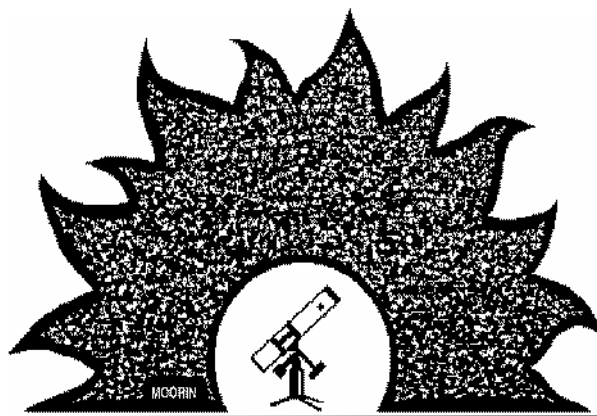




PAStimes

Phoenix Astronomical Society
www.pasaz.org

February 2007
Volume 59 Issue 6

PHOENIX ASTRONOMICAL SOCIETY — ESTABLISHED 1948

Dennis Young to be February First Speaker

By Don

PAS is pleased to have as its February speaker Dennis Young from the Sedona astronomy club Sirius Lookers. Young is also an honorary member of PAS.

Young makes his living giving star-parties in the Sedona area, and owns an 18 inch Dob and a 28 inch Dob, as well as

numerous smaller scopes.

His topic this month is "How to Collimate a Telescope." It will be interesting to see his approach as this author has read many different articles on this very necessary subject.

Young is also an accomplished astro-

photographer and I am sure will bring some of his fine prints to be offered for sale.

You don't want to miss this as Young is very interesting whatever his subject. I hope to see a big crowd for this first meeting of 2007.

January 18 PVCC Starparty

By Ed Rosenthal

Rod, Sue, and Don came over and we had a good time, 6-9 PM (waited for Saturn). I had my class go out, so we got maybe 25-30 people. We got an instructor here to join PAS -- the dues check was burning a hole in his pocket! We set up next

to the deck. No problems getting cars in or out.

Rod suggested putting some gravel down to keep the dust down. I don't know if that is a viable option in the long run -- remember, construction will start soon on

new buildings in that dirt field, and we will lose the area permanently.

We can probably do the Feb 15 star party by the deck, and maybe we could continue there for the rest of the semester, if you want; who knows?

Observing Tips

By Terri, Prez

For Winter Months

The cold of a winter's night can put a freeze on your observing plans if you're not well prepared. Your body loses most of its heat through the top of your head, so be sure to wear a hat even if you don't feel cold yet. It's also important to keep well hydrated. Make sure you drink plenty of liquids, but avoid anything with alcohol or caffeine.

The Orion Nebula

The crimson glow that's dominant in pictures of the Orion Nebula is the spectral hue emitted by energized hydrogen. M42 also contains super-heated oxygen atoms that produce a greenish light. At low light levels our eyes aren't very sensitive to color, especially the color red, so the nebula appears as a greenish gray in small telescopes.

Pleiades in February Skies

The Pleiades is known as one of the more spectacular objects to view in the night sky. This time of year is the best observing time. The cluster's 5 bright stars are arranged as a little dipper. The spectacular part of this view is the fainter stars that are sprinkled throughout the cluster. In a smaller scope, one can even catch the nebulosity of this awesome object

Saturn Is a Sight to See in February

This month, on the 10th, Saturn will rise at sunset and will be visible all night. It will be seen just west of the Sickle in Leo the Lion. Throughout February, Saturn slowly retrogrades westward toward Cancer. Watch the planet over a period of weeks and you may notice its motion as it

moves away from Leo.

Mercury This Month

At the beginning of the month, Mercury is a magnitude of -1 as it slowly moves up in altitude above the west-southwest horizon. It reaches its greatest elongation on Feb. 7th. The best time to view this planet is 30-40 minutes after sunset. ***

StarTales

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Corby Haste-JPL/NASA

The Phoenix Mars Mission is scheduled to launch in August 2007. Shown landing on Mars in this artist's rendering. Phoenix is designed to study water history and search for complex organic molecules in the soil of the Martian arctic. For more on Mars, see tomorrow's StarTales.



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Observatory: Done and in Service

Text and Photos By Rod Sutter

Ok guys, here it is. It's done and being used at this time. It measures 10x10.

Notice that I have rolled off the roof in pictures 2 and 3. It works better than I thought it would.

I just have to get my computer out there so that I can do some Astro-Photography with the Meade LPI that I got for Christmas. If any member would like to come over and use the Observatory, feel free to e-mail me and we can set-up a schedule. There is no power out there, so make sure that you bring warm clothes and drinks.

Check my web site at www.geocities/rod_sutter, to see the schedule. If there is no times posted in any date it means that the date is open for use. Let's

hope that we can get some clear sky's, not like the last few weeks have been. I've tried to do some viewing, and it seems like every night that I go out, the clouds roll in just as I get ready to get started. That's ok, summer will be here soon, and with any luck at all, the cloud cover will not hamper my views too many days.



SALLY RIDE FESTIVAL 2/25 VOLUNTEERS NEEDED

By Terri, prez

The Sally Ride Festival is a daytime event that has been enjoyed over the years by PAS members. In the morning, they usually have cake, coffee, and other things to wake us up. For lunch, we get treated to a sandwich and drinks. Along with having the opportunity to enjoy the girls and their families and friends who drift by the PAS table and check out what is new.

This year, we will be doing the event again. It is held at ASU Tempe campus. To participate, you will need to RSVP with me no later than 2/15 to be assured you are included in the group. We need someone to bring a tarp for us to hide under from the

sun. We want Solar viewing, and other daytime events. We need some folks to watch the PAS table so we can all take turns walking around checking out the other displays.

We are there from 11 am (10:30 am set up) to 4:30 P.M. (take down starting at 4:30 PM). If you wish to participate and can't stay the whole time, let me know so I can adjust the volunteers to cover your position. Please wear your PAS t-shirts, or something else that says you belong to PAS. If you are doing solar viewing, I suggest you wear long sleeves and a hat to shade yourself from the sun.

We need you to volunteer and I need your RSVP so that our contact for this event can make everyone's name tags. More directions will be given to you as the day gets closer. If you have the time on this Sunday in February, please join us for some fun. It is worth it just to meet the girls and see the other displays, and help your fellow PAS member promote PAS! I await your RSVP, today! ***



by Dr. Tony Phillips

People worry about asteroids. Being hit by a space rock can really ruin your day. But that's nothing. How would you like to be hit by a whole galaxy?

It could happen. Astronomers have long known that the Andromeda Galaxy is on a collision course with the Milky Way. In about 3 billion years, the two great star systems will crash together. Earth will be in the middle of the biggest wreck in our part of the Universe.

Astronomer John Hibbard isn't worried. "Galaxy collisions aren't so bad," he says. A typical spiral galaxy contains a hundred billion stars, yet when two such behemoths run into each other "very few stars collide. The stars are like pinpricks with lots of space between them. The chance of a direct hit, star vs. star, is very low."

Hibbard knows because he studies colliding galaxies, particularly a nearby pair called the Antennae. "The two galaxies of the Antennae system are about the same size and type as Andromeda and the Milky Way." He believes that the Antennae are giving us a preview of what's going to happen to our own galaxy.

The Antennae get their name from two vast streamers of stars that resemble the feelers on top of an insect's head. These streamers, called "tidal tails," are created by gravitational forces—one galaxy pulling stars from the other. The tails appear to be scenes of incredible violence.

But looks can be deceiving: "Actually, the tails are quiet places," says Hibbard. "They're the peaceful suburbs of the Antennae." He came to this conclusion using data from GALEX, an ultraviolet space telescope launched by NASA in 2003.

The true violence of colliding galaxies is star formation. While individual stars rarely collide, vast interstellar

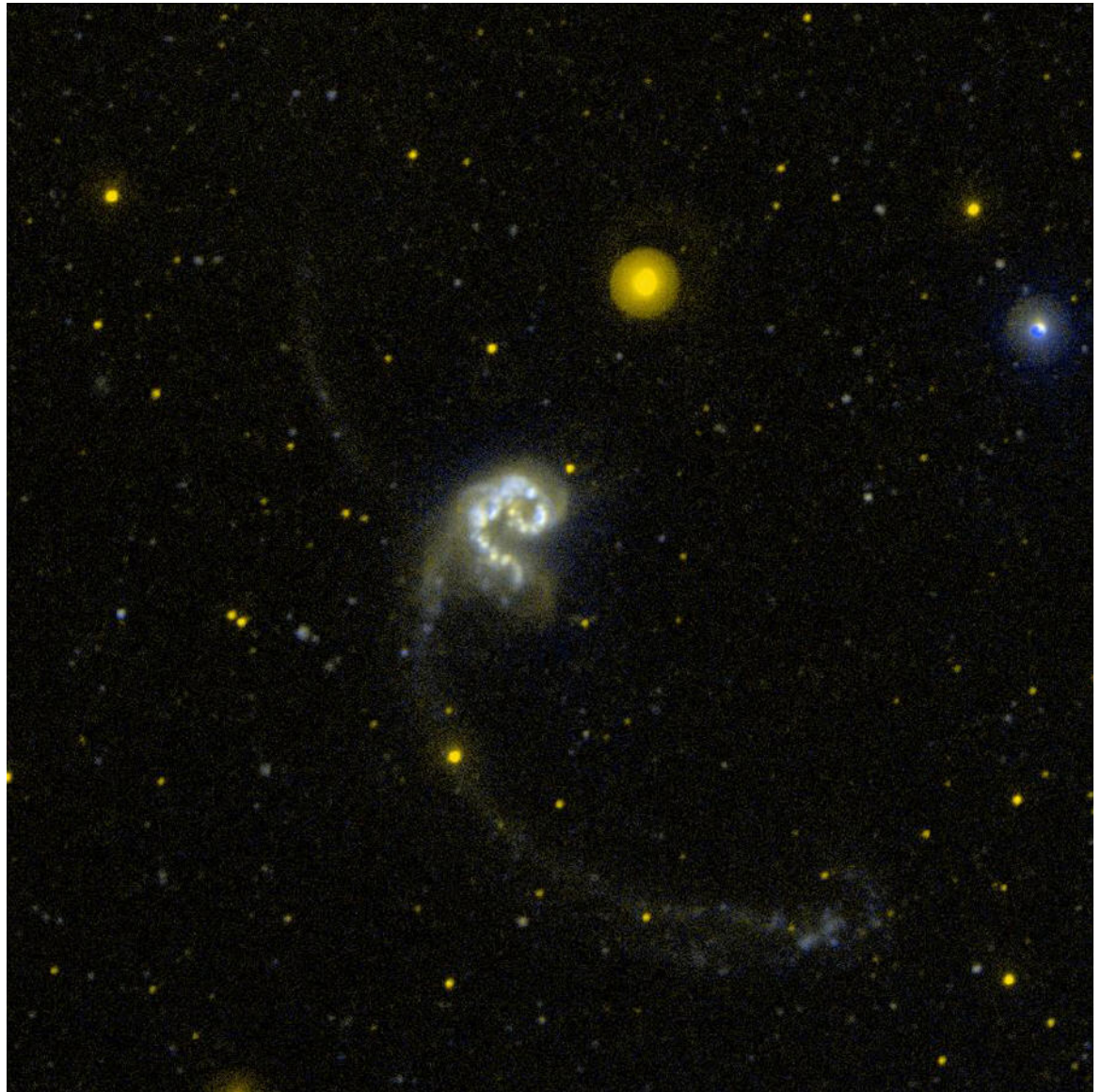
A Great Big Train Wreck

clouds of gas *do* smash together. These clouds collapse. Gravity pulls the infalling gas into denser knots until, finally, new stars are born. Young stars are difficult to be around. They emit intensely unpleasant radiation and tend to "go supernova."

GALEX can pinpoint hot young stars by the UV radiation they emit and, in combination with other data, measure the rate of star birth. "Surprisingly," Hibbard says, "star formation rates are low in the tidal tails, several times lower than what we experience here in the Milky Way." The merging cores of the Antennae, on the other hand, are sizzling with new stars, ready to explode.

So what should you do when *your* galaxy collides? A tip from GALEX: head for the tails.

To see more GALEX images, visit www.galex.caltech.edu. Kids can read about galaxies and how a telescope can be a time machine at spaceplace.nasa.gov/en/educators/galex_puzzles.pdf.



This GALEX UV image of the colliding Antennae Galaxies shows areas of active star formation, which is not in the tidal tails as one might expect.

Bookman's Telescope Class Review 1/14

By Terri, Prez

At the Bookman's class we didn't have a huge turnout, but the 2 gals who joined us were very nice. We got set up with a table of handouts, and other items, and shortly after that, we had Carmen and Isis at our class. Carmen has Isis interested in astronomy. Isis is probably about 6 years old but very intriguing and interested in everything.

It started with some really awesome help from John Pulis who took over showing the handouts and talking to Carmen about upcoming events and he did such an awesome job. I was impressed with how active he was in promoting the club. Thank you John!

Then, Mike took over and was sharing ideas on astronomy, physics, meteorites and more. The two of them sat on the floor by

Mike for the majority of the class learning more and more about what ever Mike was talking about.

While they were doing that, Rod, William, John and I were over on the other side of the room conversing and planning a book purchasing, the Social, and some other things.

As the class came to a close, I asked Carmen to do a Survey on the event to get an idea of what she thought. She has very nice hand writing. So, the survey says.... How did you like the activities? "Very informational. I liked the hands-on approach." What was your favorite activity? "The magnifying of the meteorites." What can we do to improve? "Bring a telescope." Now the reason we didn't bring a telescope

that day was because we were expecting another RSVP'd person to be bringing theirs. They didn't show up so there was no scope on display this time. The survey says she has not been to our website, so i hope that after this event she goes there, and she hasn't been to any other event we have had.

I believe the class was a success and our next one is Feb 3rd. We hope to see more folks there that day. Even if there isn't public there, we still have fun. And it is a chance for those of us in PAS to get a chance to share some other ideas we have been passing around and needing to talk over. Hope to see you at the next one. RSVP with me soon if you can help out, or if you want to attend to learn. Thanks to Rod, John, and Mike for making this class a success!***

January 7, 2007 Bookman's Telescope Class

By Rod Sutter

When we arrived at Bookman's on Sunday and entered the meeting room, there were already people waiting outside with their scopes. I knew it was going to be a good day. First to show up was Beth and her son Joseph. They brought a scope in that they had just bought a week before, they didn't know how to set it up properly and needed some help. As we were talking to them, Denise and her kids showed up with their telescope. As I was looking over Beth and Joseph's "Venture" 4.5" scope, I had to point out that their mount had a problem. The mounts on this telescope have plastic leg brackets, and plastic lock down knobs to lock the right ascension and declination axis so they don't move. The knob that locked the right ascension was broke at the top, and the end had broken off in the screw hole so that the knob would not tighten and hold the axis from turning. I advised them they should return the scope and ask for a refund. The scope they had really wasn't useful for a beginner. They would be better off purchasing a DOB. I just happened to have an Orion catalog handy, and went over some of the scopes that they would be better off purchasing. I told them the best thing to do would be to get your refund and come to our Star Party on Saturday at BCC, that way they could look thru a lot of different scopes and get a better idea of exactly what they would like to purchase.

Also joining our discussion group was Denise and her children. Denise had received a telescope from her work as a gift,

it's a Bushnell goto. She explained to me that she tried to read the manual on it, but she didn't understand some of the terminology. So I told her let's put down the instruction manual and started with the basics. After showing her how to set it up properly, I asked her, do you know anything about the sky and could you find a few stars by their names if I asked you? Her reply was "no". So I explained that she could use the scope without the goto, just by moving it around to the objects in the sky. I showed her how to setup the finder and how to align the finder with the scope. I also explained that in order to use the goto on the scope she would have to know a few bright stars. I told her we are having a Star Party at BCC on Saturday and they were welcome to come and I would give her more help with the scope. I could show her some of the stars she needs to align the scope with. She said that she would have to get with her husband and see what they could do. Sue told her that Don lives in Chandler and he might be willing to help her since she only lives down the street from him.

Since Beth and Joseph were new to Astronomy, and really didn't know constellation or how to start to read the sky, I offered a personal evening tour and some wonderful views of the sky if they wanted to come to my home after dark. Since they just lived down the street from my home, they showed up about 7:00 P.M. and I started out explaining how to find some of the easier constellations. We started with Orion, which is the biggest and easiest to find

and recognize from anywhere. By the end of the time allotted, they had discovered Orion, Auriga, Cygnus, Cassiopeia, The Great Square of Pegasus, and The Andromeda Galaxy. The best part was when we were just about done for the evening; I told both Beth and Joseph, OK now it's your turn to find "The Andromeda Galaxy." I already had my scope point at it but I just happen to bump it so that it was now longer in view, oh darn, now you have to use what I showed you about "The Great Square of Pegasus" to find the galaxy. I did this for both of them. After just a little help they both moved the big scope and after a few minutes, they actually found "The Andromeda Galaxy" on their own. They thought that was great that they now have found something in the sky on their own, and they know some of the sky to get them started on their adventures of becoming new members and new amateur astronomers.

StarTales

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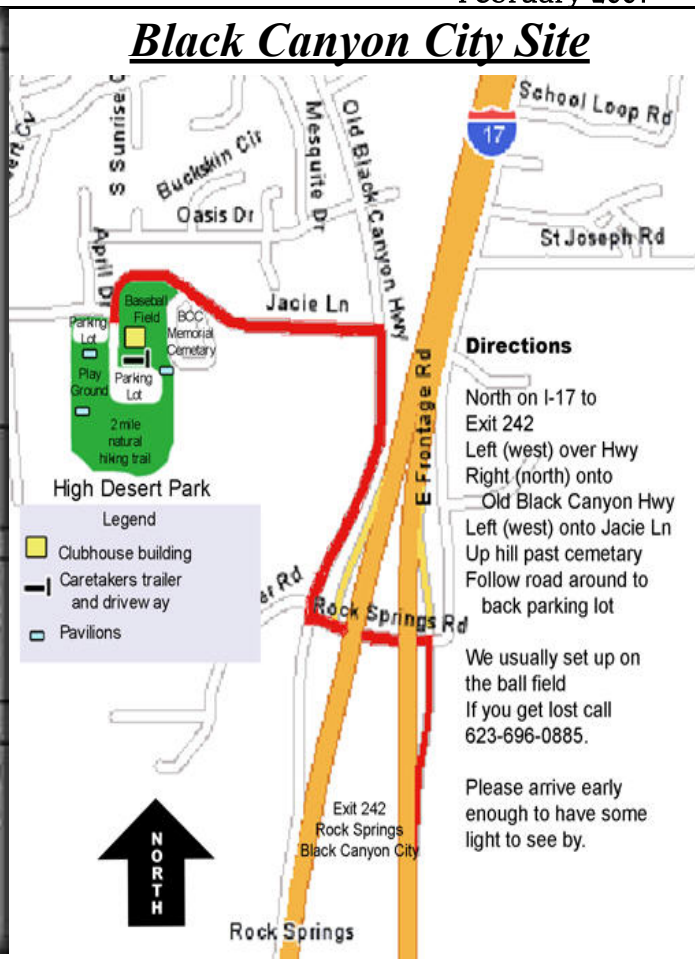
R.K. Herd, Geological Survey-Canada/Natural Resources Canada

The Tagish Lake meteorite fell on a frozen lake in Canada in January 2000. Its long bright fireball was seen throughout the Yukon, parts of British Columbia and Alaska, and the Northwest Territories. Initial analyses suggested material forming this meteorite may be some of the most primitive known from the solar system.

A NASA team recently announced parts of the meteorite sample date back more than 4.5 billion years, much older than most ancient terrestrial rocks.



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February 1 Thursday	7 PM to 9:30 P.M.	Paradise Valley Comm. College	PAS General Meeting Dennis Young, Sirius Lookers, Sedona Astronomy Club "Collimating a Telescope"
February 2 Friday	6 PM to 9 PM	Arizona Science Center Heritage Square	ASC Adult's Night Out *** Volunteers Needed *** RSVP with Don Boyd to attend or to help out. * Weather Permitting *
February 4 Sunday	2:30 P.M. to 4:30 P.M.	Bookman's Back room 8034 North 19th Avenue Phoenix, AZ	PAS Bookman's Free Indoor Telescope Workshop . RSVP. is required by email to Terri Finch or by phone at 602-561-5398 to attend or help out.
February 10 Saturday	Sundown to Moonrise	High Desert Park Jacie Ln Black Canyon City, AZ 85324	PAS Third Quarter Star Party All are Welcome! \$2 per car donation request. RSVP with Barbara Hartman to attend. * Weather Permitting *
February 11 Sunday	2:30 PM to 4:30	Bookman's Back room 8034 North 19th Avenue Phoenix, AZ	PAS Bookman's Free Indoor Telescope Workshop . RSVP. is required by email to Terri Finch or by phone at 602-561-5398 to attend or help out.
February 15 Thursday	6 pm to 10 pm	Paradise Valley Comm. College	PAS/PVCC Public Star Party *** Volunteers Needed *** RSVP with Terri Finch to attend or to help out. * Weather Permitting *
February 17 Saturday	Sundown to ?	High Desert Park Jacie Ln Black Canyon City, AZ 85324	PAS Deep Sky Star Party All are Welcome! \$2 per car donation request. RSVP with Barbara Hartman to attend. * Weather Permitting *
February 22 Thursday	7:30 P.M. to 10 PM	Paradise Valley Comm. College	PAS Meeting of the Minds No children please (business meeting)
February 25 Sunday	11 am to	ASU Tempe Campus Mill Ave & Apache Blvd	Sally Ride Science Festival See article page 2 *** Volunteers Needed ***

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

www.pasaz.org

Ads in PAStimes

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

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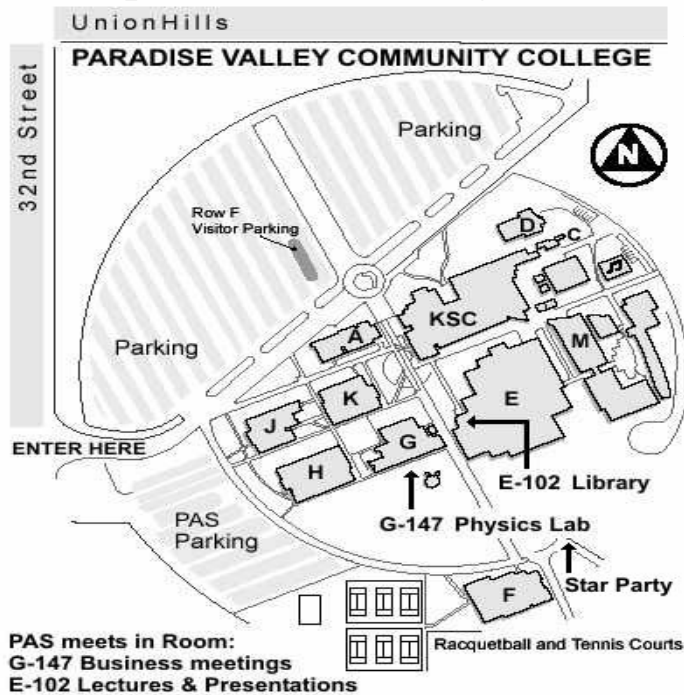
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Upcoming PAS Meetings

March 1: Don Garnett "A Close Up Look at Our Neighbor Galaxy M33 With the Hubble Space Telescope"
April 5: Larry Wasserman, U.S. Geological Survey "Kuiper Belt Asteroids"
May 3: Steve Dodder "Cataclysmic Variable Stars"

Map To PAS Meeting Location



Phoenix Astronomical Society Contact Info

President	Terri Finch	602-561-5398	President@pasaz.org
Vice President	Matt Kohl	623-221-2261	VicePresident@pasaz.org
Treasurer	Mike Marron	480-488-3031	Treasurer@pasaz.org
Newsletter Editor	Don Boyd	480-963-7189	Editor@pasaz.org
MultiMedia Director / Librarian	Rod Sutter	602-971-9129	MultiMediaDirector@pasaz.org
PAS Hostess	Amanda Sallas	602-547-2420	PASHostess@pasaz.org
PAS Host	John Pulis	623-570-5308	
Webmaster / Dark Sky Advocate	Barbara Hartman	623-374-5364	Webmaster@pasaz.org
P. R. Director	Steve Snyder	602-686-3334	PRDirector@pasaz.org
WOW Contact	James Desantis	620-256-0171	jld314159@yahoo.com
Rocketry Liaison	Jerry Belcher	623-328-9290	http://ahpra.org/launches.html

February 15 2007

Sunrise: 7:13

Sunset: 6:14



Full: February 2



Q3: February 10



New: February 17



Q1: February 24

Astro Events

February 3: Regulus 1° south of the Moon

February 7: Spica 1° north of the Moon

February 12 Jupiter 6° north of the Moon

February 14 Mars 4° north of the Moon

February 19 Venus 2° south of the Moon