



# the EYEPIECE



the FORT WAYNE ASTRONOMICAL SOCIETY • PO Box 11093 • Fort Wayne, IN 46855

Volume: 58

Issue : 8

August 2017

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FWAS Web page: <http://fortwayneastronomicalsociety.com>

## GENERAL MEETING

Visitors Welcome

Tuesday Evening, August 15, 7:30 PM

Allen County Public Library Main Library  
900 Library Plaza, Fort Wayne, IN 46802

## 2017 August 21, Total Solar Eclipse Crosses USA

by Mikal Pulse, Laura Ainslie, Greg Jacobs

Discussions on how to help the public enjoy this event.

General Meetings are held the third Tuesday of each month,  
7:30pm. Check our web site for location.

## Eclipse of the Century

Get ready for the big one. Billed as the Great American Solar Eclipse, this event will probably draw more people than any event in the world.

Mikal Pulse, Laura Ainslie, and Greg Jacobs have teamed up to give the facts about this eclipse that cuts a line across the United States from Oregon to South Carolina. Laura will stress safe ways to observe including a pin hole projector. Greg will give a review of the book; "The Great American Eclipse." Mikal will review plans for observing the eclipse from the Allen County Public Library Plaza. Free solar eclipse glasses will be available on a limited basis.

If you can help with this event, contact Mikal Pulse at: [mikalsoopulse@yahoo.com](mailto:mikalsoopulse@yahoo.com)

After the meeting you are invited to join the group that meets for continuing discussions at a restaurant to be selected at the meeting.

## Calendar Events Aug-Sep

Scheduled events for the next two months:

**Saturday Public star gazing at Jefferson Township Park April Thru November.** (Observatory is available for members to use, except for scheduled observing events)

### August

General Meeting Tuesday, Aug 15

Solar Eclipse Monday, Aug 21

Board Meeting Tuesday, Aug 22

### September

General Meeting Tuesday, Sep 19

Board Meeting Tuesday, Sep 26

## Deep Sky Star Parties

Deep Sky observing events are scheduled for FWAS members and their guests to observe the fainter objects in the sky from a location away from city lights. These events are closed to the general public to allow members to plan observing and photography projects that will be undisturbed.

This year you are invited to come to the **Star\*Quest Observatory (S\*QO)** for observing times, scheduled for Fridays near the new moon each month. The remaining dates this year are: **Aug 18, Sep 15, Oct 20, Nov 17.**

## Public Star Parties

The public observing season started in April. We need trained volunteers to run the Richard Johnston (RJ) Telescope. **If you wish to participate, with the RJ scope, with your own telescope or without a scope, contact Mark Anderson (260)416-4094, to get on his volunteer list.** This is a great way to contribute to our community service. Current events are:

**Sat Aug 19, Gene Stratton Porter at Rome City,** call Larry Clifford at (260)824-2655 for details on time and place.

**Fri 1 Sep at S\*QO, Cancer Research Fund (Backup 8 Sep)**

## Star\*Quest Update

by Gene Stringer

Since the grand opening of Star\*Quest Observatory on 20 May we continue to have record attendance on Saturday evenings, On one occasion we had more than 70 visitors and on another more than 50 visitors.

We still have construction support activities to complete:

**3. Install Red Lighting** (Leader Alan Paries)

**5. Landscaping** (Leader Laura Ainslie)

**8. Plan, procure and install observatory equipment** (Leader: Gene Stringer)

Additional tasks include an update of the Sky Wizard for the HC scope, and fixing a leak in the well of the RJ scope.

If you have not already volunteered and/or wish to support any of the above tasks please contact the task leader or Gene Stringer at (260)489-8135 or email at: [genestringer@mac.com](mailto:genestringer@mac.com) to volunteer.

## Board Meeting Highlights

- Board met on Tues, 25 July in Phil Hudson's office.
- Treas reported current holdings of \$3,412 for General operations and \$3,874 for S\*Q
- Discussed preparations for the 21 August solar eclipse.
- The next board meeting will be on Tuesday, 22 Aug., at 7:30 p.m. in Phil Hudson's office.

### FWAS OFFICERS

President: Larry Clifford 824-2655  
Vice-Pres: Laura Ainslie (260)740-9162  
Secretary: Gene Stringer 489-8135  
Treasurer: Julie Kaufman (260)579-1777

### APPOINTED POSITIONS

Observatory Director: Mark Anderson  
(260)416-4094

Web Master: Sarah Suraci 797-2776

Star\*Quest Project Manager: Gene  
Stringer 489-8135

Star\*Quest Treas: Julie Kaufman  
(260)579-1777

### EDITORIAL STAFF

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E-mail (preferred) or on CD  
or other media, or on paper.  
Submissions may be edited  
for space or style.

## Saturn Surprises As Cassini Continues its Grand Finale

As NASA's Cassini spacecraft makes its unprecedented series of weekly dives between Saturn and its rings, scientists are finding -- so far -- that the planet's magnetic field has no discernible tilt. This surprising observation, which means the true length of Saturn's day is still unknown, is just one of several early insights from the final phase of Cassini's mission, known as the Grand Finale.

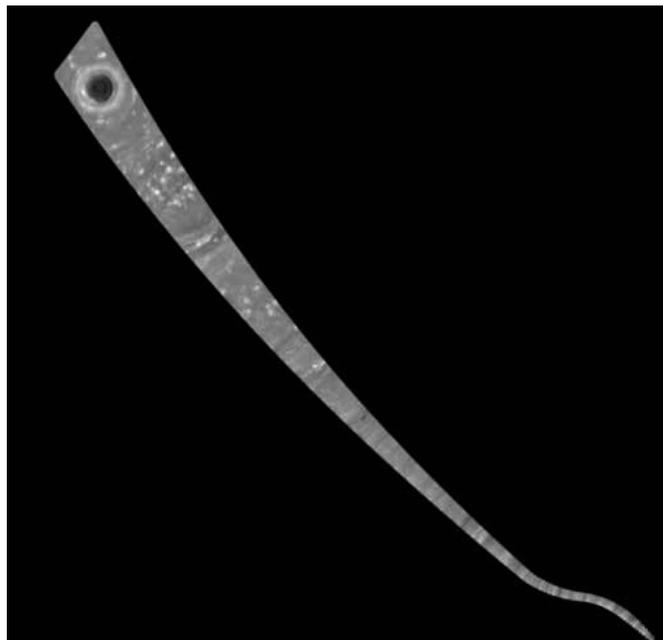
Other recent science highlights include promising hints about the structure and composition of the icy rings, along with high-resolution images of the rings and Saturn's atmosphere.

Cassini is now in the 15th of 22 weekly orbits that pass through the narrow gap between Saturn and its rings. The spacecraft began its finale on April 26 and will continue its dives until Sept. 15, when it will make a mission-ending plunge into Saturn's atmosphere.

"Cassini is performing beautifully in the final leg of its long journey," said Cassini Project Manager Earl Maize at NASA's Jet Propulsion Laboratory, Pasadena, California. "Its observations continue to surprise and delight as we squeeze out every last bit of science that we can get."

Cassini scientists are thrilled as well -- and surprised in some cases -- with the observations being made by the spacecraft in the finale. "The data we are seeing from Cassini's Grand Finale are every bit as exciting as we hoped, although we are still deep in the process of working out what they are telling us about Saturn and its rings," said Cassini Project Scientist Linda Spilker at JPL.....

<https://www.nasa.gov/feature/jpl/saturn-surprises-as-cassini-continues-its-grand-finale>



*This mosaic combines views captured by Cassini as it made the first dive of the mission's Grand Finale on April 26, 2017, and shows details in bands and swirls in the atmosphere.*

*Credits: NASA/JPL-Caltech/SSI/Hampton University*

On two of Cassini's close passes over Saturn, on April 26 and June 29, the cameras captured ultra-close views of the cloudscape racing past, showing the planet from closer than ever before. Imaging scientists have combined images from these dives into two new image mosaics and a movie sequence. (Specifically, the previously released April 26 movie was updated to greatly enhance its contrast and sharpness.)

Launched in 1997, Cassini has orbited Saturn since arriving in 2004 for an up-close study of the planet, its rings and moons, and its vast magnetosphere. Cassini has made numerous dramatic discoveries, including a global ocean with indications of hydrothermal activity within the moon Enceladus, and liquid methane seas on another moon, Titan.

The Cassini-Huygens mission is a cooperative project of NASA, ESA (European Space Agency) and the Italian Space Agency. NASA's Jet Propulsion Laboratory, a division of Caltech in Pasadena, California, manages the mission for NASA's Science Mission Directorate, Washington. JPL designed, developed and assembled the Cassini orbiter.

More information about the Cassini mission:

<https://www.nasa.gov/cassini>

<https://saturn.jpl.nasa.gov>

**Preston Dyches**

**Jet Propulsion Laboratory, Pasadena, Calif.**

**818-394-7013**

[preston.dyches@jpl.nasa.gov](mailto:preston.dyches@jpl.nasa.gov)

*Note: This article was downloaded and edited from NASA's web site:*

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## Twenty Years Ago on Mars...

By Linda Hermans-Killiam

On July 4, 1997, NASA's Mars Pathfinder landed on the surface of Mars. It landed in an ancient flood plain that is now dry and covered with rocks. Pathfinder's mission was to study the Martian climate, atmosphere and geology. At the same time, the mission was also testing lots of new technologies.

For example, the Pathfinder mission tried a brand-new way of landing on Mars. After speeding into the Martian atmosphere, Pathfinder used a parachute to slow down and drift toward the surface of the Red Planet. Before landing, Pathfinder inflated huge airbags around itself. The spacecraft released its parachute and dropped to the ground, bouncing on its airbags about 15 times. After Pathfinder came to a stop, the airbags deflated.

Before Pathfinder, spacecraft had to use lots of fuel to slow down for a safe landing on another planet. Pathfinder's airbags allowed engineers to use and store less fuel for the landing. This made the mission less expensive. After seeing the successful Pathfinder landing, future missions used this airbag technique, too!

Pathfinder had two parts: a lander that stayed in one place, and a wheeled rover that could move around. The Pathfinder lander had special instruments to study Martian weather. These instruments measured air temperature, pressure and winds. The measurements helped us better understand the climate of Mars.

The lander also had a camera for taking images of the Martian landscape. The lander sent back more than 16,000 pictures of Mars. Its last signal was sent to Earth on Sept. 27, 1997. The Pathfinder lander was renamed the Carl Sagan Memorial Station. Carl Sagan was a well-known astronomer and science educator.

Pathfinder also carried the very

first rover to Mars. This remotely-controlled rover was about the size of a microwave oven and was called Sojourner. It was named to honor Sojourner Truth, who fought for African-American and women's rights. Two days after Pathfinder landed, Sojourner rolled onto the surface of Mars. Sojourner gathered data on Martian rocks and soil. The rover also carried cameras. In the three months that Sojourner operated on Mars, the rover took more than 550 photos!

Pathfinder helped us learn how to better design missions to Mars. It gave us valuable new information on the Martian climate and surface. Together, these things helped lay the groundwork for future missions to Mars.

Learn more about the Sojourner rover at the NASA Space Place: <https://spaceplace.nasa.gov/mars-sojourner>

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## Space Place...the place for kids to explore

If your children have not yet discovered NASA's outreach web site for kids you need to plug them in to this valuable resource for learning about Earth's place in the universe, what science has learned so far and how to use the technology of the space program to enlarge their daily lives.

The site includes topics about the Earth, Sun, Solar System, Universe, and Science & Technology. There is also a site for educators to provide classroom activities on 55 different space science topics.

Check into the Space Place at: <https://spaceplace.nasa.gov>

You won't be disappointed.



*Caption: The Mars Pathfinder lander took this photo of its small rover, called Sojourner. Here, Sojourner is investigating a rock on Mars. Image credit: NASA/JPL-Caltech*



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**\*\*PROGRAM\*\***

## 2017 August 21, Total Solar Eclipse Crosses USA

by Mikal Pulse, Laura Ainslie, Greg Jacobs



Mid Eclipse Fort Wayne



Diamon Ring along total eclipse line

Next General Meeting  
 Tuesday, August 15, 7:30 pm  
 Allen County Public Library  
 Main Library  
 900 Library Plaza  
 Fort Wayne, IN 46802

The Fort Wayne Astronomical Society  
 will have Public Viewing  
 of the 88% Partial Eclipse  
 on the East Plaza  
 of the Allen County Public Library  
 Monday August 21st  
 Eclipse starts: 12:59 pm  
 Mid Eclipse: 2:25 pm  
 Eclipse ends: 3:47 pm

Saturday Night Stargazing  
 at Jefferson Township Park  
 every clear Saturday night  
 starting 1 hour after sunset and  
 continuing for 2 hours.  
 April through November

**August Night Sky:** Start the month off by looking for the Planet Mercury low in the West. You might see Regulas to the right. Use binoculars first, and if found see if you can see Mercury naked eye. It sets just before evening twilight ends. 11,12 - Perseids Meteor Shower is one of the best meteor showers to observe, producing up to 60 meteors per hour at its peak. They are famous for producing a large number of bright meteors. The shower runs annually from July 17 to August 24. The waning gibbous moon will block out many of the fainter meteors this year, best viewing will be from a dark location after midnight. Full Moon is the 7th . . . Green Corn Moon.