

Volume 57, Issue 3

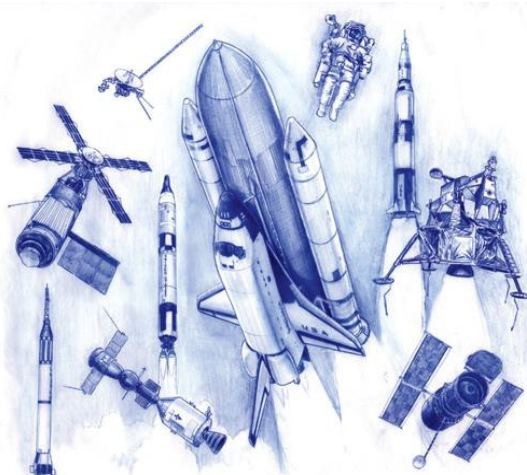
PAStimes

Monthly newsletter of the
Phoenix Astronomical Society
Founded 1948

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CHILDRENS' HOSPITAL STAR PARTY FOR LUNAR ECLIPSE CANCELLED

Here is the dilemma. The moon rises on the horizon already eclipsed, and from the view at the Children's Hospital, Jerry says we won't be able to see the moon till the eclipse is finished. So, here is what he proposes. We will have a wonderful Children's Hospital Star Party, just for them, on November 17, 5pm set up time, (mark your calendar for this one) and we need to get some scopes to confirm they will be there. We need a location that is open to viewing the Horizon. We need names of who will come. The Hospital will make us name badges and treat us like royalty, according to Jerry. So, that's one change. The other change is, we would like to hold a PUBLIC star party on the October 27 Lunar Eclipse date. And we need a location to do this. If you have an idea where we can hold it, please let me know and let's get it set up and get the advertising for it out to the public. I have access to a News dude who will advertise both of these events if I can get the info to him quick enough to run in the newspaper for us. So, let's toss the idea around and get back to me on it. This is highly important we come up with a location. The alternative is to join EVAC at the Arizona Science Center and do a star party down there with them. We can do that... I'm not saying - Don't.... but it would be nice if PAS had it's own public event for this Lunar Eclipse. Put your heads together and let's take about a week to come up with something. Email me the moment you have something in mind. ***

GET INVOLVED IN YOUR CLUB

Have you wanted to talk about how the PAS Meetings are run? Or did you have an idea to share and didn't know who to share it with? Well, for a year or so now, we have been having the MEETING OF THE MINDS. These meetings are held usually the last Thursday of the month (except November and December due to holidays) and they are designed for topics such as those listed above. This is your chance to make a difference in YOUR club. Yes, PAS is YOUR club. You belong because you care. If you sit back and let everyone else make the decisions and choose how your club will be run, then you can't complain to anyone but yourself for not getting involved. At the Meeting of the Minds, you will be involved in discussions on how the club is run, on how to raise funds, on how the next PAS meeting will happen

and who we have for speakers. Yes, you can make a difference by showing up at a meeting and putting in your opinions. It's easy. Come over to Denny's on I-17 and Dunlap on the last Thursday of the month (see listing in this issue of upcoming dates) and meet us in the back room We reserve the room from 7 to 10pm. We usually get done way before 10pm. Leave when you need to but be there for the beginning of the meeting when we make the most important decisions. When you arrive the first thing you will be asked is "Do you have a topic you would like to discuss?" It's that simple. Everyone gets to discuss what ever they need to. So, let's say your topic is how to raise funds and you have a brilliant idea to share. This is the place to do it. This is where your voice will be heard and we will listen. We need the input, we need the ideas, we need you at the next Meeting of the Minds. We not only want you to come for the meeting, but also because we have a great time there. Each of us orders a snack, so we get to eat and talk, we get to socialize outside of the club formalities, we get to know the Officers. This used to be an OFFICER'S ONLY meeting but we decided to make it open to anyone and everyone with ideas to share. Now is the time for you to share those ideas and come be part of PAS's decision making group. We are no longer doing our major voting at the PAS Meetings. You have to attend the Meeting of the Minds to be involved. The next several dates for our Meeting of the Minds are listed on the back page next to the list of PAS Meetings. Come have some fun with us. We really do have a blast and we get a lot done besides. Be part of PAS that makes the decisions and helps to improve the club for everyone. We Need You!***

THE FATHER OF STREET-CORNER GAZING

by Brett Campbell

When he was a child growing up in Beijing, John Dobson used to lie on his back, gaze upward, and imagine the sky was a vast ocean below him. If only he could slip the bonds of gravity, he wondered, how far would he plunge into the sky's endless depths? Mr. Dobson has never stopped wondering about what lies beyond our home planet. Possessing a quicksilver wit, a gift for turning a phrase that makes scientific concepts accessible, and an energy that belies his nearly 90 cycles around the sun, Mr. Dobson is one of history's greatest popularizers of science. Through his founding of the Sidewalk Astronomers of America, his invention of a simple, cheap, yet powerful telescope, his

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media attention (he's appeared on "The Tonight Show," PBS and dozens of radio programs), and his star parties, Mr. Dobson has brought the wonders of the universe to millions. And he's done it largely outside the scientific and academic establishments, traveling all over the world, an itinerant opener of eyes and minds. This summer alone, he's taught weeks-long classes in telescope making and cosmology in Texas, Oregon and New York. Then after a trip to Italy and a brief stay in his San Francisco basement apartment -- his "home" for only a few weeks each year -- he's off to South America. Mr. Dobson's childhood curiosity about the universe has never wavered. After his parents -- both teachers -- returned to San Francisco from China in 1927, Mr. Dobson studied chemistry at the University of California at Berkeley. But while he learned that science could explain much of how the universe worked, Mr. Dobson's search for deeper meaning led him in 1944 to join San Francisco's Vedanta monastery, where he found that the pre-Buddhist philosophy that originated in India complemented rather than contradicted science and empirical observation. (He's now completing a book that he hopes will reconcile quantum physics with ancient mysticism.) In the early 1950s, Mr. Dobson spied a 12-inch piece of porthole glass on a friend's table and realized that it could be polished with sand into a reflecting telescope mirror. As an ascetic monk with no money, he was forced to scrounge for materials, cobbling the mount from such humble objects as a plywood box, the cardboard cores of garden hose reels, and roof shingles. Then he pointed his homemade contraption at the moon -- and was astonished by how much detail he could see. Craters, mountains, crags leapt to life. "It was like I was coming in for a landing," he says. His eventual design for an affordable Newtonian reflecting telescope would later be named the Dobsonian. Mr. Dobson started lending telescopes to kids who'd see him stargazing on the streets of San Francisco, and then teaching them to make their own. Eventually his absences led to his dismissal from the monastery. A few months later, in 1968, he co-founded the Sidewalk Astronomers, headquartered in a retired school bus that made hundreds of trips around California for star parties. Its two-dozen chapters now include São Paulo, Liverpool, Moscow and British Columbia. And Mr. Dobson still lives like a monk, shunning possessions as he stays with members and friends on his travels around the world, teaching people to build telescopes and to understand what they see with them. At a recent appearance Mr. Dobson briskly enters a planetarium crowded with children and adults eager to hear his unorthodox view of cosmology. He flings hundreds of small fliers in the air, and as they flutter through the crowd, Mr. Dobson launches into his condemnation of the Big Bang -- which he dismisses as the idea that "nothing made everything out of nothing." Citing sources as old as Einstein's groundbreaking 1905 Special Theory of Relativity and as



recent as current papers in astronomy, Mr. Dobson makes the case for a universe that has always existed. Much of his explanation is lost on anyone not conversant with recent developments in astrophysics, and seems unlikely to persuade the overwhelming majority of physicists who have for decades subscribed to the Big Bang theory. But regardless of the ultimate outcome of that debate, Mr. Dobson's real legacy is apparent in what happens after his lecture, when the audience moves outside to find a dozen or more telescopes set up and pointing at the evening sky. The members of the telescope class Mr. Dobson has been teaching for the past month are showing off their new scopes, assembled for a few hundred dollars from hardware-store components. (A Dobsonian can be made for as little as \$20 if you don't take shortcuts.) They've been setting up on busy street corners for the past week, drawing crowds of curious viewers young and old. Some of the cylinders stretch to eight feet long and more than a foot in diameter, and it's a wonder that the sight of a half-dozen or more mortar-like tubes pointed skyward doesn't prompt a visit from Homeland Security. "Awesome!" cries one teenager. "Wow!" marvels another. Despite the ready availability of recent TV and Internet images of Saturn's rings, passersby and students alike are clearly amazed by what they can spy through a telescope lens: Jupiter's bands, other galaxies, and a three-quarter moon whose surface is so distinct it seems you could almost spot the American flag at Tranquility Base. Small scopes can make big discoveries, like the planet discovered last month in a constellation 500 light years from Earth by astronomers using a four-inch telescope (a third the diameter of some of these), or the nebula nabbed by a Kentucky amateur astronomer's three-incher. Mr. Dobson's affected irascibility vanishes as he ushers bystanders over to peer through the eyepieces. For him, gazing beyond the earthbound features that humans evolved to perceive is a way to overcome what he calls our "genetic programming" -- mistaken notions such as the earth being flat, and the sun revolving around it. Both the Vedantans and the quantum physicists understand that what we perceive is merely an apparition, and Mr. Dobson challenges us to see beyond our egocentric, earthbound point of view to glimpse the strange beauty of the reality beneath and beyond. Just as the young Mr. Dobson was able to envision the sky as an ocean below him, what he really wants viewers to see through their telescopes is a new perspective. Recently a puzzled park ranger, spotting Mr. Dobson leading one of his frequent star parties at Yellowstone National Park, asked the old stargazer if he considered the sky to be part of the park. "No," he replied, "the park is part of the sky."***

FRED WHIPPLE, WORLD-RENOWNED HARVARD AND SMITHSONIAN ASTRONOMER, DIES

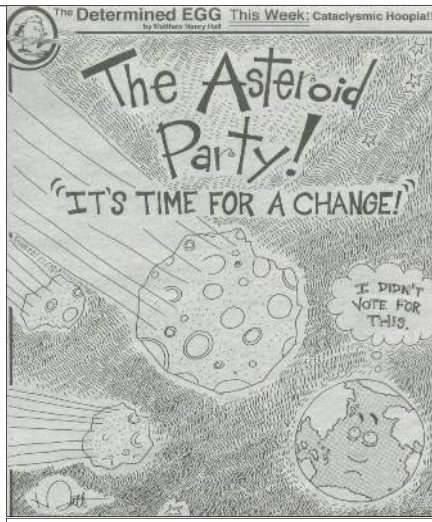
received from Gene Lucas

Dr. Fred Lawrence Whipple, the oldest living American astronomer and one of the last giants of 20th century astronomy, passed away at the age of 97 following a prolonged illness. He was Phillips Professor of Astronomy Emeritus at Harvard University and a Senior Physicist at SAO. "Fred Whipple was one of those rare individuals who affected our lives in many ways. He predicted the coming age of satellites, he revolutionized the study of comets and as Director of the Smithsonian Astrophysical Observatory, he helped form the Harvard-Smithsonian Center for Astrophysics," says Charles Alcock, current

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Director of the Harvard-Smithsonian Center for Astrophysics (CfA). A discoverer of six comets, Whipple may be best known for his comet research. Five decades ago, he first suggested that comets were "icy conglomerates," what the press called "dirty snowballs." His dirty snowball theory caught the imagination of the public even as it revolutionized comet science. Whipple's change of concept from the generally accepted "flying sandbank" model was "one of the most important contributions to solar system studies in the 20th century," says Dr. Brian Marsden, director of the Minor Planet Center located at SAO. "I think many people would agree that that was a really shining moment in his scientific career." A 2003 survey by The Astrophysical Journal showed that Whipple's 1950 and 1951 scientific papers on the "icy conglomerate" model were the most cited papers in past 50 years. Whipple's comet work continued for a lifetime. In 1999, he was named to work on NASA's Contour mission, becoming the oldest researcher ever to accept such a post. Never one to limit his work to one area of research, Whipple also contributed to more earthly challenges. During World War II, Whipple co-invented a cutting device that converted lumps of tinfoil into thousands of fragments known as chaff. Allied aircraft would release chaff to confuse enemy radar. Whipple was particularly proud of this invention, for which President Truman awarded him a Certificate of Merit in 1948. Whipple also strongly influenced the early era of spaceflight. Mindful of the damage to spacecraft from meteors, in 1946 he invented the Meteor Bumper, a thin outer skin of metal. Also known as the Whipple Shield, this mechanism explodes a meteor on contact, preventing the spacecraft from receiving catastrophic damage. Improved versions of it are still in use today. Whipple and a handful of other scientists had the foresight to envision the era of artificial satellites. Only Whipple had both the imagination and the managerial skill to organize a worldwide network of amateur astronomers to track these then hypothetical objects and to determine their orbits. When Sputnik I was successfully launched on 4 October 1957, Whipple's group was the only one prepared. Cambridge fast became a nerve center of the earliest part of the space age. Whipple and some of his staff were even featured on the cover of Life magazine for their satellite tracking prowess. Later, also under his leadership, SAO developed an optical tracking system for satellites using a network of Baker-Nunn cameras. That network achieved spectacular success. "It tracked satellites so well that astronomers were able to determine the exact shape of the Earth from its gravitational effects on satellite orbits," says Dr. Myron Lecar of SAO. For his work on the network, Whipple received from President John F. Kennedy in 1963 the Distinguished Federal Civilian Service award. "I think that was my most exciting moment, when I was able to invite my parents and my family to the Rose Garden for the award ceremony," Whipple said in a 2001 interview. Born in



received from Bette Wurst

Red Oak, Iowa, on November 5, 1906, Whipple studied at Occidental College and earned his undergraduate degree in mathematics at the University of California at Los Angeles, prior to moving to Berkeley to obtain his Ph.D. degree in 1931. He then moved to Harvard College Observatory in Cambridge, Massachusetts. Whipple directed the Smithsonian Astrophysical Observatory (SAO) from 1955 to 1973, before it joined with the Harvard College Observatory to form the Harvard-Smithsonian Center for Astrophysics (CfA). "Fred Whipple was a truly extraordinary person among extraordinary people. He was gifted with great scientific imagination, superb analytical skills, and excellent management acumen," says Dr. Irwin Shapiro, who served as CfA director from 1983 to 2004. In the late 1960s, Whipple selected Mount Hopkins

in southern Arizona as the site for a new SAO astronomical facility. Whipple was part of the group that initiated a novel and low-cost approach to building large telescopes first realized in the construction of the Multiple Mirror Telescope, a joint project of SAO and the University of Arizona. Mt. Hopkins Observatory was renamed Fred Lawrence Whipple Observatory in 1981. Dr. George Field, the first CfA director, says of Whipple, "He will be remembered by a generation of scientists for his leadership and for his keen insight. He was admired by his friends and colleagues for his integrity, and for doggedly pursuing his research into his nineties." In 1946 Whipple married Babette F. Samelson, by whom he had two daughters, Sandra and Laura. He also had a son, Earle Raymond, by his first marriage. Headquartered in Cambridge, Mass., the Harvard-Smithsonian Center for Astrophysics (CfA) is a joint collaboration between the Smithsonian Astrophysical Observatory and the Harvard College Observatory. CfA scientists, organized into six research divisions, study the origin, evolution and ultimate fate of the universe.***

COULD SPACE SIGNAL BE ALIEN CONTACT?

received from Jeff Brereton

An unexplained radio signal from deep space could -- just might be -- contact from an alien civilization, New Scientist magazine reported. The signal, coming from a point between the Pisces and Aries constellations, has been picked up three times by a telescope in Puerto Rico. New Scientist said the signal could be generated by a previously unknown astronomical phenomenon or even be a by-product from the telescope itself. But the mystery beam has excited astronomers across the world. "If they can see it four, five or six times it really begins to get exciting," Jocelyn Bell Burnell of the University of Bath in western England told the magazine. It was broadcast on the main frequency at which the universe's most common element, hydrogen, absorbs and emits energy, and which astronomers say is the most likely means by which aliens would advertise their presence. The potentially extraterrestrial

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received from Bette Wurst



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signals were picked up through the SETI@home project, which uses programs running as screensavers on millions of personal computers worldwide to sift through the huge amount of data picked up by the telescope.***

SEPTEMBER PAS MEETING REVIEW

We had an interesting first meeting at our NEW PAS meeting location at Foothills Academy Charter School. It wasn't a huge turnout but you could tell who the hardcore PAS folk were. We were very pleased so many people showed up and we even had one Foothills Academy student attend. Mark, our Prez, opened the meeting promptly at 7:30pm. This is the plan from now on. He introduced everyone and opened the meeting with a brief idea of where things were, and how to find stuff. Please note that there are **NO SNACKS AND DRINKS** for the purchasing at this location. Bring your own or purchase XS from the Finches and snack on the items brought by other members or provided by the Snack Fund each month. There are **NO** vending machines. There are bathrooms right around the corner from our meeting room (very convenient). Mark greeted our guest from Foothills and welcomed him to our meeting. His name, by the way, is also Mark. For the first 15 minutes of the meeting, several announcements we made. A few business items were taken care of that needed to be voted on. First, Richard suggested and we voted to make John Pulis an Honorary Life Time Member of PAS. That was put into effect and so it shall be. Mark and Dan announced that they are working on getting an astronaut for our speaker at the November meeting, Marsha Imans. Marsha is the Cousin of one of the students there at Foothills Academy. That should be very exciting, so we are all looking forward to that. Richard announced there is a current balance of \$804 in the treasury with only about 6 people having renewed their dues thus far. **REMEMBER: YOUR DUES ARE DUE.** Richard asked for a vote to create a check to Barbara Hartman to pay for our outing for September 11th at the High Desert Park in Black Canyon City. That was voted positive and the check was written and given to Barbara to take care of for PAS. Richard then wanted to announce that these kind of items, the voting and the other business items be taken care of at the Meeting of the Minds in the future and not take up time at the PAS Meeting. All attendees were informed that if they want to be part of voting on what happens with PAS, they need to attend those Meeting of the Minds meetings. Each of those meetings are designed to cut down on the business junk we have to take care of at the PAS Meetings. We prefer to make the PAS Meetings into something fun and exciting for the attendees, and leave all the business junk to the meetings that are designed for that - the Meeting of the Minds held every last Thursday of the month (if applicable). Jerry then announced upcoming star parties and covered what the status of the Children's Hospital star party on October 27 was going to be. He said that he doesn't know if it will work out at this point and will check into it further and let us know. He also proposed that we consider having a Foothills Academy Ambassador. Last year we had a PAS Junior

Ambassador, whose purpose was to contact other kids of his age (J.T. was our Ambassador) and find out what they think of astronomy. Well, Jerry thinks if we have someone from the Foothills school, it would be a good way to promote our existence and meetings. So, he said think about this and we will discuss it at the next Meeting of the Minds (MOM is the abbreviation). Dan then took the floor around 7:45 and he did an awesome presentation. He always does but it seems that each time we see him do a presentation, he outdoes the previous one. Excellent! His talk covered the Apollo Moon Landings and the scientific side of it.

This was very interesting. He compared such things as the Moon and Earth and the trip the Apollo astronauts took to get to the Moon. He showed us the difference in the albedo of the two surfaces of the Moon (Maria and Highland rocks) and we discussed Transient Lunar Phenomena. We really got informed about a lot of details about the Moon, Earth and Rocketry to get there. It was awesome! And it was very interactive. Thank you Dan for such an informative and interactive presentation. Around the room, Terri had placed several things that everyone who attends is familiar with. We had the usual handouts, except these were up-to-date, nothing outdated. There wasn't room on the tables for extras. And we had a pile of past Newsletters, only back to the May Issue. The purpose of including the May issue (which will be at the next PAS Meeting as well) is because some of us are working to achieve the next part of the story for

the **ROUND ROBIN STORY**. It started in May, so I brought extra copies of the May issue incase anyone wanted to grab it and get started on working on that story. It seems we will have some competition for this coming month's issue. You might want to get your story going and get involved. Some more items that were around the room were the Snack table, XS Energy Drinks for sale, the PAS Pop supply (free to attendees), Lasers for Sale, and Dues sheets for those wanting to pay their dues on time. Dan Heim was our **ROUND ROBIN STORY** winner. He chose from the pile of possible prizes a 3-D CD which he then awarded our only Foothills Academy Guest - Mark - for attending our meeting. I thought that was very special of Dan to do that. I'd like to thank Ed Garbero, our PAS Host, for handling a new job very well. Ed was assigned a new way to take care of our guests. At the PAS Meetings it is now going to be that you will pick up your next issue of PASTimes Newsletter as you arrive. They will be on the first table when you walk in, as well as your Membership Card if you haven't picked that up yet. What Ed will be doing is... as you sign in, he will ask if you are a current member, until he figures out who is and who isn't, and if you are... then he knows you already get the newsletter. If you aren't, then he is going to ask you if you received the recent newsletter, which will be the current month (at the September meeting, it was the September and October issues). For the October meeting it will be November issue. The idea is that NEW guests will be greeted and offered a copy of the newsletter. Hopefully they will only take a hard copy if they haven't already received one in the mail or by the internet. We want to conserve copies. I only bring a few extras with me each month. So, Ed's job will be to find out who is a guest and give them a copy as they sign in. This will cut down on the extra copies being

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passed out when they don't need to be. The other thing he is going to do is tell the new people where to find handouts and snacks. This way they can help themselves while waiting for the meeting to start and feel like part of our group. We want everyone to feel welcome, especially the new folk. And if we can start having the Officer's make it a point to walk around and greet anyone they don't know, that would be great. Do this before the meeting so that the new folk feel welcome. I try to do it because everyone needs to know I'm the editor, and most of the time, I'm the one who invited them there. I need to thank Barbara Hartman and Sam Insana for bringing snacks. This is a great way to help the snack fund. If you can't donate to the snack fund with cash, please donate with snacks. We did raise \$4 for next month's snack fund which will help get a few extra cookies and such. When the snacks are brought if we can refrain from opening too many items at once, that would be good as well, because we can always hang on to a closed box of cookies till the following month if needed if there are plenty to go around. Anyone thinking of bringing snacks should consider finger foods that don't require a plate, such as cookies, chips, candy, crackers, popcorn and other small snackish foods. We appreciate the donations. I wish to thank Matt Kohl for helping set up and then take down all the tables and chairs for the meeting. He did an excellent and speedy job. We had gotten there with plenty of time to fuss about how we wanted to set up the room, and it worked out well. If anyone wants to help us set up in the future, that would be greatly appreciated. Dan did ask that we put the room back to its original position when we leave for the night, so we need help with that at the end of the meetings. Thanks so much in advance for your assistance. Our posted schedule will be as follows: 7pm to 7:30 socializing and set up for the Speaker. 7:30 to 7:45 announcements and opening introductions - keep them short. 7:45 to 9pm Speaker presents. 9 - 9:15 Q & A, 9:15 to 9:30 clean up and close up for night and leave. We appreciate everyone who made this night work out quick, clean, smooth... and fun. Thanks so much! We hope to see more in attendance next month. And we appreciate seeing Adam Bloomer at our meetings again. Welcome back Adam!***

ROUND-ROBIN STORY CONTEST

Do you enjoy writing stories? Would you like to win a prize for doing so? The Round-Robin Story Contest continues. Based on the introduction to the story (May 2004 issue) and the previous chapter write chapter 2 (leave it open-ended so we can add more chapters). It should be approximately 600-625 words in length. No need to bother with paragraphs. The deadline is the 15th of each month. The editors will then choose which one they feel helps move the story along the best and include it in the next newsletter (please don't make us write it ourselves). If you are the winner for that month, you MUST attend the next meeting in order to claim your prize. (Prize may be awarded the following month if your hard-luck story about why you couldn't attend the previous meeting is convincing enough).

HOUSTON, WE HAVE A PROBLEM CHAPTER 2

by Leah Sapir, based on an idea by Matt Kohl

The first thing we noticed was that some of the brown blobs were still stuck to our ship. William's skillful handling had managed to throw most of them off - at least now they weren't clogging our sensors and antennae. But

there were still plenty of blobs clinging tenaciously - I could count at least a few dozen. The second thing we noticed was that the sun seemed much farther away than it had been just a little earlier. It wasn't glinting as brightly off the surface of our ship. Jerry was the first to speak up. "Where are we now, anyway?" "We can't have gotten too far in just a few minutes," replied Dan, our navigator. "Uh, William - can you tell me what coordinates you used?" "I wasn't really concentrating on coordinates," William admitted. "It was more like, a little bit of this, and a little bit of that, to throw off those blobs." Dan turned on the holomap, and the space below the projector lit up with a beautiful three-dimensional moonscape - Dan's favorite default setting. Dan punched in a few numbers, and the scene changed to the central solar system. With input from our outboard antennae - luckily they were working again - Dan zeroed in on a spot and said, "I think we're about here, just a little past the orbit of Venus. But, we're farther from Earth than we were before. We must have swung around to the far side of the sun when William hit the accelerators." "Well, at least we're still in the solar system," replied Jerry, glancing out the viewport. "We can always..." he stopped short. "Were those blobs doing that before?" "Doing what?" I asked, as everyone crowded around the viewport to see what Jerry was talking about. Some of the blobs had extended amoeba-like tentacles, and were now sliding over the surface of the ship. "It almost looks like they're alive!" said William. "But they can't be alive, can they? Not where we picked them up - not that close to the sun..." "At that spot, outside a spacecraft, the heat of the sun would certainly destroy all life as we know it," said Dan. "No organic molecules could stick together in that heat and radiation. But, who says that 'life-as-we-know-it' is the only kind there is?" As we watched, more and more of the blobs had started to form tentacles and creep along the ship's surface. Their color had changed, too, from a deep brown to a pale yellow. "Do you think they might be cold?" asked William. "You know, they're kinda cute," said Terri, our resident biologist. "Maybe we could take one in and..." "No, you can't keep any of them as a pet!" I told her. "We don't even know what they are! They might be hostile - or poisonous - or radioactive..." "We could check them out with the sensors," suggested Terri. She sat down at a control panel and pointed the biochemical sensor towards the closest blob, which was now a pale shade of green. The machine took a few moments to register and display its results. Terri stared at the screen, searching for words. Finally she exclaimed, "I just can't believe it!" I looked over her shoulder to read the sensor's results, and I had to admit she was right - I couldn't believe it either. (to be continued)***

HIGH DESERT STARS STAR PARTY IN BLACK CANYON CITY on 9/11/04 Review

by Barbara Hartman

I arrived at the park about 6:30 pm, Richard Guthrie was already there setting up. Richard brought his son and granddaughter with him, as they do not get to see the Milky Way from home. There were a few late afternoon clouds that I believed would dissipate as the night cooled. As it turned out they came and went all night long, about 9 to 10 being the worst of it with the sky about 80% covered and almost totally clearing out after midnight. The night was warm with slight breezes early on that strengthened after about 1 am and became cooler. At

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7:21 pm we watched an especially good pass of the International Space Station, it was better than first magnitude, passed almost at the zenith and lasted for about 6 minutes before vanishing into Earth's shadow. We were all impressed. Richard stayed until about 10 pm and we viewed the Lagoon Nebula, M57, M29, and the very lovely double star Alberio among others objects through his telescope. I found the last of this years bright comets, Q4 at magnitude 8 and very near a 6th magnitude star it was very difficult to see in my 30 X 80 binoculars. Sweeping the binoculars made it more visible. I was preoccupied as I was working on my Binocular Messier award. I believe, I logged about 12 or 13 more objects and am now halfway there. About the time that Richard was ready to start picking up, Don had arrived, and that was around 9:30. We viewed several objects through Don's scope as well. Don was very helpful with identification of a couple of objects that I had difficulty with - Thanks Don! We were going to stay until moonrise so that we could start the Astro Leagues Lunar Observers club, but I was getting weary and moonrise was expected to be 4 am. So we packed up and left about 2:30 am. I believe that even though it was a really small group we all had a great time, I know I did.***

WEATHER BALLOON

by Ted Finch



photo by Ted Finch

(This) is a picture I took of the weather balloon that passed over Phoenix Friday morning (the 17th [of September]). The original was a 3 megapixel picture that, if displayed at 72 dpi, would be about 25 inches wide. I took a "piece" of that photo that was 2 inches wide for this picture. The news said that weather balloons regularly pass over Phoenix at an altitude of 20 miles or more. This one

was much closer, so could be seen by the naked eye -- and caused a lot of calls to the TV stations. They didn't say what altitude this one was at.***

OCTOBER 14 AT ASC

Howard of EVAC has invited all of PAS to join in the fun at their October EVAC meeting which is a special meeting being held down at the Arizona Science Center on October 14, which works out to be a Thursday. The topic sounds terrific and I'm going to attend, so I hope you can join me. I asked Howard to email me some more info about the meeting so that I can pass it around, so watch for it to come your way. They have rented the auditorium for this presentation. The starting time is 7pm. Prior to the EVAC meeting will be a viewing of the newest planetarium show "Galaxies." Everyone attending is asked to give their input on the new show. Admission is free. I borrowed this right from the EVAC webpage: October 14th - To kick off the annual All-Arizona Star Party, noted author Phil Harrington will speak about "Nights of Future Passed" -- a poignant, if not comical, look back at how far our hobby and our equipment have come in the 20th century. The site for this meeting will be

the auditorium at Arizona Science Center in downtown Phoenix.***

SATURN

by Kevin Schindler, Lowell Observatory, Dec. 2003

received from Bette Wurst

Edited slightly to fit needs of this newsletter by Terri Finch

When Galileo first pointed a telescope toward Saturn in 1610, he saw what appeared to be not one but three bodies close together, with the main planet in the middle, separating two smaller ones that seemed likely to be satellites. Galileo's view was very limited by today's standards, as the instrument he used was crude and only magnified about 20 times. When he tried to locate the Saturn bodies two years later, the smaller ones had apparently disappeared, as Galileo couldn't distinguish them any more. It wouldn't be until the 1650's that Christian Huygens, using a much better telescope than Galileo's and one that magnified 50 times, realized that the "satellites" were, in fact, a system of rings and the appearance of these rings changed regularly. Today, we know that they span 170,000 miles (70 percent of the distance from the Earth to the moon) but are less than a half-mile thick. However, even though they are quite expansive, the rings can't be seen from the Earth without the use of a telescope because of Saturn's great distance from us. On average, the distance between these two planets is about 1.3 billion kilometers, or 800 million miles. As a comparison, the distance between the Earth and moon is only about 385,000 kilometers, or 240,000 miles. The rings are composed of countless pieces of ice ranging in size from dust to boulders as big as houses. If you were to travel through them, your trek would be reminiscent of flying through a blinding snowstorm.***

OCTOBER 27th TOTAL LUNAR ECLIPSE

borrowed from http://www.stargazingforeveryone.com/Current_Newsletter.pdf

Check the October Sky and Telescope magazine pages 72 - 75; October Astronomy magazine pages 50 and 60; and September/October Night Sky magazine pages 44 - 48 for more information on this eclipse. All times listed below are approximate and local to Phoenix, Arizona. The easily visible phases of this eclipse (the partial and total phases) will be visible from 6:17 PM to 9:52 PM. This will give you plenty of time to enjoy the eclipse and maybe even try to photograph it. The eclipse can be viewed without any optical aid, but binoculars or a telescope will enhance your view. The moon rise is at 5:33 PM, but unless you have a very clear view to the Eastern horizon don't expect to see the moon until after 6 PM. The moon will already be into the penumbral eclipse phase. This phase will not show any real darkening. The first contact of the entry partial eclipse phase is at 6:17 PM with the moon about 8 degrees above the horizon at a local azimuth of 80 degrees. The entry partial eclipse phase continues until 7:26 PM when the total eclipse phase begins. The total eclipse phase continues until 8:42 PM when the exit partial eclipse phase begins. This total lunar eclipse phase will last for 1 hour and 16 minutes. The exit partial eclipse phase continues until 9:52 PM when the exit penumbral eclipse phase begins. For all practical purposes the eclipse is over at 9:52 PM.***

NASA IS LOOKING FOR AMBASSADORS

Here's an interesting opportunity for all of you. NASA is
See AMBASSADORS, p. 7



ADS IN PAsTimes

This is the PAS advertising column & is a FREE service to all PAS members, guests, & VIP. Any Astronomy related items (books, scopes, binoculars, services, etc.) may be listed here that are being SOUGHT or SOLD. The item will only be advertised for ONE MONTH, but may be renewed each month (as needed) by contacting the Editor, by the newsletter deadline (the 1st of the month). It is requested that Non-PAS Members please make a small donation for placing your ad in both the PAsTimes newsletter and to my list of 170+ astronomy-loving email contacts. Please make check payable to Phoenix Astronomical Society and send to the return address on this newsletter. We do your advertising in hopes of great returns.

AMBASSADORS, cont'd. from p. 6
looking to recruit more of its Solar System Ambassadors. These are volunteers from around the US and Puerto Rico who help build awareness and enthusiasm for space and astronomy. NASA supplies the educational material, videos, etc, and puts you in contact with various mission scientists. You've got to put on at least four public outreach events a year. Sounds like a good trade if you're a space enthusiast.

They're accepting applications until October 15th, so if this is an interest to you, visit their website: <http://www.jpl.nasa.gov/ambassador> ***

MEETING OF THE MINDS

Review for Sept. 30, 04

I got a call from Mark, "Can we cancel the Meeting of the Minds tonight?" I said, "Why?" He said, "Because the Election Debates will be going on and we probably won't have the turnout we really need." We didn't cancel it. Instead, the main core PAS People showed up and we had a good meeting. We didn't have Jerry there, as he is away for 2 months in California. Must be nice. I hope he has a great time. We did miss his input at the meeting. We didn't have Mark there because he drew the short straw and the rest of his work buddies went home early to watch the debate. He was stuck there till 9pm, so he didn't make it to the meeting that night. We didn't have Don Boyd there because his car wasn't working. But we did have a nice collection of the Core, serious PAS people, the ones who care about PAS. This shows you who runs the club. Oh, and if you want to make a difference in the club, you should be at these meetings. This is where all the business stuff takes place and happens. Decisions are made, we vote on things, we plan our future. You have to be there to help out. Anyway, let me give you the review of what we had discussed. We had plenty of topics for the evening. We got word from Dan that January 22 will be the PAS Social. Mark it on your calendar now and get a gift for the White Dwarf Exchange. I don't

know if Dan has anything new planned this year, but I do know we will get to meet his Mom as she will be attending the Social. In order to receive a White Dwarf gift, you must bring one in exchange. I will give you more details in the next newsletter or as we get closer to the date of the Social. Dan was telling us about a website with a web cam that watches the progress of Mt. St. Helen. He said you can see it warming up (recall it is noted as about to blow). He says he visits the site just to watch to see if it has gone off yet. Pretty interesting. If I find that website, I'll pass it along. (<http://www.fs.fed.us/gpnl/volcanocams/msh/> - Matt) We also discussed the topic of Observatory Invite, which was my topic. During the Festival of Science about 10 years ago, I got to attend the Braeside Observatory. At that time, I just went to find out more about the Observatory. Well, as part of my birthday celebration this year, I decided to contact the Observatory and see if they wouldn't mind doing a tour for 5 people sometime last weekend. I got the

tour reservation and Dennis Feather, the current curator, who used to belong to PAS, took us on a tour. Read about it in the Festival of Science Review. He told us that if PAS wants to use the facility for a star party or some other type of club event, he would check with his boss and try to set it up for us. So, we have, in a sense, gotten PAS's Foot in the Door of the Braeside Observatory. Then we discussed the November PAS Speaker. We had an Astronaut from NASA who was going to do the

presentation. She is on call with NASA so she can't commit to the date, but it is our hope we will have her as our speaker. In the mean time, it was voted that we ask Dennis Young to come down and do a presentation and if for some reason we have the Astronaut come in as well, we can then have Dennis show us his 28" Telescope by having it set up outside for us to view through. So, I will email Dennis right away and find out if he is available. The Astronaut's first name is Marsha, and so Marsha and Dennis are both Tentative for the November Speakers. Then we discussed star parties. Now, with the upcoming Lunar Eclipse we had to decide where the best place to hold the star party would be. We voted to hold it at our meeting location on October 27th at Foothills Academy. If you can at all make it with your telescopes, please do. We also discussed doing a star party on or around Halloween. Halloween falls this year on a Sunday, so we were thinking of having a star party on the 30th. The location is up in the air right now but we were tossing around the idea of the school Mike knows of in Cave Creek, wouldn't be far from the meeting location, dark skies, and they are having a carnival, so we would just be an added addition to their planned events. Watch for news about that event so you can attend. Dan brought up the PAS constitution next. He felt it was necessary to clarify with Richard that the newest version, done in 1997 or so, did indeed incorporate all that was in the original version. We had a good discussion about that. Our next topic was the Aluminum Can drive. We all know Mike Marron won this year's event. We also voted against doing it next year, as we haven't had anyone volunteer to take over the storage of the cans until

See MOM, p. 8

BALDO



received from Greg Askins

BY CANTU AND CASTELLANOS



MOM, cont'd. from p. 7

we can take them to be recycled. However, we did raise a collection of money doing this event, so if in the future anyone wants to be the house for the storing of the cans, please volunteer. Mike has been awarded his FREE 2005 PAS Membership at the Meeting of the

Minds, but he will also be acknowledged at the PAS meeting this Thursday. I will be collecting one last batch of cans for the purpose of giving PAS the money from them, if you care to donate one last time this Thursday. Dan then showed us the Life Time Membership Award that was being mailed and presented to John Pulis. That goes in the mail this morning and John should receive it in a few days. That is a great honor to become an honorary member. Then Dan showed us a letter he prepared, from PAS to Roger Serrato. Roger and Dan have been working to make a really cool Lectern for our meeting location. The job is done and Roger doesn't want to be paid, but instead wants something for his records showing he accomplished this. Dan made an awesome presentation award page and we are happy to send it on to Roger for all his help. We discussed a topic Barbara wanted me to pass along. Barbara would be at the Meeting of the Minds but she has so far to drive. So, she gives me topics to discuss at the meeting and I try to do my best to present them like I think she would. Anyway, the topic we were talking about was the International Dark Sky Association. Barbara wants to have PAS join IDA. I passed along the info she gave me and the group declined it. However, they did say that I could put a link on the website giving the visitors the



Here we see Kevin (as usual) hiding from the camera behind a newspaper. Matt sits next to him. We have Dan talking about something of interest and William listening intently. This is a scene from the September 2004 Meeting of the Minds. You might want to attend to find out what we will talk about next.



Kevin, without the annoying paper in front of his face, Matt and Dan are listening to William this time. We are in the back room of Denny's, so behind William is a door we usually shut when we start the meetings. We hadn't started yet, so I thought I'd grab a photo or two to give you an idea of what to expect when you attend of one of these meeting.

chance to go join individually. So, I shall do that very soon. And the last item while we had the chance was that everyone present is now a PAS Member for 2005, we all paid our dues that night. Speaking of Dues, did you get yours in to Richard? If not, then please do it at the October PAS Meeting or sooner. Thanks. That about wraps up the Meeting of the Minds for this month (Sept). If you can at all make it to future meetings, it is definitely worth your time to be in where the decisions and voting is done. Remember, everyone is welcome (no children please).***

ASU WEST OPEN HOUSE

October 27, 2004 - 6:30 to 9pm

by Paul Shmidtke

It will be on the evening of October 27th -- during the total lunar eclipse. Because we need a good eastern horizon, we'll be using a different observing site. We'll set up on the east side of campus, along the outside of the new, large lecture hall. Unfortunately, there is no visitor parking even remotely close to this location. So, I'd recommend not bringing a telescope to this one! In addition to general viewing, I'll have some students doing a special lab that night.***

YEAR IN SPACE CALENDARS

I'm taking orders and sending them in at the end of October. Anyone interested. Go check out the website or see Terri at the meeting to see what they look like. The website is yearinspace.com and they are awesome little calendars with plenty of room to write as well as read up on the latest interesting facts and see awesome photos, a new one each week. The more orders we have, the less it costs per calendar. Email me if you are ready to purchase one. We get them for the price listed on the website. I hope to get them at a cheaper rate than last year, and last year we did a great job. Just enough to save a bunch of money. I'm putting in an order with or without your order, but it would be nice to have more people involved in the calendar sales to reduce the total cost per item. Thanks for your order. I am waiting to hear from you. Order goes in Oct 31, so get that order to me TODAY.***

DID YOU KNOW?

Borrowed from a Oatmeal packet

Our galaxy has approximately 250 billion stars - and it is estimated that there are 100 billion other galaxies in the universe.***



Here we see Ed Garbero in the way background on the left, and Richard Guthrie talking about something. Mike Marron and Kevin were chatting and then there is Matt who is patiently waiting for 7:15 which is our official start time to give the late arrivals time to arrive.

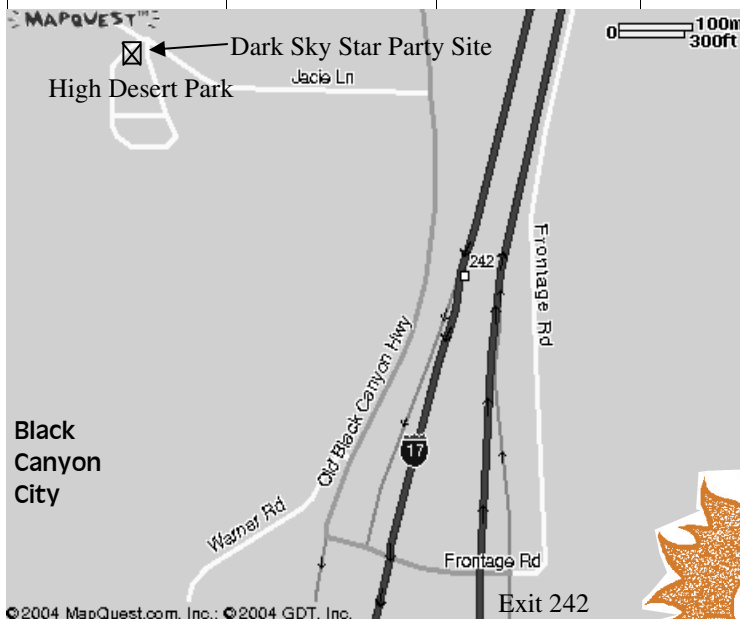
**Telescope Viewing of the
Total Lunar Eclipse
October 27, 2004
6:30 to 9:00 PM
From the East Side
Of CLCC-110
(Large Lecture Hall)**

Department of Integrative Studies
New College of Interdisciplinary
Arts and Sciences

ASU ARIZONA STATE UNIVERSITY WEST

UPCOMING EVENTS

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
OCT. 10 Venus 4° S of Moon	11	12	13	14 special EVAC meeting at Arizona Science Center	15 <i>Deadline</i> for submissions to December Newsletter	16 <i>Lake Pleasant Deep Sky Party</i> - see map
17	18	19	20	21	22 Orionid Meteor Shower Peak	23
24	25	26	27 Total Lunar Eclipse (see article p. 6); <i>Lunar Eclipse Star Party at Foothills Academy</i> - Volunteers needed; ASU West Open House Star Party	28 <i>Meeting of the Minds</i> , 7pm, Denny's, Dunlap + I-17	29	30 <i>Star Party at a school in Cave Creek</i> (tentative)
31 Halloween	NOV. 1	2	3 Saturn 5° S of Moon	4 <i>PAS Meeting</i> , 7pm, Speaker: , Topic:	5 <i>Adult Night Out</i> - Arizona Science Center- Volunteers needed 6 - 10pm; Last quarter Moon occults mag 3.5 star eta Leonis (disappears behind bright side 2:09am MST, reappears from dark side 2:38am) in E; Taurid Meteor Shower Peak	6 <i>Lake Pleasant Shallow Sky Party</i> - see map



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

NOVEMBER 2004

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
Nov. 2004 Issue

STAMP

BRING A FRIEND

NOVEMBER SPEAKER (tentative):
Dennis Young and/or Astronaut Marsha Imans
TOPIC: TBA

TO:

MAILING LABEL

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P.A.S. Meeting Location

Foothills Academy College Prep
7191 East Ashler Hills Dr, Rm. 204

PAS MEETINGS 2004/2005

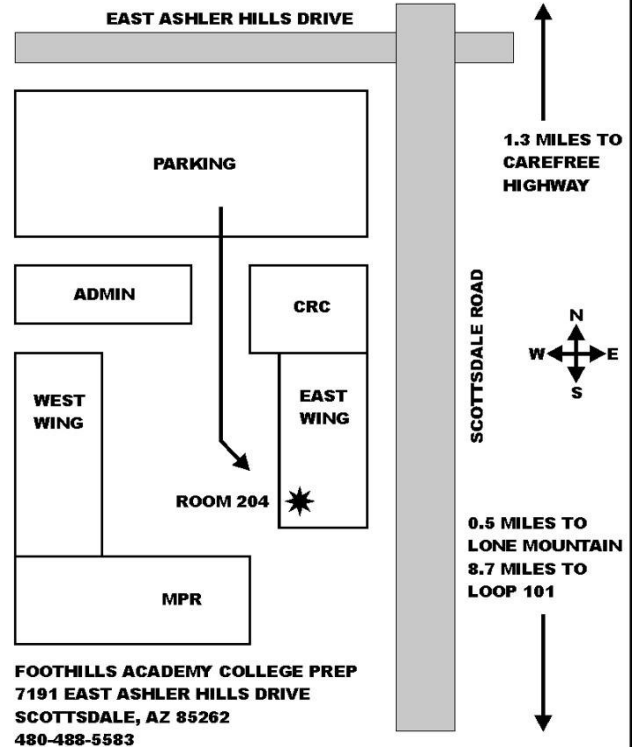
Nov. 4, 2004, 7 pm
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MEETING OF THE MINDS 2004/2005

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Mar. 31, 2005, 7 pm
Apr. 28, 2005, 7 pm

2004/2005 P.A.S. OFFICERS & DIRECTORS

POSITION	NAME	E-MAIL ADDRESS	PHONE #
President:	Mark Stephenson		623-435-5454
V.P. & Star Party Dir.:	Jerry Belcher		623-328-9290
Treasurer:	Richard Guthrie	rg85029@mindspring.com	602-943-8278
Multimedia Dir.:	Dan Heim	dan@heimhenge.com	623-465-7307
Editor & Photographer:	Terri Finch	alienstarstuff@yahoo.com	602-547-2420
Co-Editor:	Matt Kohl	coeditormatt@yahoo.com	623-847-3371
HomePage Dir.:	William Finch	gilgamesh_az@iname.com	602-547-2420
Hosts:	John Pulis		623-582-9235
	Ed Garbero		602-942-2452
Public Relations Dirs.:	Mike Marron	primefactory@cs.com	480-488-3031
	Kevin Harcey	kevinofphx@yahoo.com	602-622-0258



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