. George Coyne, who is the Director of the Vatican Observatory. Our purpose was for two reasons:

See ADULT, p. 10

One: I knew it was a good talk because we had seen it previously at an EVAC meeting, and Two: we wanted to ask Fr. Coyne to come talk to PAS. We did both. And we enjoyed it. His talk has to do with the "Dance of the Fertile Universe." It was humorous, entertaining, enlightening, interesting and very well thought out. We'd like to have him do the same talk next season for PAS. We totally enjoyed the talk, but didn't do the telescopes that night. Maybe next Adult Night Out!***

PALO VERDE MIDDLE SCHOOL STAR PARTY VOLUNTEERS NEEDED

May 11, 2005 7-10pm Wednesday

The school's address is: Palo Verde Middle School 7502 N. 39th Ave Phoenix, AZ 85044. We need Volunteers for this star party. If you can sign up for it, please do. Bring scopes, friends, family, everyone. Let's have some fun.***

OFFICER POSITIONS

This is the serious stuff. Let's get it out of the way so we can continue to have some fun. First, I'd like to thank everyone who has been an officer this year. We have had some really nice officers and I do hope some of the stick around, even if they aren't an officer or director this next year. Mark Stephenson has been Prez for quite some time. The President's duties are to find the speakers for the meetings and try to be at the public events to talk to the people. We might want to consider someone new for the job. We've had a few people interested but no one has really put their foot down and told me they want the position. However, at the May meeting, please come help us decide who will be the next President of PAS. I heard a rumor that Dan Heim and Matt Kohl are thinking about it. Maybe Disa is interested too. The Vice President has the duties of setting up the Star Parties and filling in for the President. Jerry Belcher took on the star party part, but it wasn't a given assignment. In fact, I wouldn't mind taking over the star party planning and getting a title of EVENTS COORDINATOR. We don't have any one taking the position of V.P. yet, so if you are interested in filling in when the President isn't available, opening the meetings, and such, then let me know. The Multimedia Director position has been going really good with Dan Heim's help. He really does an excellent job of it. Currently, unless you know something about that kind of thing, it isn't the position for you. we have no one interested in that position as of yet. The duties of that position are to make sure the speaker is all set up with what ever A/V needs they have. We have really cool abilities at our Foothills Academy school room. It wouldn't be that hard to take over this position. Editor position. Now here is a challenging but rewarding position. I haven't had any takers, but the ideas is that the Editor will report past events, present events and future events in the newsletter to let everyone know what is going on with PAS. Matt and I have the Editorship currently and we like it but sometimes it really gets rough to meet the deadlines. And we tend to put anything in the newsletter that someone sends to us. We are more than happy to include things just because it isn't something we had to

write or create. This isn't the easiest job, or maybe it could be if you are wanting the position. I'm glad I have a co-editor to help out, because when I didn't have one, my hubby didn't like the 2 weeks prior to the newsletter deadline. I wasn't much fun to be with during that time. So, if you want the position, let me know. It is also open. In fact, all positions are open at this time. The next one I'd like to review is the Homepage Director. I'm not ready to give up that position. I like doing the homepage and would like to do more with it, get it more organized before I give it away. Barbara has said she'd like to take it from me, to relieve me of my editorial duties,

but I was thinking, if I can just be (maybe for 2006) Events Coordinator, and Webpage Director, and drop the Editorship, then I'd be very pleased. I already do all those things, and could continue to keep the club up-to-date on current events. Our next position we are looking to fill is the Host. We have 2 hosts currently. John Pulis, whose health sometimes doesn't allow us to see him at a meeting, and Ed Garbero who might need a lift to the meetings, are doing a fantastic job of being host when they can be there. If they want to pass that position along to another, that is fine. And if you'd like to be a host of the meeting. The duties

of the Host are to greet the people who come to the meetings, get them to sign in, and if they are brand new, supply them with a copy of the current newsletter. They also should be at events with the telescope group so that they can get people to sign up for the newsletter. I haven't seen much of either of our hosts at events lately. But we can hope they can be. Public Relations directors. We had 2 of them, but Kevin Harcey dropped out. So, the duties of the P.R. Dir is to get the word out about our events. Currently I do most of that, but we hope that Mike Marron can do more of it in the coming year. We want to contact newspapers and all sorts of avenues to get the word out about PAS and upcoming star parties. If Mike wants to give up his position or take on a sidekick, then let's get more PR people to help him out. Those are the main positions that we will be voting on this year. We also have the H.P. Rocketry Liaison which is Jerry Belcher, and he will continue that position because he is in that club and can let us know the situation and upcoming events. And we have a Darksy Advocate, Barbara Hartman, and she is doing a great job helping us with incorrect lighting problems. She will probably keep her position as well. So, that brings us to, who will you vote for for these positions? Think it over, bring your ideas to the May PAS meeting, and let's get some new blood in office. We will discuss this at the next Meeting of the Minds and see what we come up with, too. COME VOTE IN MAY!***

CROSSED FINGERS - HUMOROUS

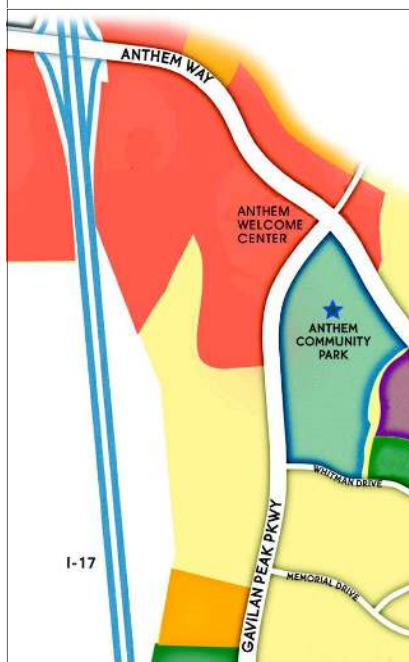
Matt and I were rushing to create the last issue of the newsletter and get it done in time so that we could have Leah print it before she wasn't able to. She gives us the best rate on Xeroxing the newsletter. Every place else charges way too much for the service.

She had a deadline and so it put us 1 week early for creating and printing the newsletter. Anyway, in the process of hurrying to type up the articles, and get them into the



newsletter, I was typing to Leah. We were talking back and forth the day of the big deadline rush, and we were talking about getting it done on time. I wrote: "I'm almost done sending stuff over to matt. And he is keeping right up to me, so we should have it done this afternoon. About 5 more articles and a small set of photos to go. Cross your fingers. Hey, have you ever tried to type and cross your fingers at the same time?" She came back with: "You'd better uncross your fingers, imagine what typos you'll get if you keep them like that! ;)" I wrote back: "You don't know what typos Matt has to put up with when I'm rushing like this to complete the newsletter. I might as well have my fingers crossed. I get so tired that I don't know if my fingers are seeing what I'm saying or not." I just thought this was funny enough to share. See how tired I am? Everything is funny when I'm tired. Hope you enjoy the newsletter. This is the last one for the season. You won't get another until the end of August. Have a GREAT SUMMER.***

ANTHEM ANNUAL STAR PARTY



This year's Anthem star party will be held at the Anthem Community Park (same location) on Saturday April 16 from 6-10pm. We are looking for volunteers and please RSVP with Terri so we have an idea how many scopes to expect.***

THANK YOU CHRISTINE SHUPLA

Christine, the Director of the Dorrance Planetarium at the Arizona Science center and my contact for doing the Adult Night Out events, treated those who could attend to a free "seeing" of the James Bond exhibit. I wish to thank her for the

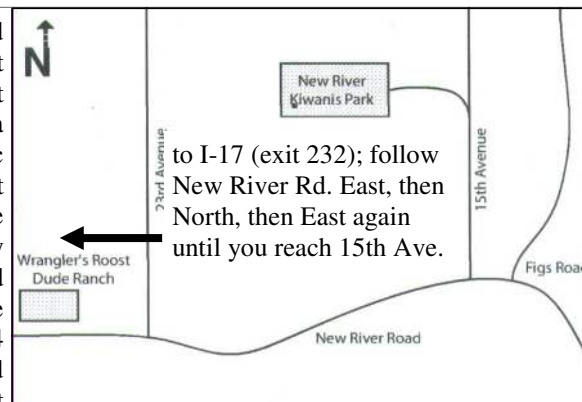
tickets and for a fun time. We really enjoyed the trip down there and hope to have clear skies and more Adult Night Out activities at the Science Center. Thank you Christine, from all of PAS.***

BILTMORE STAR PARTY REVIEW

This was a successful star party. The night was awesome and cooperative. The seeing may not have been spectacular but what everyone viewed was great. I wish to thank everyone who joined us at that star party. We had Sam and Frank Insana who put their scope on Saturn. Saturn was a very wonderful object for the night. Don Boyd also did Saturn which gave it a different view. Terri Finch did the Orion Nebula and wowed everyone with its beauty. Barbara and Scotty Hartman brought in the elusive Comet Machholz. Matt Kohl borrowed Kevin's binoculars and had Orion to show. Dan Heim had binoculars and showed Pleiades. Roger Serano brought his scope and showed Saturn. Leah Sapir showed the Owl Nebula. That was an awesome sight that night. And Kevin Harcey showed us



Sirius. And we aren't kidding about that. It was a fantastic night. We left with all the left over Sky and Telescope magazines (4 kinds) and used them at



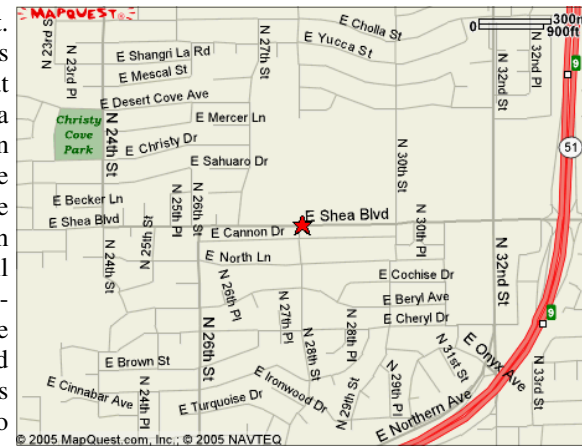
future events. Thank you Sean Ryan for inviting PAS to participate in this wonderful event. We hope to help you out again sometime soon.***

NEW RIVER DARK SKY APPRECIATION DAY STAR PARTY

On April 9th starting at 6pm, we will want as many telescopes and PAS people as possible to join us at the Kiwanis Park for an awesome Dark Sky Star Party. Bring everyone you know and your telescope.***

SHADOW MOUNTAIN H.S. STAR PARTY VOLUNTEERS NEEDED

Shadow Mt. High is located at 2902 E. Shea Blvd. in Phoenix. We are having the star party on Friday April 15 from 7-9pm. We need volunteers with scopes to show the



night sky to hopefully the whole school. If you can make it RSVP with Terri, soon. Thanks. See map for location.***

STAR TALES

received from Bette Wurst

Earth's Barringer Meteor Crater, located in Arizona, is an example on a small scale of the type of collision that can create or destroy a planet. At one mile across and 600 feet deep, this is the best example on Earth of an exposed impact crater.***

Since the moon's formation about 4.5 billion years ago, its distance from Earth has grown significantly. our closest celestial neighbor has been creeping away from us, moving farther out into space on average of 1 inch a year because of the effects of tides on the Earth-moon system. As a result, Earth is slowing down by about 2 milliseconds per 100-years.***



Here we have (L to R) Roger, Bette, Ed and Dan's Mom, Elaine enjoying some socializing at the 2005 PAS Social held up at Dan's home - Heimhenge. *photo by Dan Heim*



At the PAS Social, this past January, we see Bruce getting ready to take his turn playing darts. The pooch is Georg's dog Lucy. To the right is William watching as Bruce prepares to make a bull's-eye. *photo by Dan Heim*



These folks were caught snacking and enjoying the foods found at the Holiday Social. From left to right we have Mike, Matt, Amanda and William. The food this year was terrific and the people there were so much fun. *photo by Dan Heim*



Here is an excellent shot of Georg photographing the current photographer Dan as they share the experience at the PAS Holiday Social. *photo by Dan Heim*

Here are more of the PAS members enjoying snacks at the Social. Matt is back by the telescope, Terri is at the table with the White Elephant



Gift Exchange items, Jerry is reading the PAS times newsletter and Bette is seen snacking and smiling on the right. *photo by Dan Heim*



Here we see Dan getting ready to photograph the photographer, who in this case is Georg. *photo by Georg Koester*

Here Mike shows something to Disa while Bruce watches. Behind them is Dan's wonderful kitchen and we see Sam and Kevin back there getting in to the drinks. *photo by Georg Koester*



Here are Sandi, Vera and Bette enjoying some drinks and having a great conversation at the PAS Social. *photo by Georg Koester*



Bruce won this wonderful gift, which was donated by Jerry at the Social. It is an awesome metal sundial. It will go perfect at the cabin they have up north. *photo by Georg Koester*

At the Social, Jerry announced that the special door prize would be drawn but the winner would have to donate \$25 to the club for the item. Kevin won the prize, donated his \$25 and got a complete Rocket set which was worth \$125. *photo by Georg Koester*



A nice shot of the White Elephant gift exchange table. We had such a laughing good time with that this year. You won't want to miss next year's event. *photo by Georg Koester*

Amanda won this awesome Sun Clock which was donated by Georg. It hangs on my wall at the moment because Amanda and her husband are on the road Trucking. Once they settle down someplace, her clock can go to her new home with her. It is a really beautiful clock. *photo by Georg Koester*



Disa donated this awesome mobile of the Solar System and I won it. While we were doing the exchange, we kept calling it the Bread Box, because it didn't weight much and was shaped like a loaf of Bread. *photo by Georg Koester*



UPCOMING EVENTS UPDATED (see insert April Newsletter for more events)

APRIL

- 1 Adult Night Out** at Arizona Science Center - Nancy Welch, Topic: What Matters: The Maturing of Greater Phoenix - Volunteers Needed - Set up in Heritage Square 6pm.
- 2 Shallow Sky Star Party** at Lake Pleasant site
- 7 PAS Meeting** 7 pm Foothills Academy
- 9 Deep Sky Star Party** Location: New River - See Flyer for additional information and map
- 15 Shadow Mountain High School Star Party** 2901 E Shea 7-9 pm - Volunteers Needed with Scopes - Please RSVP with Terri if planning to attend
- 16 Anthem Star Party** at Anthem Community Park in Anthem 6-10 pm - Volunteers needed for handouts and with Scopes - Please RSVP with Terri if planning to attend
- 28 Meeting of the Minds** Denny's I-17 & Dunlap 7 pm - No Children
- 29-30 2-Day Special Carefree Observing Event** open to PAS Members Only, at Mike's house in Carefree. Bring scopes and sleep over needed items & cash to split cost of ordering dinner for sharing. Please RSVP with Terri if planning to attend
- 30 Shallow Sky Star Party** at Lake Pleasant site

MAY

- 5 PAS Meeting** 7 pm Foothills Academy
- 6 Adult Night Out** at Arizona Science Center - David Burstein Ph.D., Topic: Global Warming - Volunteers Needed with Scopes - Set up in Heritage Square 6 pm.
- 7 Deep Sky Star Party**, Location: TBA
- 11 Palo Verde Middle School Star Party** 7-9pm - Volunteers Needed with Scopes - Please RSVP with Terri if planning to attend - School is located at: 7502 N. 29th Ave
- 14 Shallow Sky Star Party** at Lake Pleasant site
- 19 William T. Machan Elementary School Star Party** 7-9pm - Volunteers Needed with Scopes - Please RSVP with Terri if planning to attend - School is located at: 2140 E. Virginia Ave
- 21 Astronomy Day** at Arizona Science Center, Volunteers get to explore Science Center for free for helping with PAS Display. RSVP with Terri if you can help out - Volunteers Needed - Scopes are not needed for this event unless you are displaying them, however creative ideas are needed. Please RSVP with Terri if planning to attend
- 26 Meeting of the Minds** Denny's I-17 & Dunlap 7 pm - No Children

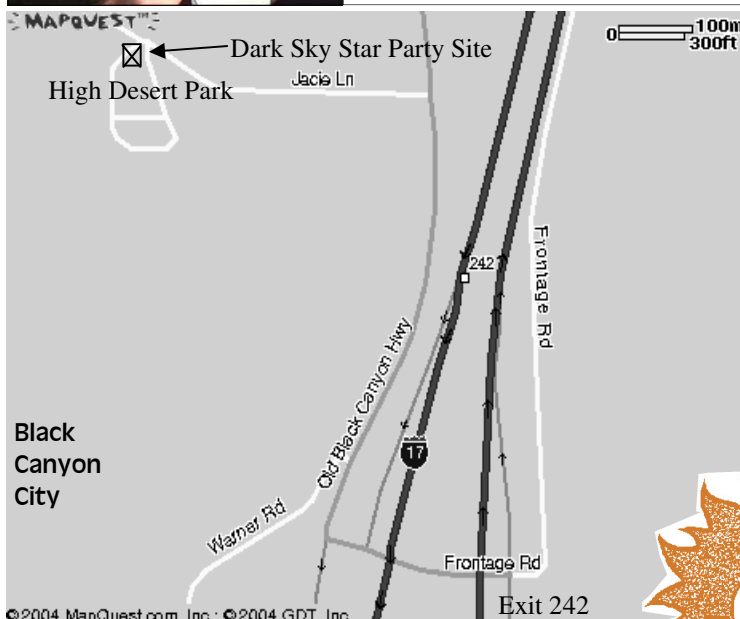


We have here three wonderful people. Matt, my coeditor, Amanda my daughter, and William, my husband, all caught eating the wonderful food at the Social this year. Behind them is Dan's fireplace. They are gathered over here to watch the progress of the yearly game of Darts. *photo by Georg Koester*



Kevin and food. That's a chicken wing in front of his face. Kevin seems to like strange photos. I usually catch him with a paper or book in front of his face. He doesn't like his photo taken but when you do get the chance, he does something weird to it. So, we see him enjoying a chicken wing at the Holiday Social. *photo by Georg Koester*

This is a great photo of Kevin. He was seen at the Holiday Social this year. He brought some really cool presents to give away and he also won some really nice things too. We all had a great time this year. If you want to read more about it, please see the April 2005 issue of PASTimes. There are 2 pages dedicated to this event in that issue. *photo by Georg Koester*



Lake Pleasant
Shallow Sky Star Party Site
Contact Jerry 623-328-9290
or Mark 623-435-5454 so
you don't go alone.

MAY 2005

PASTimes

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PHOENIX ASTRONOMICAL SOCIETY

Terri & William Finch
PAStimes NL Editor & HP Editors
10828 N Biltmore Dr #141
Phoenix AZ 85029 USA

PAStimes
May 2005 Issue

STAMP

BRING A FRIEND

Next Meeting: May 5, 2005
Speaker: Dennis Young
Topic: TBA
+ Officer Elections & Celestial Viewing

TO:

MAILING LABEL

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PAS MEETINGS 2004/2005

May 5, 2005, 7 pm
September 1, 2005, 7 pm
October 6, 2005, 7 pm
November 3, 2005, 7 pm
December 1, 2005, 7 pm

MEETING OF THE MINDS 2004/2005

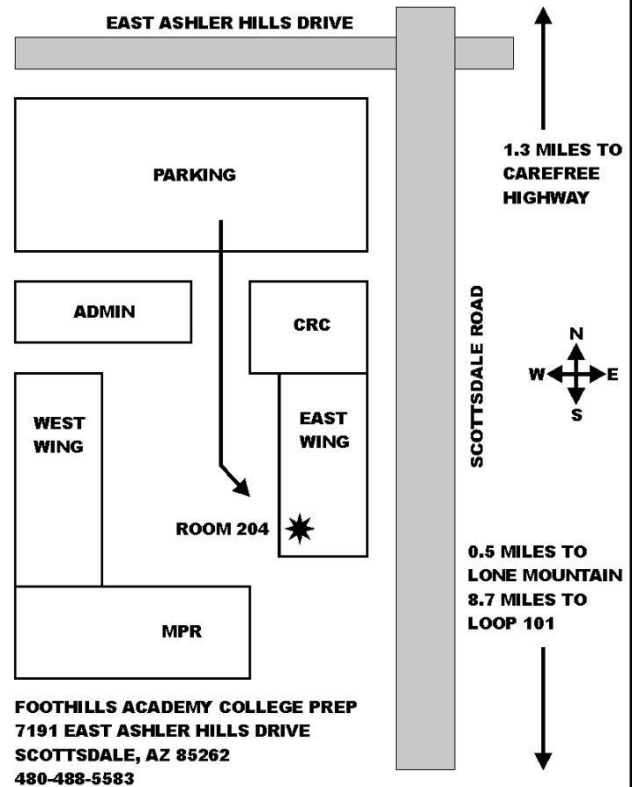
Apr. 28, 2005, 7 pm
May 26, 2005, 7 pm
June 29, 2005, 7 pm
July 28, 2005, 7 pm
August 26, 2005, 7 pm
September 29, 2005, 7 pm

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Submissions to **PAStimes** should be received no later than the 15th of the month for publication in the next issue. Email submissions received at: **PASEditor@yahoo.com** or **CoEditorMatt@yahoo.com**. Items arriving too late for an issue will be printed in a future issue (if applicable). **PAStimes** is produced monthly by Terri & William Finch and Matt Kohl. It is distributed to the members, friends & guests of the **Phoenix Astronomical Society**. It is also circulated to business, teachers, and organizations relating to astronomy. For needed changes to the **PAS Homepages** contact William or Terri Finch, or Matt Kohl. **KCH Cartoon** is by Kevin C. Harcey. Extra Editing & Newsletter Layout by Matt Kohl (MK). Meeting & Star Party **photos** taken & **Editorial** articles written by Terri Finch (Rip). Additional materials from sources as noted. For membership info contact Terri Finch or Richard Guthrie. For newsletter submissions or to get on the mailing list (2 months free) contact Terri Finch. PAS is a nonprofit organization with the purpose of educating the public, and sharing a great hobby! If you receive a duplicate copy of this Newsletter, please pass it on to a friend and inform the Editor. **CLEAR SKIES & HAPPY STARGAZING!!!**