

# Pegasus

## The BCAAS Newsletter

Berks County Amateur Astronomical Society



### President's Message

It's hard to believe we are nearing the end of 2009 already. As usual, the weather didn't cooperate for quite a few of our public events, but we did have clear weather for our annual picnic for a change. We also had some great speakers at our meetings. We had eleven events count towards our Night Sky Network requirements and we've also had some wonderful teleconferences provided by the NSN. This year was also the International Year of Astronomy, which introduced astronomy to a lot of people. Regardless of your politics, how cool was it that there was a star party at the White House!

Our election of officers will be held at the December meeting, so if you want to run for office, or want to nominate someone, please let us know.

We will also have our holiday party at the December meeting. The Club is going to provide a deli tray with assorted meats and cheeses with rolls, potato salad and macaroni salad, as well as plates, cups, napkins and utensils. I will supply coffee, tea and soda. We are asking members to bring a dish to share. (If someone wants to bring sodas instead of food, let me know.) I hope to see a lot of you there!

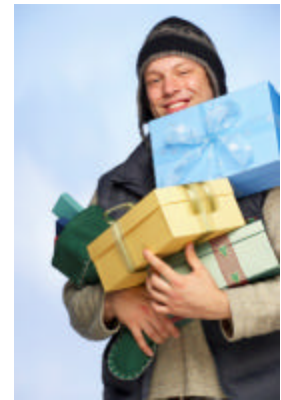
We are starting to plan speakers for next year. If you have any suggestions for a speaker or program, you can contact me or Gene Salvatore. We'd love to hear from you.

We could also use some volunteers to contribute articles for the Pegasus. If you have a funny observing story, or want to discuss some astronomy news, or want to review a new Astro gadget, just send it in to Melody Gardner. She would appreciate it!

If you haven't had a chance to do so, check out our new website. Dan Brown put a lot of work into it. We'd love to hear suggestions for content or links, as it is a work in progress.

It has been a pleasure serving as your President this year. I think we have a terrific group of people in our Club, and that has made the job a lot of fun. I'd love to see more people get involved. Remember, this is your Club, and it is only as good as you make it! If I don't see you before then, have a wonderful, safe holiday season. Hopefully we will have some clear skies, too.

Barb Geigle

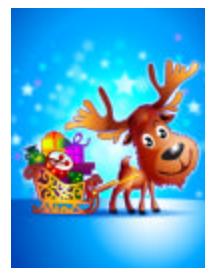


### Holiday 2009

Volume 35, Issue 3

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## A Cosmic Crash by Patrick Barry and Dr. Tony Phillips

Two small planets hurtle toward each other at 22,000 miles per hour. They're on a collision course. With unimaginable force, they smash into each other in a flash of light, blasting streams of molten rock far out into space.

This cataclysmic scene has happened countless times in countless solar systems. In fact, scientists think that such collisions could have created Earth's moon, tilted Uranus on its side, set Venus spinning backward, and sheared the crust off Mercury.

But witnessing such a short-lived collision while pointing your telescope in just the right direction would be a tremendous stroke of luck. Well, astronomers using NASA's Spitzer space telescope recently got lucky.

"It's unusual to catch such a collision in the act, that's for sure," said Geoffrey Bryden, A cosmic Crashspitzer\_an astronomer specializing in extrasolar planet formation at NASA's Jet Propulsion Laboratory and a member of the science team that made the discovery.

When Bryden and his colleagues pointed Spitzer at a star 100 light-years away called HD 172555, they noticed something strange. Patterns in the spectrum of light coming from nearby the star showed distinctive signs of silicon monoxide gas — huge amounts of it — as well as a kind of volcanic rock called tektite.

It was like discovering the wreckage from a cosmic car crash. The silicon monoxide was produced as the high-speed collision literally vaporized huge volumes of rock, which is made largely of silicon and oxygen. The impact also blasted molten lava far out into space, where it later cooled to form chunks of tektite.

Based on the amount of silicon monoxide and tektites, Bryden's team calculated that the colliding planetary bodies must have had a combined mass more than twice that of Earth's moon. The collision probably happened between 1,000 and 100,000 years ago — a blink of an eye in cosmic terms.

The scientists used the Spitzer space telescope because, unlike normal telescopes, Spitzer detects light at invisible, infrared wavelengths.

"Spitzer wavelengths are the best wavelengths to identify types of rock," Bryden says. "You can pin down which type of rock, dust, or gas you're looking at."

Bryden says the discovery provides further evidence that planet-altering collisions are more common in other star systems than people once thought. The "crash-bang" processes at work in our own solar system may indeed be universal. If so, Spitzer has a front row seat on a truly smashing show.

See Spitzer Space Telescope's brand new Web site at <http://spitzer.caltech.edu/>. Kids can learn about infrared light and see beautiful Spitzer images by playing the new Spitzer Concentration game at <http://spaceplace.jpl.nasa.gov/en/kids/spitzer/concentration>.

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

**Artist's rendering of cosmic collision involving two objects whose combined mass was at least twice that of our Moon. Discovered using the Spitzer Space Telescope in the planetary system of a star called HD 172555 100 light-years away.**



**twitter**

Now you can find the Space Place on Twitter! Did you ever wonder what happened in space twenty years ago today? Well, Space Place did and we're tweeting these amazing pieces of space trivia and history to all of our followers!

Go to <http://twitter.com/nasaspaceplace> and sign up to follow us on twitter. The early bird gets the worm! We have a very limited number of Earth Science Week packets, and we'd love to share them, particularly with our NASA Space Place Twitter fans. After signing up, please send us an e-mail as well as your snail mail, and we will ship out your Earth Science Week packets immediately. Don't forget to include your contact information -- name, address and club name.

We hope to hear from you soon, so Tweet away!

### **DUES ARE DUE IN JANUARY**

It will soon be that time of the year when the 2010 dues are due. If you joined during the year, your dues are pro-rated to pay you through the end of 2010. If you are on our BCAAS e-mail list, I will be sending you an e-reminder. If you receive a paper Pegasus, look for the dues reminder inside the issue. The dues are the same as before, \$20.00 for an individual and \$25.00 for a family membership. To avoid that nasty \$2.50 late fee, you need to pay by the end of January. If you get to the January meeting, you can pay me at that time. If not, please mail me a check payable to BCAAS. My address is 345 Douglass Street, Wyomissing, PA 19610.

**Linda Sensenig**  
**Treasurer**

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### **CALENDARS ARE HERE**

If you ordered a calendar but did not attend the November meeting, you can pick up your calendar at the December meeting. Hopefully the weather will be good this year so we have a good turnout at the annual Christmas Party and Election of Officers. This year we have a race for Vice President! If you cannot make the December meeting, the calendar will be mailed to you.

**Linda Sensenig**  
**Treasurer**

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## NASA Photo of the Day—November 30, 2009



Bright Sun and Crescent Earth from the Space Station  
Credit: STS-129 Crew, NASA

This was just one more breathtaking view from the International Space Station. The Sun, a crescent Earth, and the long arm of a solar panel were all visible outside a window when the Space Shuttle Atlantis visited the orbiting outpost last week. Reflections from the window and hexagonal lens flares from the camera are superposed. The space shuttle landed Friday after a successful 10 day mission to expand and resupply the ISS. Numbered STS-129, the space shuttle mission returned astronaut Nicole Stott to Earth from her stay on the ISS as a Flight Engineer in the Expedition 20 and 21 crews.



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**Berks County Amateur  
Astronomical Society**

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Hotline: 610-921-0173  
Call us for all the  
latest event details!

Visit us today at  
[www.berksastronomy.org](http://www.berksastronomy.org)

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## Events Calendar

### **Dec 10—Club Meeting – Election of Officers and Holiday Party**

**The club will be supplying a deli tray; please bring a dish to share! Ron Kunkel will be speaking on supernovae as part of our Introduction to Astronomy series. Come on out and meet us under the mistletoe for the Annual Holiday Party!**

