



Presents

# The Fourteenth MICHIANA STAR PARTY

50<sup>th</sup> Anniversary

**Dr. Lawless International  
Dark Sky Park**

15122 Monkey Run Street, Jones, MI  
49061

**May 3-5, 2024**

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**Dark Sky  
Special Speakers  
Constellation Guided Tour  
Observing Opportunities  
Vendors  
Astronomy Enthusiasts  
Camping, Hiking Trails**

## Program

All times are Eastern Daylight-Saving Time

### Friday

- \* After 3:00 pm - Camp Set Up
- \* 8:00 pm – Social Time
- \* After 9:30 pm – Laser Sky Tour
- \* Astronomical Twilight: Speaker

**Jim Hopkins**

***Tonight's Constellations***

- \* Observing

### Saturday

- \* Vendors and swaps
- \* Solar observing
- \* Hiking, biking, free time
- \* Yard games for kids of all ages
- \* 11:00 am - Noon: Speaker

**Melissa F Kaelin**

***Chasing the Aurora in the Great Lakes  
Region***

- \* Noon: **Lunch** break
- \* 1:00 - 2:00 pm: Speaker

**Dr. Peter Garnavich**

***The Attraction of Observing Magnetic  
Cataclysmic Variable Stars***

- \* 2:30 – 3:30 pm: Speaker

**Dr. Shane Larson**

***STAR LIGHT, STAR BRIGHT Discovering the  
secret lives of the stars***

- \* 4:00 pm - Group Photo
- \* Dinner break
- \* 6:00 - 7:00 pm: Speaker

**Kurt Eberhardt**

***Asteroid Impact Structures of Indiana  
and Michigan & Club History***

- \* Observing

### Eating and Sleeping

- \* Community campfire and grill
- \* Microwave oven available
- \* Bring your own food and drinks
- \* Restaurants, motels, and hotels nearby
- \* Campsites available for tents, campers and RV's
- \* Public restrooms and running water available in the Pavilion

### Park Opportunities

- \* Wildlife observation
- \* Hiking and biking trails, Maps here:  
<https://tinyurl.com/LawlessTrails>
- \* Open fields for games, Frisbee

### Star Party Camping Guidelines

- \* Arrive after 3:00 pm Friday; set up before dusk
- \* Star party ends Sunday at 11:00 am
- \* Parking in the designated parking area
- \* No car movement on the field after dark
- \* Bring battery power for motorized mounts
- \* **Red flashlights only!**
- \* Minors must be with an adult
- \* Dogs on leashes are allowed
- \* Vendors and swap tables welcome!
- \* Acoustical musical instruments are welcome!
- \* Dress warmly
- \* Smoking permitted beyond telescope areas, downwind
- \* You are responsible for the security of your own belongings.
- \* **Do NOT look at the sun through any device that is not designed for it!**



## Speakers



### **Chasing the Aurora in the Great Lakes Region Melissa F Kaelin - 11:00 am – Noon**

Join the Founder of the Michigan Aurora Chasers to learn how to chase the Northern Lights using tools, tips, and techniques that could help you catch this rare phenomenon in your backyard. She will introduce the science of space weather while also sharing advice that has helped hundreds of people view the Aurora for the first time.

An Aurora Chaser for 12 years, Melissa is a writer, speaker, and road trip adventurer who enjoys immersive experiences in the wilderness. She is the author of "Below the 45th Parallel: The Beginner's Guide to Chasing the Aurora in the Great Lakes" and the founder of the Michigan Aurora Chasers, a group of nearly 100,000 members. She also co-founded the Aurora Summit: Celebrating the Art, Culture, Science, and Photography of the Aurora, an international conference that has welcomed the public since its inception in 2017. Melissa has caught the Northern Lights in four states, including Michigan, Wisconsin, Minnesota, and Alaska, and in November, she will lead a Northern Lights tour in Iceland.



### **The Attraction of Observing Magnetic Cataclysmic Variable Stars Dr. Peter Garnavich - 1:00 – 2:00 pm**

Dr. Peter Garnavich is a Professor of Physics and Astronomy at the University of Notre Dame.

Previously, he was a Research Fellow at the Harvard-Smithsonian Center for Astrophysics and received an M.Sc. from the Massachusetts Institute of Technology and a Ph.D. from the University of Washington. His research interests include cataclysmic variable stars, supernovae, and cosmology. He is a co-recipient of the 2007 Gruber Prize in Cosmology and the 2015 Breakthrough Prize in Fundamental Physics. He was recently named as a Fellow of the American Astronomical Society. Garnavich was a key member of the "High-Z" team that discovered the universal expansion rate is accelerating. The discovery of the accelerating universe was awarded the 2011 Nobel Prize in Physics.

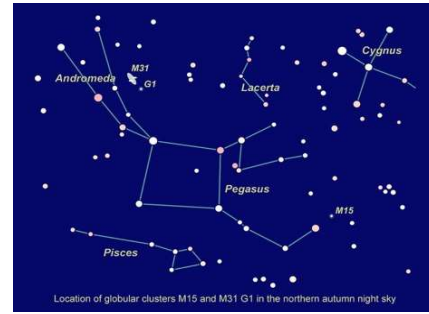
Dr. Garnavich will give his presentation on the cataclysmic variables, which are binaries containing a compact star that accretes matter from a close companion. They are some of the most exciting stars to observe because the timescale for their light variations ranges from hours to minutes and sometimes seconds. When the compact star possesses a strong magnetic field, gas flow can be channeled along the field lines, producing bright emissions near the star's magnetic poles. In a few cases, magnetic fields on rapidly spinning stars can even eject gas that tries to reach the compact star.



### **STAR LIGHT, STAR BRIGHT Discovering the secret lives of the stars Dr. Shane Larson - 2:30 – 3:30 pm**

Dr. Shane Larson is a research professor of physics at Northwestern University, where he is the Associate Director of CIERA (Center for Interdisciplinary Exploration and Research in Astrophysics). He works in the field of gravitational wave astrophysics, specializing in studies of compact stars, binaries, and the galaxy with both the ground-based LIGO project and future space-based observatory LISA. He grew up in Eastern Oregon, and was formerly a tenured Associate Professor of Physics at Utah State University. He is an award winning teacher, and a Fellow of the American Physical Society.

Dr. Larson will give his presentation on the stars in the night sky, which seem immutable, appearing much the same tonight in the skies over the Midwest as they did 10, 20, and even hundreds of years ago. We are



**Tonight's Constellations**  
**Mr. Jim Hopkins – Friday After 9:00 pm**

used to thinking of the stars as everlasting, a comfortable constant filling our nighttime musings. But the stars, like people, live dynamic and exciting lives. They are born from the turbulent mixing of gases in vast molecular clouds, they live through constant swelling and shrinking in middle age, and they die possibly violent deaths, leaving behind a fascinating array of skeletal remnants in the stellar graveyard. There are about 8000 stars visible in the night sky over the star party (considerably fewer under the city lights many of us live near!), and tonight, we'll visit some of these stars at various points in their evolution in our exploration of the lives they lead.

Mr. Hopkins is a retired high school physics and astronomy teacher and Associate Professor at Joliet Junior College in Illinois. He has spent his retirement speaking to star party attendees and is the past president of the Naperville Astronomical Association. He has attended more than 60-star parties, including at the Grand Canyon, Okie-Tex, and Nebraska, over 20 years in a row. He especially enjoys showing the night sky to various scout, church, and park district members.



**Asteroid Impact Structures of Indiana and Michigan**  
**Mr. Kurt Eberhardt – 6:00 – 7:00 pm**

Mr. Eberhardt has been an active amateur astronomer for over 50 years. He is also a retired high school science teacher with a B.S. in Geology and an M.S. in Geosciences. As a student, Kurt worked for the Minor Planet Center at Indiana University.

**Michiana Star Party 2024**

**Pre-registration Form May 3-5, 2024**

Please pre-register by **April 26**. Copy this form as needed.

Name: \_\_\_\_\_

For others in your party, please include names and ages if under 18.

Address: \_\_\_\_\_

\_\_\_\_\_

E-mail: \_\_\_\_\_ Phone: \_\_\_\_\_

**Member of Astronomy group – name:** \_\_\_\_\_

<u>Pre-registration</u>	<b>Fee</b>	<b>Number</b>	<b>Total</b>
<b><u>Pre-registration fees:</u></b>			
Adult non-member	\$35	_____	_____
Adult MAS member	\$25	_____	_____
Under 18 Free			
<b><u>At the Gate registration fees:</u></b>			
Adult non-member	\$40	_____	_____
Adult MAS member	\$25	_____	_____
Under 18	\$10	_____	_____

Daily pass \$10 - Come as early as you want, stay as late as you want. But no overnight camping allowed with a daily pass  
Star Party Fees include semi-primitive camping at the county park where the star party is being held.

**Official 2024 Michiana Star Party T-shirt** (April 22th deadline -- we may not have your size)

Small	\$20	_____	_____
Medium	\$20	_____	_____
Large	\$20	_____	_____
XL	\$20	_____	_____
XXL	\$25	_____	_____
XXXL	\$25	_____	_____

**MAS Membership for One Year** (optional)

Associate & Family	\$20	_____	_____
Senior & Student	\$15	_____	_____

**Grand Total:** \_\_\_\_\_

**Make check payable to Michiana Astronomical Society.** Your check is \_\_\_\_\_ your receipt.

Confirmation will be emailed.

No refunds.

Pre-registration closes on April 26.

**Send pre-registration and check to:**

Michael Hensley

**224 Devonshire. Dr.**

**South Bend, IN 46615**

(e-mail: [mehensley123@gmail.com](mailto:mehensley123@gmail.com))