

Volume 56, Issue 4

PASTIMES

Monthly newsletter of the
Phoenix Astronomical Society
Founded 1948

PAStimes Internet Home Page: <http://PASAZ.org>
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Swap Your Treasures at the December Meeting

NOVEMBER PAS MEETING REVIEW

We had a good turn out for this meeting. It began with a lot of socializing, and we waited till 7:45 to actually begin because people were still arriving. We did our usual 50/50 drawing and Jerry Belcher won and donated his winnings of \$15 to the club. Thank you Jerry. We had Ed Garbero filling in for John Pulis, who wasn't at the meeting. Ed did a fine job as Co-Host (his position). Thank You Ed. He also assisted in the clean up and the organization of



They gathered at the back of the room, around Adam, discussing things while feeding their faces with the candy, cake, and other goodies that were brought to the November PAS Halloween Costume Contest.

the meeting. Mark Opened the meeting and turned it over to Jerry for Star Party announcements. He announced the Pierre Schwaar Star Gaze in Sentinel in 2 weeks. He also pinned down the PAS Social for January 10th. We talked about the Phoenix Children's Hospital as a Bi-annual event, in the Spring and in the Fall. Everyone seemed to like that idea. Then the meeting turned over to Adam who talked about paying the Dues and the increase in Sky and Telescope to \$33/year. That will be reflected in next year's subscription pricing on the Dues Sheet. Then we had Terri do her announcements. There were plenty of handouts for everyone, and the prizes for the Halloween Costume Contest were laid out on a table. XS was being sold at the back of the room. Remember, buying XS helps the club because the difference between what it costs us, and what we sell it for,



Mike Marron came as a visitor from outer space. He bought a T-shirt while visiting Earth.

goes to PAS. So, Ed Garbero purchased the one and only can of the night, and we donate \$.15 to PAS. It doesn't seem like much but it is definitely worth it over time. Just like the Aluminum Can Drive. We don't take in much in small amounts of cans, but over time, there is quite a bit of money PAS is receiving from your donations of aluminum cans. Thanks to Mike Marron, we have another bag to turn into the recycling center. He is really striving to get that FREE membership for 2005. There are some upcoming star parties that will be talked about in other articles, so check them out. And then we did the Halloween Costume Contest. The entrants were: Terri Finch, Bette Wurst, Mike Marron, Ed Wurst and Kevin Harcey. The costumes were very interesting this year. See the photos I included in with this article. The meeting then turned to Dan Heim, our guest speaker, who did an exceptional job, as always, on the topic of "Weightlessness Explained." We were all involved in his discussion and Kevin Harcey and William Finch asked the most questions during the presentation. The video clips that were shown and the examples given were really well planned and an asset to this presentation. IF you missed this meeting and wish to see Dan present it again sometime, let us know so we can reschedule it again. After Dan's presentation, we reviewed the Costume Contest. Here are the topics and the winners: Remember WHO was in the contest... 1) Adam and Ed got 1 vote, Bette took 2 and Terri (The Ghost of Christmas Present) won with 9 votes for Most Original Costume. 2) Bette, Ed and Jerry had 1 vote each, Kevin had 2 votes, and Terri and Mike (Alien Hitchhiker) won with 4 votes for Most Unrecognizable.



Kevin Harcey came as the person who hangs Xmas lights before Thanksgiving.



Bette Wurst came as Pokie-hantas.

Most Original Costume. 2) Bette, Ed and Jerry had 1 vote each, Kevin had 2 votes, and Terri and Mike (Alien Hitchhiker) won with 4 votes for Most Unrecognizable.

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3) Ed, Adam and Jerry had one vote, Terri and Kevin had 2 votes and Mike Marron (Alien Hitchhiker) won with 5 votes for Scariest



You'd had to have been present to figure out who the person on the left is, but the one on the right is Ed Wurst, who came as Johnny Trash. His hat has a sign that says "This is a black hat," and his guitar has a sign that says "Johnny Trash."

Costume. Mike was also voted scariest as "Mike without a costume" by one of our voters. 4) Kevin and Bette had 1 vote, Mike had 4 votes, and Ed Wurst (Johnny Trash) took it with 8 votes in the division of Funniest Costume. 5) Don had 4 votes (*Co-editor's note:* Terri kept reading it as Dan) but Bette Wurst (Pokie-hantas) won with 9 votes for the PRETTIEST costume. And the last category winners were: Mike with 3 votes, Ed with 4 votes and Kevin Harcey (The guy who puts up his Christmas lights prior to Thanksgiving) took it with 5 votes for Most Unusual costume. I do wish to thank all who dressed up and hope to see more costumes next year. The winners got to choose

from a collection of items on the table. Most of the snacks were eaten and enjoyed. Mark closed the meeting and then we hung around for about an hour more talking and enjoying the snacks and cleaning up. You won't want to miss the next PAS Halloween Costume Contest in 2004. Please, dress up and join us.***

DUES ARE DUE

In case you didn't know this, at the December meeting, Adam will be providing me (I control whether you get the newsletter or not) with the complete list of who is and who isn't a 2004 paid PAS member. Yes, that means you have till November 25 (see Upcoming Events listing) to get those dues in to Adam so you make it on the list he will provide to me. We currently have 19 customers who get their newsletter by snail mail. That means I have to fold a duplicate, fold, staple, sticker, and stamp 19 newsletters to go in the nearby mailbox. I don't mind this, the total has gone down from 125 each month to 19. That is awesome. But, if you are scheduled to get the January issue, and your dues haven't been paid yet, **GET THEM IN NOW**. Also, that includes those wonderful people who are on my YAHOOGROUPS email list PASAZ-NL. If your dues aren't in, you will be deleted from that group. Guests stay for 2 months for free in both lists, and after that it is up to them to get dues in to continue to get the newsletter. So, look at your status and if you haven't paid up, **DO IT NOW**. We want you to stay part of PAS. Thank you so much for taking the time to resolve this right away. Have a superb day!***

THE PAS SOCIAL

You don't want to miss this event. Every year, instead of a meeting in January, PAS holds the PAS Social. This is a



And now you find out you really missed something. The ghastly ghoul on the left of Pokie-hantas is me, your editor. I came as the Ghost of Christmas Present (see the red present?) Don't I look dead? We had a good turn out of very creative costumes, and I wish to thank everyone who dressed up for this event. We hope for more costumes next year.

time to get to know the members of PAS. We meet at Heimhenge, which is Dan Heim's home in New River (north on I-17). He has a wonderful big screen TV for which he uses to do a wonderful presentation of something (always a mystery unless you attend). A few years it was movies, and some years it was Pyrotechnics (fireworks), he surprises us each year. He is a wonderful host. For the Social in January, you will want to plan to bring a food to share. In the past we have had hot wings, platters of foods, hot sauce (done by William - beware), all sorts of cookies, candies, and other home made items. You don't need to make an item yourself if you don't have time, but the home made items in the past have always been delicious. Plan to bring a dish to share, and Dan will provide the drinks, unless you want something special. The other part of the Social is the gift giving. In the past, we just had door prizes. Last year we started the White Dwarf Gift Exchange. So, this year we will do the White Dwarf again. What is that? Bring a gift, preferably astronomy related. Bring it wrapped and preferably disguised so no one can tell what it is by looking at the wrapping. Then, put it on the table at Dan's and pick up a raffle ticket to show you are involved in the gift exchange. When it comes time to do the exchange, usually right before or right after the surprise presentation by Dan, you will be drawn as to what order you get to pick a gift from the table or steal one from someone else. All gifts will be taken from the table prior to anyone opening any. The fun part is stealing one from your neighbor, and then having it stolen from you when the next person has a turn. Then after everyone has

gotten a gift, we will open them one by one. In the gift, if you wish to let the person receiving it know who gave it to them, you can put your name. Most of us do not do this, just because it is more fun to be a Secret Santa. The Social will begin at 7pm, and it is preferred that everyone start arriving as early, but no earlier than 6:30. Best parking is for those who arrive earlier. We have had so much fun at the PAS Socials in the past that we want every PAS member to attend. This is your After Christmas Christmas Party. We want to wait for all the Christmas rush to settle down, and then have one more event. It is best to start looking for that special White Dwarf item NOW than wait to the last minute. Also, you need to bring one gift per person in the family, if every member plans to get involved in the gift exchange. For my family I need 5 gifts: William, myself, Bette, Ed & Bruce. I bring 5 and we get to leave with 5. Some items that have been given in the past are: star charts, books about astronomy, puzzles (thank you Vera), Games, Hot Chocolate packets for that cold observing night, flashlights (red, blue, green filtered), and many other items that relate to Astronomy. As a point of interest, I had my shopping for this done back in June. I just keep an eye out for that special, really cool item that is affordable to me, and pick it up when I see it. Last



Pokie-hantas and Johnny Trash are seen at the November PAS meeting. Where were you?



See SOCIAL, p. 3

-SOCIAL, cont'd. from p. 2

year, I waited longer and had to rush to find something cool. The gifts can range in prices, but it is preferred that an item no less than \$5 is given. There is no upper limit. I thought of making a price range, but that is hard to do. Some Star Charts, for example, cost way too much to say - your upper price limit might be \$20. Maybe next year we can do something like that. DO you have an idea to share on this, contact me about it. Thanks. It is a fun filled night you will definitely want to attend. See you there! (**Dan's note:** The 2004 PAS Holiday Social will be on Saturday, January 10th, 6:00 pm to 10:00 pm (ending time flexible). Drinks will be on the house (soda, hot chocolate, beer, wine), Takahashi will be on the deck, food will be pot luck ... bring entrees, snacks, hors' d'hourves, deserts, whatever. The Heimhenge Home Theater will be presenting the usual surprise video feature relating to our favorite topic ... astronomy. See you all there! Dan @ Heimhenge***

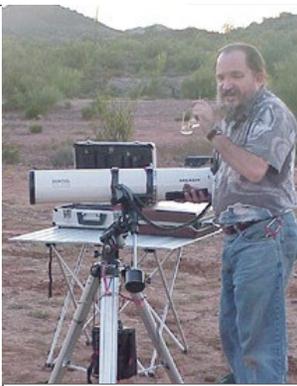
ALUMINUM CAN DRIVE UPDATE

Matt and I took a trip in mid October to turn in the aluminum that had been collected thus far. This is a tight race. We have a few people who are just gung-ho for getting that membership. Even if you aren't trying to get a free membership, your donations will help PAS tremendously. Donate any and all aluminum to the Finches so we can turn it in and get some \$\$\$ for PAS. We raised 17.70 this time. And here are the results of the race (which ends September 2004). This is in no particular order, just the order I have it on the list on my wall where I keep track of who is involved in the race.

Mike Marron turned in 29 more pounds of aluminum this time bringing his total up to 73 pounds. He is at the moment in the lead. Matt Kohl donated 18 more pounds bringing his total to 68 pounds. They are the two who are most active and competing neck to neck, racing to the end. Then we have a donation by the Finches of 10 pounds bringing their total up to 20.5 pounds. Bruce Wurst donated 1 pound bringing his total up to 9.5 pounds. Tim Steelman donated 1/2 a pound bringing his total to 11.5 pounds. Kevin Gray donated 1/2 a pound and his total is .5 pounds. Now, incase you don't remember where everyone else

stands... here are the people who didn't donate this last time but have in the past. Ted Finch is at 26 pounds, Adam Bloomer is at 1 pound, Don Boyd is at 15 pounds, Ed Garbero is at .25 pounds, Kevin Harcey is also at .25 pounds. That gives the total to date. So, we have Matt and Mike racing very closely. Who will win this race with only 11 more months to compete. Don't delay, turn in your Aluminum Today! And yes, You can catch up to these two racers if you send your cans our way, every chance you get. 11 months is a long time. A lot can

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Here we see Don Boyd setting up his telescope. We were teasing him because he was sighting in his finders scope on a near by cactus. We kept asking him if his telescope was still tracking the cactus. It was fun. And Don played along with our teasing. He's a great guy, especially at a star party.

happen and you could still win.***

ANTHEM VOLUNTEERS NEEDED

We will need volunteers for this event, so Please let me know if you can make it either with a scope or as a table watcher. Everyone is needed. The Phoenix Astronomical Society will be at the Anthem Park on April 17, 2004 to show the public the night sky. Admission is Free. There will be T-shirts, membership to PAS and slide sets for sale. There will be tons of handouts to help everyone know more about what the night sky has to offer (handouts are Free). What will you see? We anticipate about 20+ scopes and the highlights of the evening will be VENUS, MARS JUPITER and SATURN. We can also show you the Great Orion Nebula and some other really cool objects. Sunset will be around 7pm and viewing of Venus will start at that time. Everyone is invited, children included. Invite all your friends! There will be no Moon that night, so plan to be in the dark and if you bring a flashlight, please be sure to put a red filter on it or cover it with a brown paper bag to keep the light to a minimum. The past Anthem Star Parties have been a great success and we hope to see you out there! ***

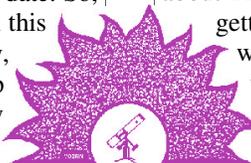
OCTOBER LAKE PLEASANT STAR PARTY REVIEW

It was an awesome viewing night. In attendance were Kevin Gray, Susan (his fiancé), Kevin Harcey, Adam Bloomer, Don Boyd, Mike Marron, Matt Kohl and the Finches. I wish to thank Kevin Gray for the snacks. He didn't hear it was NOT a POTLUCK, thus he came prepared with KFC Chicken. The rest of us had eaten before coming and only had snacks and drinks with us. I felt bad, but was glad he made it to the star party. We had an awesome night. Once the sun went down, the sky cleared up a bit, which was very nice. We viewed a slew of new objects. Adam had his brand new, just received that day, eyepiece, an 8mm, and it gave some awesome views of Mars. In fact, in his scope with that eyepiece was the only way we saw Mars's polar ice cap. We also saw the Pleiades, Andromeda, Perseus Double Cluster, Hercules Globular Cluster and a few new items. Don, Adam and Terri raced to several objects. That was a blast! Gotta do that more often. We had gotten there around 5pm, waited for the sun to set around 5:45, and viewed to about 11:30. We would have stayed out longer but most of us were getting cold and sleepy. Terri fell asleep in her chair, which wasn't the plan. But we enjoyed the evening. We also viewed from a new location. If you take Carefree Hwy and get off at the location you are supposed to and go in 1



Here we have Kevin Gray waiting, watching, maybe supervising the assembly of the Doctor? He was telling me how he never has seen me set up the Doctor in the daylight. Every time we get to a star party, it is usually after dark, or just getting dark, OR, we are in such a rush to get set up with tables and such for a public event that the scope gets put up last in the dark. It seemed to interest him on how one puts up a telescope. Thank you Kevin and Susan for bringing food and sharing.

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-PLEASANT, cont'd. from p. 3

mile to the dirt road, that is the location we usually meet. The alternate location is a 1/4 of a mile in on the right. There is a big open area that we can view in and it is rather nice. This time, though, we were up on top of the mesa. Back behind the open area at the 1/4 mile in spot. So, now we have three location. For future reference, we have the 1 mile location, the 1/4 mile location we call the alternative spot, and now we have the 1/4 mile Mesa area. Keep in mind which one we are referring to when looking for the group. Adam had another new toy which he used to let cars that drove by, know we were there, if they were looking for astronomers. He has a new green laser. I want one. Awesome, reaches really far and shows the objects in the sky just as if we were using our finger to point them out. He flashed that at the trees in front of the cars to let them know we were there, but after it got very dark, no one came up to our spot. But we had an awesome party up there. You must come to the next PAS Lake Pleasant Star Party and remember to call my cell before you leave home if it is cloudy at all, and if you are not sure which location we are going to be in. We chose the location this time due to the



I caught Mike Marron on film actually setting up his telescope. They were teasing that Mike doesn't have a telescope because we never see him use it or set it up. Actually, at the Wilson H.S. Star Party, not too long ago, Mike did set up his telescope and had many folk using it besides himself, while he told them of meteorites. Thank you for attending the star party and joining the observing fun.

guy at our usual spot shooting a gun at targets he had just set up when we arrived. Let's hope for clear skies like this night had, for our next star party. Bring everyone you know. Maybe we can make it a potluck. I'll check with Jerry. See you there!***

PROMOTING NASA'S DISCOVERIES

by Chuck Wood

Hi- I am Chuck Wood. You may recognize my more formal name (Charles A. Wood) from my monthly Lunar Notes columns in Sky & Telescope. A small group of observers and I have received a grant from NASA to help promote awareness of NASA's discoveries and, in general, the night sky. Our web site <http://www.observingsky.org> typically has 3-4 new short observing articles every night and welcomes comments and articles (and images) from observers anywhere in the world. "Observing the Sky" (OtS) differs from most other observing sites for we don't offer computerized predictions of what you can observe, but strive for frequent - often during an observing session - comments by active observers. Our lead observer is Jay Brausch, who is one of the most diligent observers in modern history: over the last 20 years he has observed >6000 sunspots, 2000 aurora, 1000s of meteors (not all in one night!) and noctilucent clouds and zodiacal light dozens of times. Other skilled observers from

around the world contribute reports and images. As an example, last week OtS was the first place on Earth to show the first aurora ever photographed in Greece. We welcome visitors (and their comments, questions and reports) of all skill levels. I hope you will recommend OtS to your club via your meetings, web sites and newsletters. Tell your members that we welcome their visits and examples of their work. And because we are new, we especially welcome suggestions for improving OtS. Thanks, Chuck***

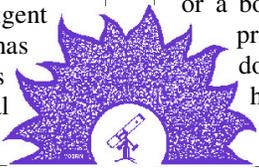
ASTRONOMY DAY AT ASC: EVENT IDEAS & VOLUNTEERS NEEDED

It is a really awesome, cooler Monday morning. I think our weather is finally cooling off and we won't have to be running the A/C as much as we were up to now. That also means that anyone who wants to help out with creating displays for the Astronomy Day event (May 15, 2004) can now do it at my place, because it will be cooler and we need not run the A/C for big crowds in our home. Also, that means that Movie night will now start up again and anyone who wants to get involved in Game Night let me know on those two items. Now, back to Astronomy Day. Help from you will accomplish this years' event. If you want to help, I need to know ASAP. I also need ideas and help purchasing stuff for the event. Everyone who is involved will be mentioned in my review and thanked from head to toe for any and all help they can give.

1. What I need are volunteers to run the displays. At the Arizona Science Center we will have, or at least this is the plan thus far, many tables, all on one floor, in a single long line, preferably against a wall, maybe in front of the Freedman Gallery wall, or someplace right there. The tables will have 3 fold, large display boards. Each board will have a different topic and a different person running it. I need people who know their topic and would like to assist. The ideas for these boards are listed below in #2. Since you will have the answers already planned out, and the prizes already gathered to give away, you will be in charge of making a child's day more interesting. This will be for kids 0-17. Adults can help the younger ones get the prizes but don't get prizes themselves.

2. If you plan to be of assistance to me, here is what I need help with. We are making 3 panel large display boards (which can be used in the future for other events at schools, so they won't just sit in my home. As a volunteer, I'd like to know: what topic in astronomy do you wish to talk about? If you read my previous email with the plans of what we are doing, you know that I am designing large boards of information, one topic of astronomy per board, and the idea is that someone who knows something about that topic, can discuss a little about it. Not much... just something like asking the kids questions having to do with the topic. For example, someone suggested I do the weight of the person on each planet. Well, what we do for that is have a guessing game. A heavy item of our choice, maybe a book or a box with something in it, is placed on the scale, which I provide and is in kilograms (not by choice but because I don't have any other scale available). We would already have an example

See VOLUNTEERS, p. 5



-VOLUNTEERS, cont'd. from p. 4

with a kid in it on the display board. the Box is weighed, and the math is done. **You have the answers in your hand** (if you are doing this display) and ask the questions... How much does this box that weights 6 pound on Earth, weigh on Venus? Mars? Etc. Each close enough answer gets a star, one star per participant. And you just keep going all day that way till you run out of stars. And each display will have either stars or something else to give away, something small and astronomy related and inexpensive.

3. So, if you pick a topic, what would you like it to be (this is to give me some ideas on what topics to make posters of) and what are some questions that can go along with this topic that the kids to do and figure out? I can use some ideas on what to design and how to create the answers and questions. I want it simple and educational. So, some ideas I was thinking of:

- A) weight on the planets, we can do all 9 planets and the sun.
- B) Galaxies - any ideas on this topic?
- C) Stars - life cycle, sizes, maybe ask questions about how big Betelgeuse would be if it were in place of our sun (the diameter, the temperature, or something like that and have some of the answers up on the poster board). Ideas?
- D) Telescopes - we will have our telescope display and need volunteers to bring their telescopes to show off, and someone to be in charge, that can be there all day and in the evening, to run the display, watching the scopes and managing the helpers. And if we do a display on it, position it near the scopes, we can ask questions about it like maybe DOES SIZE MATTER? I don't know... ideas on this are welcome as well.

I would like to do about 8-10 display topics with people to run them. So, if you have an idea, share.

4. I also need people who would like to help me create these board displays. If you have the time, please let me know. We will be doing it on random Saturday and Sundays. I will have a collection of magazines and other items available. I need people to help me assemble the boards with the

questions and everything else we are working on. I will begin that probably in December, after I've collected enough supplies to do it. We have a collection of really cool photos and pamphlets we can cut up and use for this, as well as some

old magazines. Hey, **Can you donate some old astronomy or sky and telescope magazines to be cut up and made into displays or other magazines?** On the weekends we create the displays, since we will be working on them very hard most of the day, I will treat the helpers to a movie that night at our home. We will rent the movie in exchange for the help. Everything else we do will be Dutch, so plan to bring a lunch or we can all go take a break and order out pizza or something to share the cost of. Your help is appreciated and needed. I'll provide drinks. We want to make it a fun time. Everyone is welcome to join in the fun. I will set up the dates soon, and let you know, and we will meet at my place like around 10am and work till about 6 or 8pm to get as much done as possible. All supplies will just live with me. And I will keep the poster boards for future use. Can you help out? Let me know.

5. Now, I was thinking of contacting a bunch of vendors of astronomy stuff and see if i can get some donations for

a raffle. Maybe have the kids stop at three displays of their choice, earn 3 stars or what ever the prize is, and then show those to me, and I'll give them a raffle ticket chance to win a grand prize, where I can give away posters and such again like last year. That worked out very well, and the kids left very happy. Any ideas on this? Share. Ok, I think I've given you an idea of what I am looking for. Now, I need some volunteers. I wish to thank Salah, of the ALL IN ONE DOLLAR STORE for offering to donate glow stars for this event and offering to help out as well. His store is located at 4722 West Olive Avenue Glendale, AZ 85302

6. I'd also like a donation of about 1,000 plastic bags. Anyone can get this by going to a store and getting the store info and offering to put them in the flyer that will be included as our sponsor list, in the bags we are giving away. I will need volunteers to give those bags away, one per family. It was decided that it would be a good idea to give away the pamphlets to those who stop by our tables and explore with us. Maybe we will have 2 people who give away the handouts in bags, and one or two who stand down front and hand out our sponsor list to everyone who comes through the door, one per family. So, I need at least 4 people for handouts. If you wish to volunteer for handouts, please let me know. There will be 2 of your so one can sit down at a time, taking breaks about every hour. And doing it as a team. Greeting the people, offering them some free astronomy info, etc. We will have some of the information available at the display as well, for the taking, if someone wants to learn more about the subject. That's where I'm going to get some of my information to make the displays as well. Ideas on this?

So, if you can or want to volunteer, even if you don't know if you will have the day available to do it, let me know. You can always decline later if needed. But the more info I have up front, the better I am at organizing it. Everyone who is involved will be working with the kids in some fashion.

7. Oh, I'd also like 1 or 2 digital photographers for this event. I have my camera, and Bruce will probably go around taking photos

again for me, he did awesome this last time, but if someone else would like to volunteer and burn all images to CD, that would be very helpful. As a photographer, you will do your photography during the set up of the event, during the event a few times during

the day, and possibly take some more outside when we do the evening viewing (if they schedule this). And then, the photographer will help out at the PAS main table. I will try to provide chairs for all my volunteers so that if there is a lull, they can feel free to sit and take a break if needed. We have a great project ahead of us and your help is needed and appreciated. All volunteers, donators, photographers, bag people, display makers, etc, will be appreciated and in the list of sponsors. If you wish to get your website listed, please le me know when you volunteer or help out. One display I will definitely have to not do much will be the METEORITE DISPLAY. I am hoping to have our Meteorite Man, Bob Holmes, with his display available again. If he can make something

similar to poster display boards with info on them, and then sit by it like he did last time with his display of meteorites that would be awesome. I haven't figured out what position Mike Marron is going to do yet, but I'll figure something

-See ASC, p. 6



UPCOMING EVENTS

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
NOV. 9	10	11	12	13 <i>Meeting of the Minds</i> - 7 pm @ Denny's, I-17 & Dunlap, back room. Please RSVP with Terri	14	15 <i>Lake Pleasant Shallow Sky Party</i> - See map; <i>High Power Rocket Launch</i> - Call Jerry for details
16	17	18	19 Leonids Meteor Shower peak	20	21	22
23	24	25 <i>Membership Dues deadline.</i> Get them to Adam to stay a current member	26	27 Thanksgiving	28	29
30	1 DEC. <i>Submission deadline</i> for January newsletter	2	3	4 <i>PAS Meeting</i> - 7 pm Speaker: TBA Swap Meet	5	6
7 Pearl Harbor Day	8	9	10 Saturn is 5 degrees S. of Moon	11	12	13

-EVENTS, cont'd. from p. 6

time will be 6:30, sunset is at 7pm, we need everyone there. Maps will be in the April newsletter. Visible that night will be Venus, Mars, Jupiter and Saturn.

May 15th, 2004, Astronomy Day at Arizona Science Center, all day, from open to close. We will be doing a bunch of exciting things for this event, and we need volunteers to help assemble the projects. We also need people who wish to run the displays.

These events require PAS members and others to join forces to make them a great success. If you can volunteer, please contact Terri and we will fit you in someplace where you can do the most good in our group efforts. Thanks to all who do volunteer and please mark these events on your calendar now, incase I forget to include them in the Upcoming Events list.***

ASTRONOMERS AT ASC FOR ASTRONOMY DAY 2004

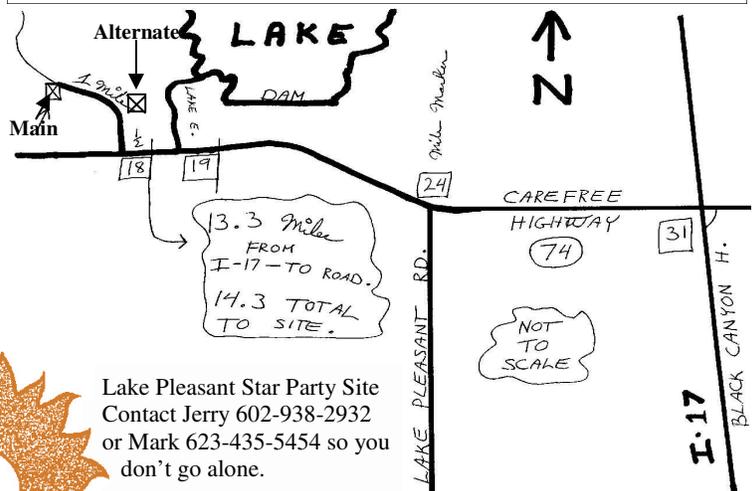
by Kevin Healey

In order to make the astronomers at ASU more visible at Astronomy Day, I'll volunteer that we will provide some kind of display or talk or something. I will start poking people in the Department of Physics and Astronomy and the Department of Geology and see what we can put together. Even if it's a group of students at a table talking about research at ASU, it would be time well spent. Thank you for organizing this event and thanks to PAS for all it does to bring astronomy to the public. We appreciate what you do. I just returned



from a conference in D.C. sponsored by the National Science Foundation and the National Radio Astronomy Observatory on "Communicating Astronomy to the Public". Time and again the efforts of amateur astronomers were brought up. I hope as I finish my degree I can help to forge better connections between the astronomers at ASU and the amateur community. Kevin Healey, ASU***

Co-Editor's Note: There just wasn't enough room this issue to place the rest of the Festival of Science pics. Will try for next month.



Lake Pleasant Star Party Site
Contact Jerry 602-938-2932
or Mark 623-435-5454 so you don't go alone.

PHOENIX ASTRONOMICAL SOCIETY

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PASTimes
 Dec. 2003 Issue

BRING A FRIEND



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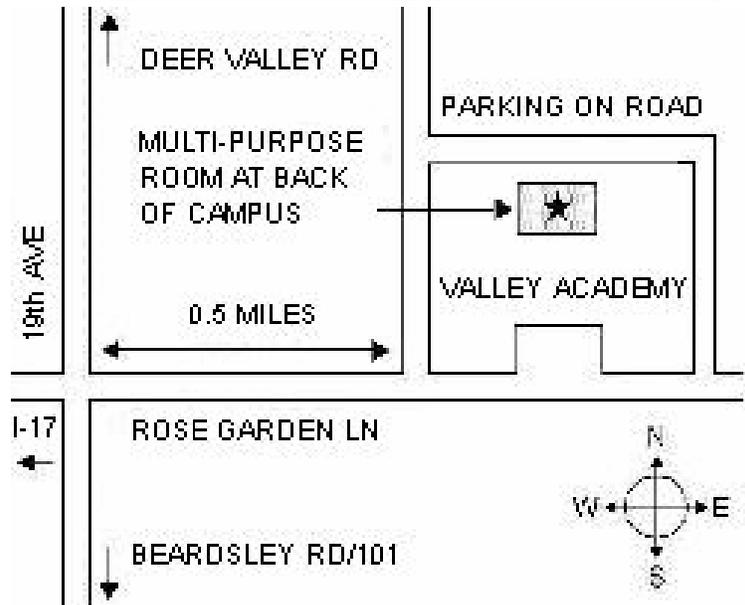
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