



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, February 21, 7:30 PM

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

HI-SEAS Team

Completes 8-Month "Mars" Isolation Mission

Plus

Introducing the Tucson Astronomy Club
By Ron Williams

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

Mauna Kea Plus Tucson

Mission Complete! Ron will report on the Hi-Seas Mars Simulated Isolation Mission. His individual research interest, while on the HI-SEAS mission was focused on exploring the cognitive, personality and psychological characteristics of the crew and their relationship to adjustment, group dynamics and mission success.

Ron will also introduce us to the the Tucson Amateur Astronomy Association (TAAA), and their plans for a 40 inch telescope.

Dr Ron Williams was born and raised in Bloomington Indiana. He received his BA degrees in Psychology and Chemistry at Indiana University Bloomington in 1976. He received his MA degree in Experimental Psychology with a concentration in gerontological psychology from the University of Notre Dame and his PhD in Neuropsychology from Ball State University in Muncie, Indiana.

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 Feb-Mar

Scheduled events for the next two months:

Saturday Public star gazing at Jefferson Township Park is closed until April. (Oservatory is avaiable for members or sheduled observing events).

February

General Meeting Tuesday, Feb 21

Board Meeting Tuesday, Feb 28

March

General Meeting Tuesday, Mar 21

Board Meeting Tuesday, Mar 28

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). **We urge that you renew before 1 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).

How May We Serve You?

Your Board is now looking ahead to the coming season to determine how best to serve your desires and needs. If you have some ideas of things you would like to see or do, or for programs for our general meetings now is
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Board Meeting Highlights

- Board met on Tues, 24 Jan. in Phil Hudson's office.
- The Star*Quest observatory is under preparation for a grand opening in April.
- Our new observing season will begin in April 2017 at Jefferson Township Park.
- The next board meeting will be on Tuesday, 28 Feb., 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

a good time to voice them. Contact Phil Hudson at (260)484-7000 for discussing topics for monthly meetings.

Also, we invite your participation in the activities we perform for the public – star parties or one of the Star*Quest teams. Call Larry Clifford at (260)824-2655 or Gene Stringer at (260)489-8135 to get on their volunteer list.

Star*Quest Update

by Gene Stringer

Preparation is underway to prepare the Star*Quest Observatory for a grand opening. The control room now has a desk with shelves, and a work/test bench with a five-drawer cabinet (on castors) that can be moved to the viewing wings to support maintenance on the telescopes.

On Tuesday, January 31, the Construction Support Team (14 persons) met to organize and plan to accomplish the remaining tasks. The date for the Grand opening was rescheduled to Saturday, May 20. Team leaders and volunteers were assigned for the following tasks:

1. Fix the leak in the RJ Pier well (Leader: Gene Stringer) Gene will consult with the contractor, Robert Koors, to use hydraulic cement to plug the leak.

2. Refurbish the HC telescope (Leader: Jon Thomas) Jon's crew will prep and paint the scope & mount, install the 12.5" mirror, wire the mount for AC, collate the optics and install the Sky Wizard (or similar finder database).

3. Install Red Lighting (Leader Alan Paries) Alan is researching options for red lighting in the observing wings and the exterior of the building.

4. Plan and install signs (Leader: Phil Hudson) Phil will coordinate with JTP to design and install all signs inside

and outside the building.

5. Landscaping (Leader Laura Ainslie) Laura's plans will create a welcoming garden at the north entrance and other plantings on the site. Tasks include:

- Maintenance, mowing and clean-up.
- Plan & install shrubbery.
- Place gravel around support posts and building walls to facilitate mowing.
- Construct a wheelchair-friendly ramp from the south door to the outside observing area.
- Procure and install the Helitec sundial sculpture from Arts United (requires a foundation installation).

6. Recognition of donors & past members (Leader: Dave Wilkins) Dave will confirm recognitions with donors and family members, and coordinate with the Signs Team to create and mount signs and displays.

7. Procure and install observatory furniture (Gene Stringer) Gene will plan and procure or build furniture & cabinets as the budget allows. Current plans are for a lockable equipment storage locker for the control room and a broom closet in the east observing wing.

8. Plan, procure and install observatory equipment (Leader: Gene Stringer) Gene will define and plan programs to support public viewing and academic curricula of elementary / secondary schools and universities. Detailed equipment to support the programs may include computers, cameras, displays, internet services, a spectrograph, etc. Funding may entail preparation of grant requests from local foundations and corporations.

9. Clean the 16" Richard Johnston Telescope (Leader: Dave Atkinson) Dave's team will inspect and explore cleaning options for the optical tube assembly corrector plate and mirror.

10. Plan and conduct the grand opening on 20 May

(Leader: Gene Stringer) Tasks include:

- Creating a Grand Opening Plan to include a schedule, an invitation list, an awards & recognition list, a publicity list, a ceremony agenda.
- Preparation of awards and recognitions.
- Notifying and coordinating with members, donors, dignitaries, the media, and the public.

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 to volunteer.

Observatory is Open to You

The Star*Quest Observatory is closed to the public until April. However, members may schedule times on the 16" Richard Johnstone telescope or our other scopes (e.g.: *Big Blue* or *Astroscan*) for viewing or photography by calling Gene Stringer at 489-8135, weather permitting (check the clear sky chart on the website).

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 to explore space and Earth science!



Comet Campaign: Amateurs Wanted

By Marcus Woo

In a cosmic coincidence, three comets will soon be approaching Earth—and astronomers want you to help study them. This global campaign, which will begin at the end of January when the first comet is bright enough, will enlist amateur astronomers to help researchers continuously monitor how the comets change over time and, ultimately, learn what these ancient ice chunks reveal about the origins of the solar system.

Over the last few years, spacecraft like NASA's Deep Impact/EPOXI or ESA's Rosetta (of which NASA played a part) discovered that comets are more dynamic than anyone realized. The missions found that dust and gas burst from a comet's nucleus every few days or weeks—fleeting phenomena that would have gone unnoticed if it weren't for the constant and nearby observations. But space missions are expensive, so for three upcoming cometary visits, researchers are instead recruiting the combined efforts of telescopes from around the world.

"This is a way that we hope can get the same sorts of observations: by harnessing the power of the masses from various amateurs," says Matthew Knight, an astronomer at the University of Maryland.

By observing the gas and dust in the coma (the comet's atmosphere of gas and dust), and tracking outbursts, amateurs will help professional researchers measure the properties of the comet's nucleus, such as its composition,

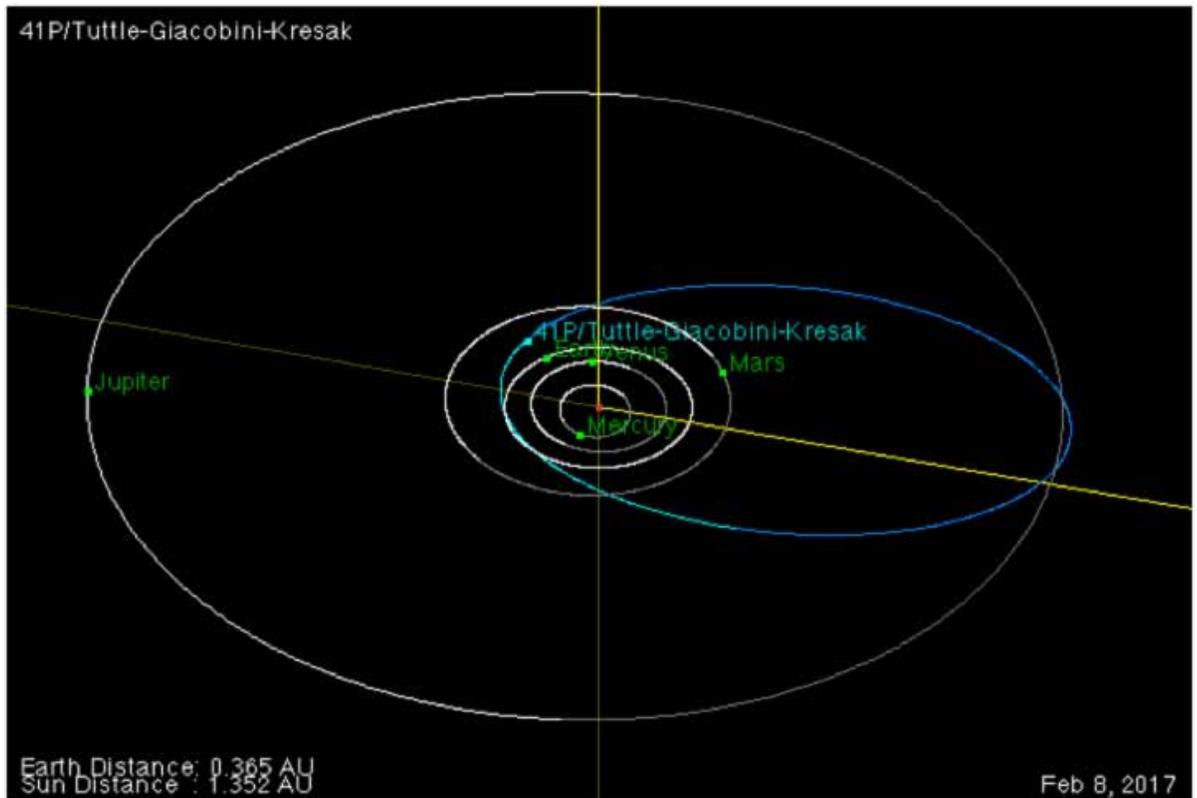
rotation speed, and how well it holds together.

The observations may also help NASA scout out future destinations. The three targets are so-called Jupiter family comets, with relatively short periods just over five years—and orbits that are accessible to spacecraft. "The better understood a comet is," Knight says, "the better NASA can plan for a mission and figure out what the environment is going to be like, and what specifications the spacecraft will need to ensure that it will be successful."

The first comet to arrive is 41P/Tuttle-Giacobini-Kresak, whose prime window runs from the end of January to the end of July. Comet 45P/Honda-Mrkos-Pajdusakova will be most visible between mid-February and mid-March. The third target, comet 46P/Wirtanen won't arrive until 2018.

Still, the opportunity to observe three relatively bright comets within roughly 18 months is rare. "We're talking 20 or more years since we've had anything remotely resembling this," Knight says. "Telescope technology and our knowledge of comets are just totally different now than the last time any of these were good for observing."

For more information about how to participate in the campaign, visit <http://www.psi.edu/41P45P46P>.



An orbit diagram of comet 41P/Tuttle-Giacobini-Kresak on February 8, 2017—a day that falls during the comet's prime visibility window. The planets orbits are white curves and the comet's orbit is a blue curve. The brighter lines indicate the portion of the orbit that is above the ecliptic plane defined by Earth's orbital plane and the darker portions are below the ecliptic plane. This image was created with the Orbit Viewer applet, provided by the Osamu Ajiki (AstroArts) and modified by Ron Baalke (Solar System Dynamics group, JPL). <http://ssd.jpl.nasa.gov/sbdb.cgi?orb=1;sstr=41P>



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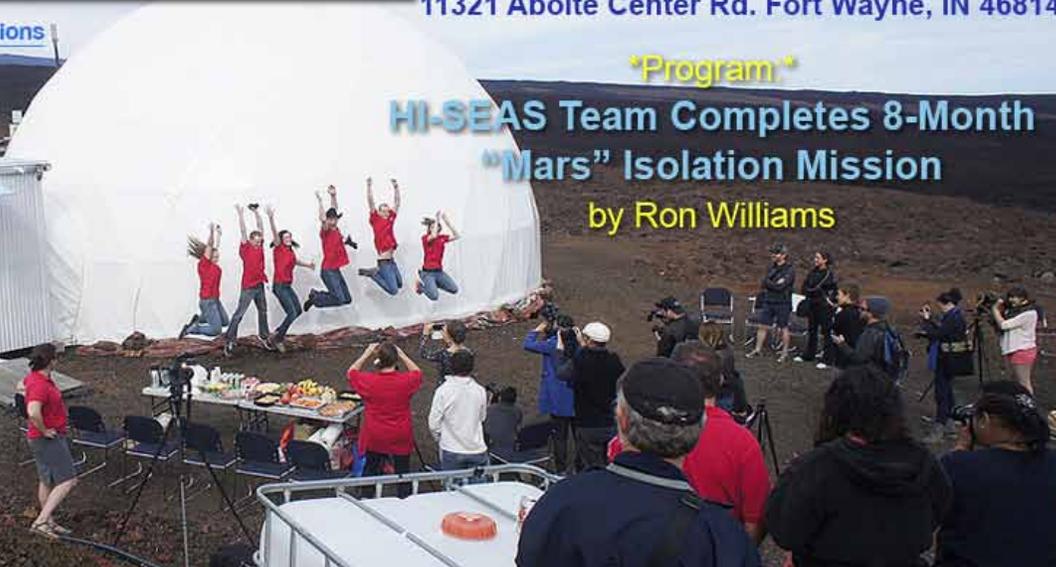
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Fort Wayne Astronomical Society, Inc.
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Next General Meeting:
Tuesday, February 21, 7:30 pm
Aboite Township Community Room
11321 Aboite Center Rd. Fort Wayne, IN 46814

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Program
HI-SEAS Team Completes 8-Month
"Mars" Isolation Mission
by Ron Williams







February Night Sky: In the first half of February, sky-watchers may get a chance to see a comet early morning. After rounding the sun in December, [Comet 45P/Honda-Mrkos-Pajdusakova](#) will be heading back to the outer solar system. On its journey it will make an appearance in our dawn skies, seeming to zip across the constellations Aquila and Hercules. Binoculars or small telescopes required. On the late evening of Saturday 11 February, the Moon will briefly move in front of the bright star Regulus. Mars, Venus in West at Sunset, Jupiter rises near midnight, Saturn in SE early morn. N moon 26th.