



# the EYEPIECE



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

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

## GENERAL MEETING

Visitors Welcome

Tuesday Evening, April 18, 7:30 PM

Aboite Township Community Room,  
11321 Aboite Center Rd. Fort Wayne, IN 46814

## James Webb Space Telescope

### Readiness Update

a NASA Video

Explore the mission and status of this successor to the Hubble Space Telescope

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

## A Giant leap Forward

The James Webb Space Telescope will be a giant leap forward in our quest to understand the Universe and our origins. JWST will examine every phase of cosmic history: from the first luminous glows after the Big Bang to the formation of galaxies, stars, and planets to the evolution of our own solar system.

This video from NASA describes the telescope's construction and deployment plans, and the progress made toward launch in 2018.

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 Apr-May

Scheduled events for the next two months:

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

**April – Saturday public viewing begins at JTP**

General Meeting Tuesday, Apr 18

Board Meeting Tuesday, Apr 25

Astronomy Day Saturday, Apr 29

May

General Meeting Tuesday, May 16

*Star\*Quest Observatory Grand Opening*

*Saturday, 20 May*

Board Meeting Tuesday, May 23

## Renew Your Membership

Good News: your current membership is good through March of 2017. The new membership dues are due by 1 April at a rate of \$36 for individuals and families and \$25 for students. The new membership card will expire on March 31 of 2018.

**This year we are continuing an added bonus.** Your new membership will include membership in the *Astronomical League*, with all of the many benefits they offer (check them out on Google or their web page, [astroleague.org](http://astroleague.org)). **We urge that you renew before 16 April so that you won't miss an issue of their quarterly magazine, *The Reflector*.**

Don't miss out on the benefits of membership:

- Membership in the Astronomical League.
- The *Reflector* on line and by mail delivered quarterly.
- Access to the Star\*Quest Observatory and library.
- Lots of star parties.
- Discounts on Astronomy and Sky & Telescope magazines.
- The *Eyepiece* on line or delivered to your door every month.
- Interesting astronomical topics presented at monthly meetings.
- The chance to meet and talk with astronomy lovers, and to participate in our primary mission: *to promote Astronomy and related space sciences to members and the public.*
- Occasional field trips to planetariums, museums or observatories.

To get your ticket to 2017 send your check to the FWAS P.O. box listed above, or see treasurer Dave Wilkins at the program meeting.

Take advantage of club membership savings for subscriptions to magazines: ASTRONOMY \$34/yr or \$60/2yr; SKY & TELESCOPE \$32.95/yr or \$65.90/2yr. Also, limited quantities of the CANADIAN OBSERVER'S HANDBOOK may be ordered at the general meeting for \$25 (if available).

## Star Parties Start Early

The observing season started in April and already we have several star party requests at Jefferson Township Park (JTP). We will need trained volunteers to run the Richard Johnston (RJ) and Harnishfegger-Crow (HC) Tele-

*Continued on page 2*

## Board Meeting Highlights

- Board met on Tues, 28 Mar. in Phil Hudson's office.
- The Star\*Quest observatory is under preparation for a grand opening on 20 May.
- Our new observing season will begin in April 2017 at Jefferson Township Park.
- The next board meeting will be on Tuesday, 25 Apr., at 7:30 p.m. in Phil Hudson's office.

### FWAS OFFICERS

President: Larry Clifford 824-2655  
Vice-President: Phil Hudson 484-7000  
Secretary: Gene Stringer 489-8135  
Treasurer: Dave Wilkins 444-3070

### APPOINTED POSITIONS

Observatory Director: Open  
Star\*Quest Project Manager: Gene Stringer 489-8135  
Star\*Quest Treasurer: Dave Wilkins 444-3070

### EDITORIAL STAFF

Eyepiece editor, Gene Stringer, 489-8135  
Distribution, Gene Stringer 489-8135 & Phil Hudson 484-7000

Submissions to the Eyepiece are cheerfully accepted by E-mail (preferred) or on CD or other media, or on paper. Submissions may be edited

*Continued from page 1*  
scopes. **If you wish to participate, with the RJ/HC scopes, with your own telescope or without a scope, contact Gene Stringer at 489-8135 to get on this volunteer list.** This is a great way to contribute to the community service of the FWAS. **Apr dates anticipated** at JTP include **Astronomy Day, 29 Apr.**, and also adult astronomy students from IPFW and Indiana Tech, plus their friends and family members.

Several scopes will be needed, but you don't need a scope to participate. You can help by coaching students and welcoming the crowd. We advise that all groups may start arriving at 8:30 p.m. while it is still light enough to read road signs, so figure your setup time accordingly.

## Star\*Quest Update

by Gene Stringer

Preparation is underway to prepare the Star\*Quest Observatory for a grand opening on 20 May. The Construction Support Team is hard at work to accomplish the following tasks:

1. **Fix the leak in the RJ Pier well** ( Leader: Gene Stringer)
2. **Refurbish the HC telescope** (Leader: Jon Thomas)
3. **Install Red Lighting** (Leader Alan Paries)
4. **Plan and install signs** (Leader: Phil Hudson)
5. **Landscaping** (Leader Laura Ainslie)
6. **Recognition of donors & past members** (Leader: Dave Wilkins)
7. **Procure and install observatory furniture** (Done)
8. **Plan, procure and install observatory equipment** (Leader: Gene Stringer)
9. **Clean the 16" Richard Johnston Telescope** (Done)
10. **Plan and conduct the grand opening on 20 May** (Leader: Gene Stringer)

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 to volunteer.

## Join the Board

As a member of the Fort Wayne Astronomical Society you can have a say in the business of the society by joining the Board of Directors. May is an important time for us because this is when the society elects members to the Board (See article this page for the election procedure excerpted from the bylaws). Officers for the coming year are nominated from the Board in May and elected by the general membership in June. You are invited to participate by joining the Board. Call Phil Hudson at 484-7000 or Gene Stringer at 489-8135 to be a part of the action.

## FWAS Election Procedure

The following excerpt from the society's by-laws is printed to apprise new members of the procedure for electing members to the Board. All members are encouraged to come to the May general meeting to participate in the election.

1. March Board Meeting: appoint nomination committee from existing Board members.
2. April newsletter: Announce call for board members.
  - Require interested members to contact nomination committee.
3. Prepare ballots with all nominees and spaces for floor nominations.
4. May General Meeting: vote for board members.
  - accept nominations from the floor.
  - nominee must agree to nomination from floor.
  - all club members in attendance vote.
  - only candidates getting 50% support from those in attendance are elected.
5. May Board Meeting: nominate officers.
  - officer nominees must be members of the new Board.
  - any club member may make a nomination for officers.
  - nominations **do not** require a 'second' voice.
6. June newsletter: prepare ballots with nominated officers.
  - send to board members only.
  - attach self-addressed stamped envelope for return.
  - return ballots remain sealed until general meeting.
7. June General Meeting: open ballots to determine elected officers.
  - in unopposed races the candidates must receive 50% support from returned ballots.
  - if unopposed candidate lacks 50% support, then nominations from the floor will be accepted and voted upon by secret ballot immediately.
  - in contested races the candidate with plurality is elected.
  - if contested race results in a tie, then a new ballot, open to all club members in attendance, will settle the tie.
8. Elected officers preside over the June Board Meeting.
9. June Board Meeting: previous officers make a full accounting to the Board and transfer all official documents and signature authority to incoming officers.

This article is provided by **NASA Space Place**. With articles, activities, crafts, games, and lesson plans, NASA Space Place encourages everyone to get excited about science and technology. Visit [spaceplace.nasa.gov](https://spaceplace.nasa.gov) to explore space and Earth science!



## What It's Like on a TRAPPIST-1 Planet

By Marcus Woo

With seven Earth-sized planets that could harbor liquid water on their rocky, solid surfaces, the TRAPPIST-1 planetary system might feel familiar. Yet the system, recently studied by NASA's Spitzer Space Telescope, is unmistakably alien: compact enough to fit inside Mercury's orbit, and surrounds an ultra-cool dwarf star—not much bigger than Jupiter and much cooler than the sun.

If you stood on one of these worlds, the sky overhead would look quite different from our own. Depending on which planet you're on, the star would appear several times bigger than the sun. You would feel its warmth, but because it shines stronger in the infrared, it would appear disproportionately dim.

"It would be a sort of an orangish-salmon color—basically close to the color of a low-wattage light bulb," says Robert Hurt, a visualization scientist for Caltech/IPAC, a NASA partner. Due to the lack of blue light from the star, the sky would be bathed in a pastel, orange hue.

But that's only if you're on the light side of the planet. Because the worlds are so close to their star, they're tidally locked so that the same side faces the star at all times, like how the Man on the Moon always watches Earth. If you're on the planet's dark side, you'd be enveloped in perpetual darkness—maybe a good thing if you're an avid stargazer.

If you're on some of the farther planets, though, the dark side might be too cold to survive. But on some of the inner planets, the dark side may be the only comfortable place, as the light side might be inhospitably hot.

On any of the middle planets, the light side would offer a dramatic

view of the inner planets as crescents, appearing even bigger than the moon on closest approach. The planets only take a few days to orbit TRAPPIST-1, so from most planets, you can enjoy eclipses multiple times a week (they'd be more like transits, though, since they wouldn't cover the whole star).

Looking away from the star on the dark side, you would see the outer-most planets in their full illuminated glory. They would be so close—only a few times the Earth-moon distance—that you could see continents, clouds, and other surface features.

The constellations in the background would appear as if someone had bumped into them, jostling the stars—a perspective skewed by the 40-light-years between TRAPPIST-1 and Earth. Orion's belt is no longer aligned. One of his shoulders is lowered.

And, with the help of binoculars, you might even spot the sun as an inconspicuous yellow star: far, faint, but familiar.

Want to teach kids about exoplanets? Go to the NASA Space Place and see our video called, "Searching for other planets like ours":

<https://spaceplace.nasa.gov/exoplanet-snap/>



This artist's concept allows us to imagine what it would be like to stand on the surface of the exoplanet TRAPPIST-1f, located in the TRAPPIST-1 system in the constellation Aquarius. Credit: NASA/JPL-Caltech/T. Pyle (IPAC)



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*\*Program:\**  
**the James Webb  
Space Telescope**  
Readiness Update

[StarQuest Observatory Donations](#)  
[Next General Meeting](#)  
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**April Night Sky:** Jupiter comes to opposition the 7th and rules our night sky. Also at its best first half of April is Mercury low in West at evening twilight., [Comet 41P Tuttle–Giacobini–Kresák](#) appears as an inflated greenish hazy blob as it sweeps near Polaris. Lyrid Meteor Shower 18th-25th, moon interference. Venus a large crescent thru binoculars, rises only one hour before the sun, in East. Mars sinking into evening twilight 4° S of the Pleiades on the 20th. Saturn in Sagittarius rises in the SE early hour. Full Moon the 11th, New Moon the 26th.