



Upcoming SAAA Events...

General Meeting

Thursday, December 20 @ 7:00 PM

- Mac-Bay School's Planetarium
- Christmas Party, Program: "Star of Bethlehem"
- All members bring a treat!

Board Meeting

Tentative: Thursday, January 3 @ 5:30 PM

- Beechwood Inn Restaurant, 380 Douglas Avenue, Holland

General Meeting

Friday, January 11 @ 7:00 PM

- Mac-Bay School's Planetarium
- A planetarium tour of the southern hemisphere
- Observing session (tentative during Winter months)

Park Township Presentation on Deep Sky Objects

Friday, February 8 @ 7:00 PM

- Mac-Bay School's Planetarium
- Volunteers Needed

Celestial Highlights:

Dec 1 - Last-quarter Moon

Dec 9 - New Moon

Dec 13-14 - Geminid meteor shower peaks after midnight

Dec 17 - First-quarter Moon

Dec 22 - Winter Solstice, Ursid meteor shower

Dec 23 - Full Moon

Dec 24 - Mars at Opposition

Dec 31 - Last-quarter Moon

Jan 4 - Quadrantid meteor shower

Jan 8 - New Moon

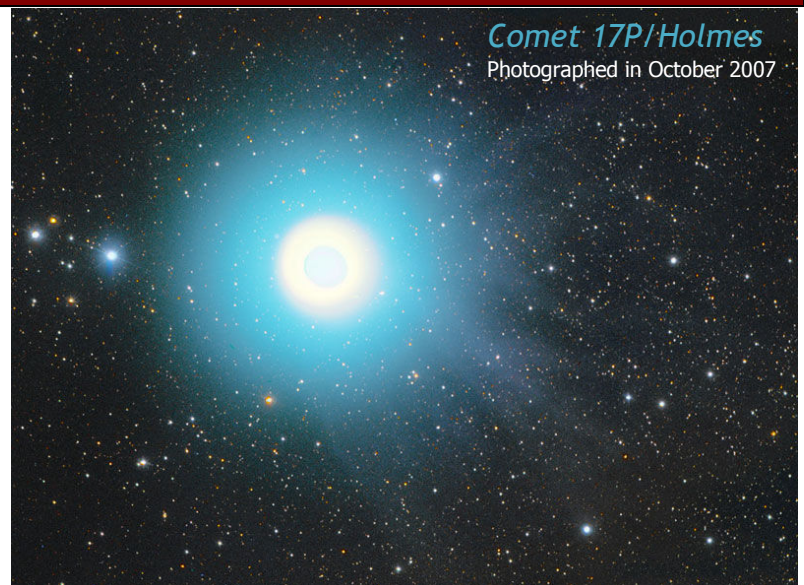
Jan 15 - First-quarter Moon

Jan 22 - Full Moon

Jan 30 - Last-quarter Moon

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Comet 17P/Holmes
Photographed in October 2007

Message from the President

As we bid farewell to 2007, I reflect back on the year's events and look forward to 2008.

For me, 2007 was the first of a two year term as President of the SAAA. What a year it has been! I am happy to report that the club is doing well and that we have much to look forward to in 2008.

I am grateful to each and every one of you for your contributions this past year. Publicly, we accomplished much in our community.

We participated in both National Astronomy Day celebrations; one in the Spring and the other in the Fall. Our observing session at Holland State Park took place on one of the darkest skies ever for this event.

We hosted Park Township in the Spring covering *Lunar and Planetary Motion*. We helped over 100 individuals earn Girl Scouts and Boy Scouts merit badges this year. We assisted the 6th, 7th and 8th graders of Black River School to prepare for the *Reach for the Stars* competition of the 2007-2008 Science Olympiad.

We have a number of opportunities in 2008 to continue educating our community. Thanks again to all of you for your continued support.

Thank-You!

Jim Reier, Club President
Shoreline Amateur Astronomical Association

Important Message!

Second Friday of the month: Last year it was proposed that in order to promote junior member participation, the general meeting day should change to Friday. In September this year we put that to a vote and unanimously agreed to move our meeting day from the 3rd Thursday to the 2nd Friday of the month. **Starting in January our general meetings will take place on the 2nd Friday of the month.**

Observing Schedule

2008		
January	01/04/08	Vivekananda - 6:00pm
January	01/11/08	Vivekananda - 6:00pm
February	02/08/08	Vivekananda - 6:00pm
March	03/07/08	Vivekananda - 8:00pm
April	04/04/08	Vivekananda - 8:30pm
May	05/02/08	Vivekananda - 8:45pm
May	05/09/08	Vivekananda - 9:00pm
June	06/06/08	Vivekananda - 9:30pm
July	07/04/08	Vivekananda - 9:00pm
August	08/01/08	Vivekananda - 8:30pm
August	08/29/08	Vivekananda - 8:30pm
September	09/26/08	Vivekananda - 8:00pm
October	10/24/08	Vivekananda - 7:00pm
October	10/31/08	Vivekananda - 7:00pm
November	11/28/08	Vivekananda - 6:30pm
December	12/26/08	Vivekananda - 6:00pm

Club News

Treasurer's report: As of December 5, 2007 the SAAA has \$589.22 in the Treasury.

SAAA Forum: As you know, most member communication occurs via email, but there is another way. Our web site has a bulletin board called the [SAAA Forum](#). It provides public and members-only forums that we moderate. I'd encourage each of you to create an account and use the forums. It's quick and easy to setup your account, and once you get started I think it'll be a great way to communicate to members outside of meetings.

Newsletter: At the close of 2006, we decided to renew the club newsletter. It has always been my ambition to release newsletters each month. After the birth of my daughter this past May, I have found it difficult to make good on these intentions. I'm settling on the notion of a newsletter every two months with hopes that it will meet all our needs. -Jim Reier

Park Township presentation: The SAAA hosts Park Township on February 8, 2008. Because our October 18th presentation was cancelled due to tornado warnings, we will again be presenting "An Introduction to Deep Sky Objects".

T-shirts and sweatshirts with SAAA logo: If you are interested in purchasing shirts or knapsacks with the SAAA logo please contact Robin Hudson.

Green laser pointer: In November, we voted to approve the purchase of a green laser pointer. The SAAA now owns a 5mW green laser pointer that is available to members at public observing sessions



Shoreline Amateur Astronomy Association Annual Holiday Party

When: December 20, 2007

Where: Macatawa Bay Planetarium

Time: 7:00 pm

Please bring your family, a treat and/or refreshments

We hope to see everyone there!



What's up in the sky?

December, 2007

By Peter Burkey

While researching the history for this month, I noticed that several "stars" of astronomy were born in December. Here is some background information on these folks, all of whom made major contributions to the field and have birthdays next month.



Gerard Kuiper's name has been in the news recently in connection with the status of Pluto as a planet. Pluto is actually a member of a family of icy objects that orbit the sun just beyond Neptune. Kuiper was the first to theorize their existence. Recent discoveries of several additional objects have confirmed what is now known as the Kuiper Belt.

Annie Jump Cannon was one of the women "computers" at the Harvard College Observatory during the late 1800's who performed the long, tedious calculations necessary to classify stellar spectra. She personally classified over 500,000 spectra and established the system of classifying stars by their spectra that is still in use today - OBAFGKM.



E. E. Barnard was another famous astronomer of that time period. He discovered Amalthea, the fifth known moon of Jupiter. He also pioneered photographic studies of the structure of the Milky Way and discovered the star, now known as Barnard's Star, that changes its position over the years by the greatest amount.



It is interesting that Tycho Brahe, Johannes Kepler, and Isaac Newton all share the same birth month. Tycho's comprehensive observations and accurate record keeping enabled Kepler to determine the true nature of planetary orbits. And, using one of Kepler's discoveries, Newton was able to describe mathematically how gravity works.



Sergey Korolev can be described as the father of the Soviet space program, comparable to Wernher Von Braun in the US. After surviving Stalin's concentration camps he was sent to Germany to study



captured rocket technology. He later went on to become the "Chief Designer" or head rocket engineer for the Soviet Union during the space race.



"All of these individuals influenced our understanding of what's up in the sky." – P. Burkey

This month in history:

- Dec. 2: Pioneer 11 spacecraft makes closest approach to Jupiter - 1974
- Dec. 7: Gerard Kuiper born - 1905
- Dec. 11: Annie Jump Cannon born - 1863
- Dec. 14: Tycho Brahe born - 1546
- Dec. 16: Last two Saturn V moon rockets are donated to museums
- Dec. 16: E. E. Barnard born - 1857
- Dec. 25: Isaac Newton born - 1642
- Dec. 27: Johannes Kepler born - 1571
- Dec. 30: Sergei Korolev born - 1906

Here are this month's viewing highlights:

Planets this month: Jupiter sinks low in WSW as month progresses - gone by the 22nd. Venus continues to dominate the predawn sky where she is joined by Mars and Saturn.



Ultraviolet Surprise

By Patrick L. Barry and Dr. Tony Phillips

How would you like to visit a universe full of exotic stars and weird galaxies the likes of which astronomers on Earth have never seen before?

Now you can. Just point your web browser to galex.stsci.edu and start exploring.

That's the address of the Galaxy Evolution Explorer image archive, a survey of the whole sky at ultraviolet wavelengths that can't be seen from the ground. Earth's atmosphere blocks far-ultraviolet light, so the only way to see the ultraviolet sky is by using a space telescope such as NASA's Galaxy Evolution Explorer.

About 65% of the images from the all-sky survey haven't been closely examined by astronomers yet, so there are plenty of surprises waiting to be uncovered.

"The Galaxy Evolution Explorer produces so much data that, beyond basic quality control, we just don't have time to look at it all," says Mark Seibert, an astronomy postdoc at the Observatories of the Carnegie Institution of Washington in Pasadena, California.

This fresh view of the sky has already revealed striking and unexpected features of familiar celestial objects. Mira is a good example. Occasionally visible to the naked eye, Mira is a pulsating star monitored carefully by astronomers for more than 400 years. Yet until Galaxy Evolution Explorer recently examined Mira, no one would have guessed its secret: Mira possesses a comet-like tail 13 light-years long.

"Mira shows us that even well-observed stars can surprise us if we look at them in a different way and at different frequencies," Seibert says.

Another example: In April, scientists announced that galaxies such as NGC 1512 have giant ultraviolet spiral arms extending three times farther out into space than the arms that can be seen by visible-light telescopes. It would be like looking at your pet dog through an ultraviolet telescope and discovering his ears are really three times longer than you thought!

The images from the ultraviolet space telescope are ideal for hunting new phenomena. The telescope's small, 20-inch primary mirror (not much bigger than a typical backyard telescope) offers a wide field of view. Each image covers 1.2 degrees of sky—lots of territory for the unexpected.

If someone combing the archives does find something of interest, Seibert advises that she or he should first search astronomy journals to see whether the phenomenon has been observed before. If it hasn't, email a member of the Galaxy Evolution Explorer science team and let them know, Seibert says.

So what are you waiting for? Fire up your web browser and let the discoveries begin!



Caption:

Astronomers looking at new ultraviolet images from the Galaxy Evolution Explorer spacecraft were surprised to discover a 13-light-year long tail on Mira, a star that has been extensively studied for 400 years