

March 9, 2024: Northern Lights Photography Workshop Recap

written by Chris Guibert | March 15, 2024

March 9, 2024 – Northern Lights Photography Workshop Recap

The [March 9, 2024 Northern Lights Photography Workshop](#) was the second workshop this year. The [January Night Sky Photo Workshop](#) was canceled due to weather, however we were able to host the [February 9th, Northern Lights Photo Workshop](#). The monthly night sky photo workshops can have different themes throughout the year. Near the spring and fall equinoxes they are focused on the northern lights because that is “[aurora season](#)” (Please note auroras can be seen any time of year, they are just slightly more frequent near the spring and fall equinoxes). In the summer months the [Milky Way](#) is more prevalent in the Northern Hemisphere (where the Lodge is located) so during those times the workshops offer a more in-depth discussion of our home galaxy. Throughout the whole year we offer [educational initiatives](#) at the Keweenaw Mountain Lodge in association with being the headquarters of the [Keweenaw Dark Sky Park](#).

NORTHERN LIGHTS PHOTO WORKSHOP

JOIN PHOTOGRAPHER NATE BETT FOR A DARK SKY PHOTO WORKSHOP
IN THE KEWEENAW DARK SKY PARK



KEWEENAW MOUNTAIN LODGE

MARCH 9, 2024 - 7:30 PM



LODGING GUESTS FREE • \$75 PUBLIC • LIMITED AVAILABILITY

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March 9, 2024 was a beautiful evening. Our [Ambient Weather Station](#) indicated it was 28 degrees before the workshop started. The guests at the lodge witnessed a colorful sunset over Brockway Mountain. It seemed as if Mother Nature wanted to provide us a little creative inspiration to start our night.

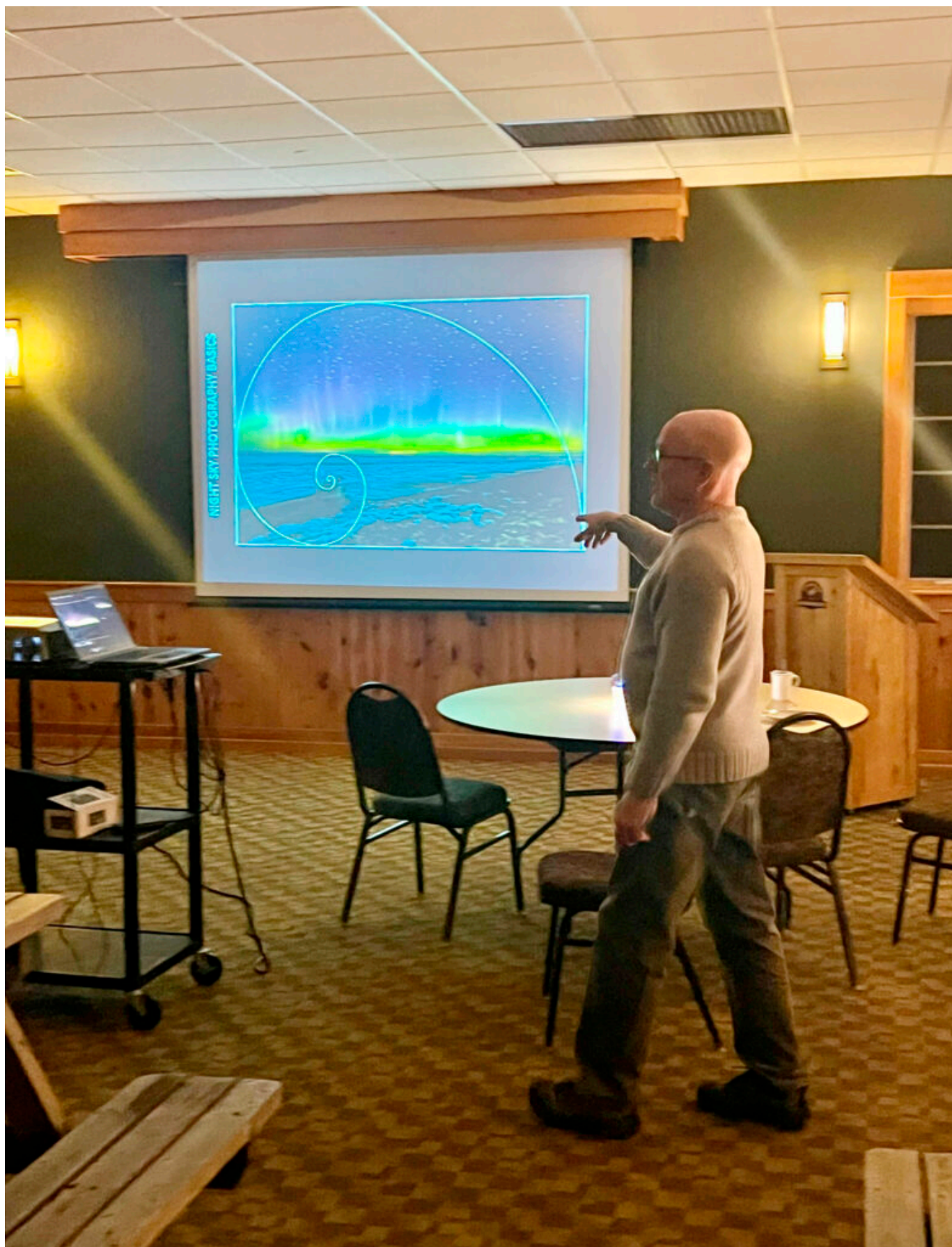


The sunset silhouetting Brockway Mountain.



The sunset from one of the Dark Sky Walking Paths.

Our regular instructor, Nate Bett, was not feeling well, and Tom Oliver was able to teach the class. Tom is currently the [Director, Center for Science and Environmental Outreach](#) at Michigan Tech and had previously worked at the Keweenaw Mountain Lodge.



Tom Oliver discusses camera composition techniques.

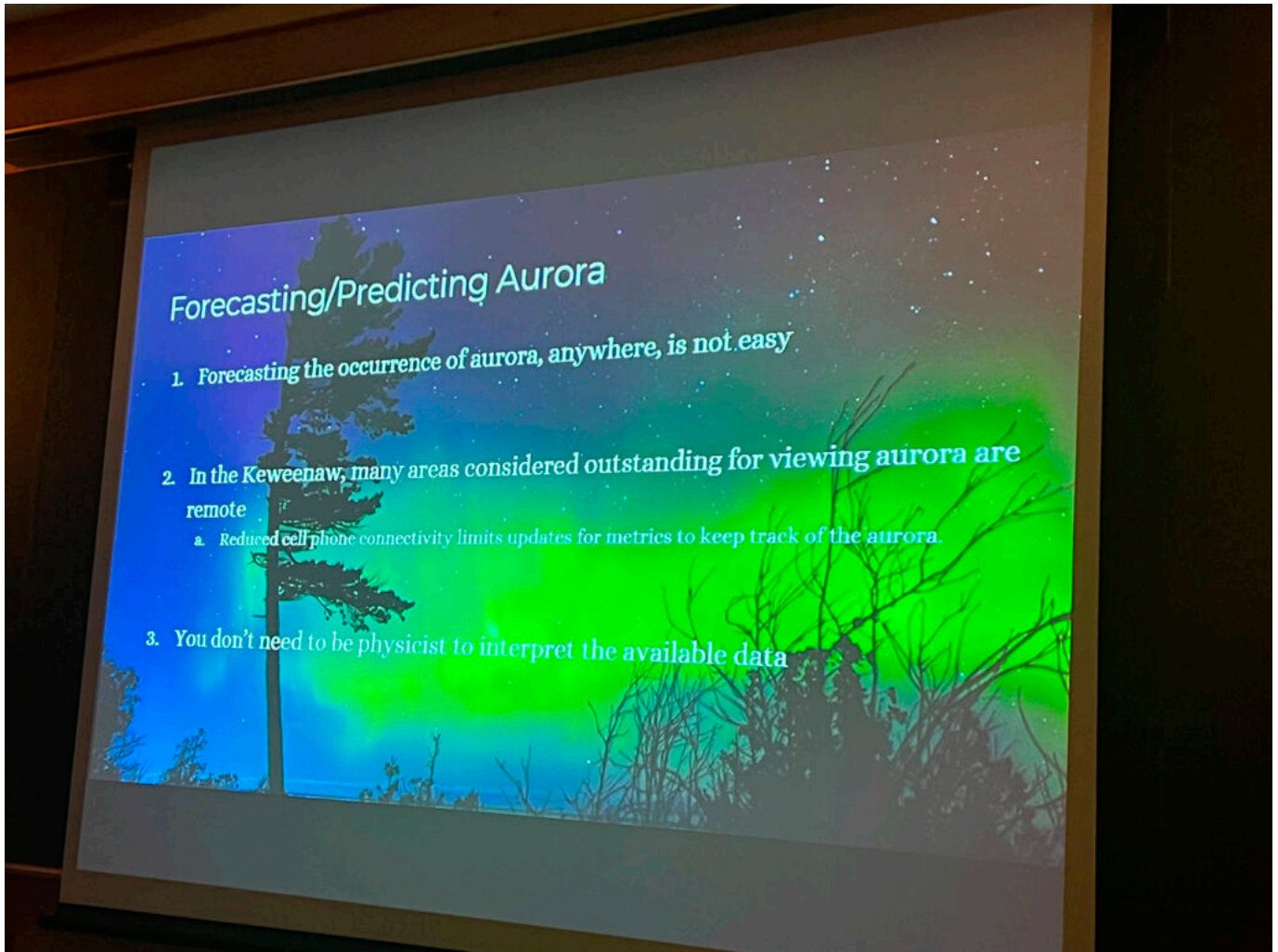
We had one participant, a lodging guest attend the workshop. Having come from New York City to visit the Keweenaw and stay at the Lodge, she was treated to a personable one-on-one lesson on how to take night sky photographs. Tom touched base on camera techniques, locations to shoot, and equipment during the workshop.



The March 9th workshop was a personable, one-on-one lesson for the guest.

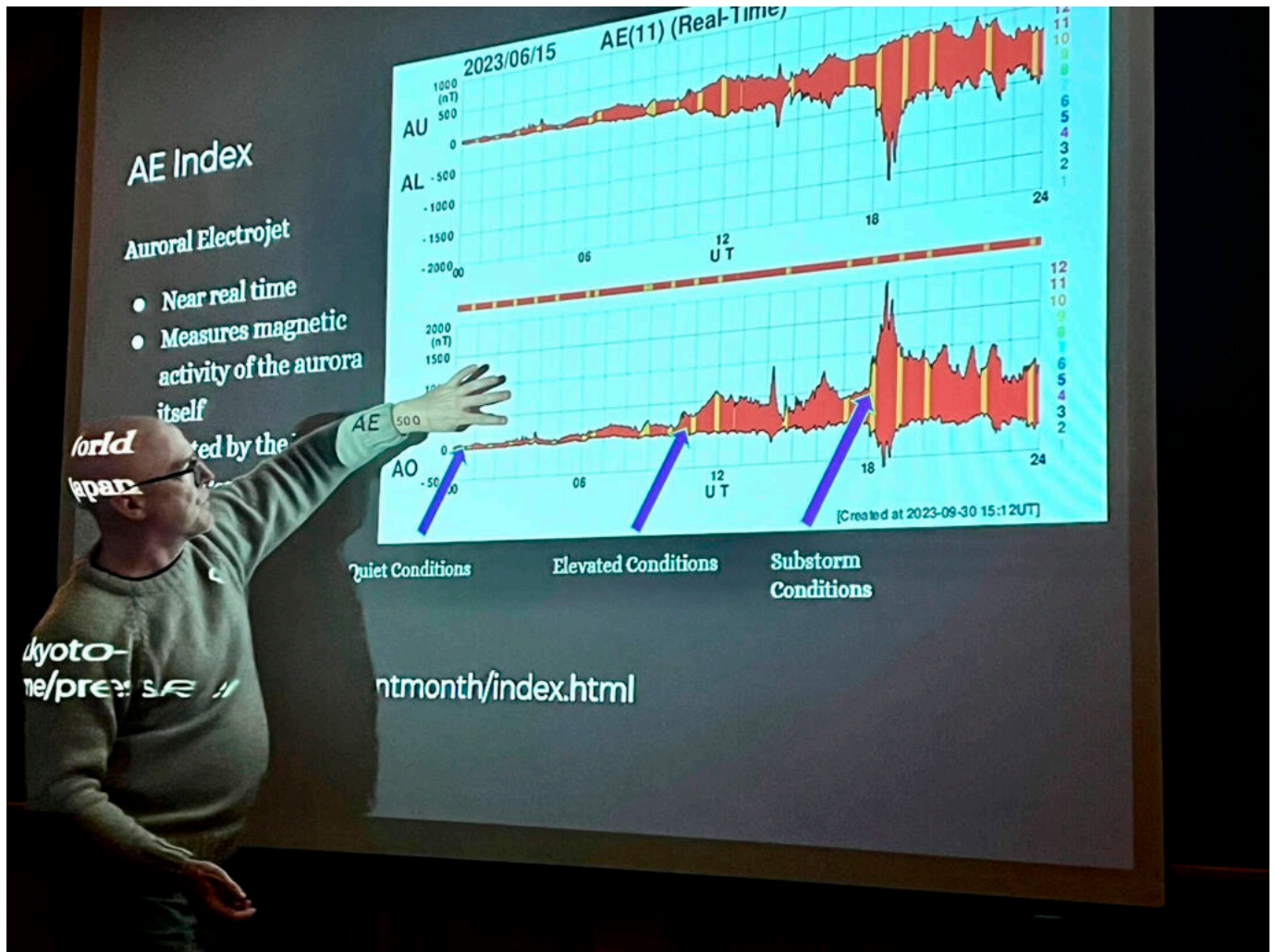
The Night Sky Photo Workshops are broken into two segments: an inside presentation and an outside, hands-on portion. Outside it was still clear skies, ideal to take some night sky photos. However, the guest had traveled by plane and did not bring her photo gear with her. So Tom offered to run through his

[Photograph the Aurora Using Science, Data, and Forecasting](#) slide deck to go more in-depth on the Northern Lights. Tom launched into a discussion on the science of the northern lights, referencing some of the many websites and apps that can help with aurora forecasting, which was of interest to our guest.



A slide from the Photograph the Aurora Using Science, Data, and Forecasting presentation.

At the end of the night our minds were filled and we left the Lodge with more knowledge than when we came.



Tom's mind filled with knowledge.

Our next photo workshop will be held during the [2024 Upper Peninsula Dark Sky Festival](#) in April.



[Chris Guibert](#)

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Activities at the Mountain Lodge I want make sure you and your family have a great experience while staying and playing. Please feel free to ask me any questions about the trails, regional activities and local secrets.

February 24, 2024: Moonlit

Snowshoe Hike Recap

written by Amy Oestreich | March 15, 2024

“Adapt accordingly to the situation in a positive manner.” This is one of our core values at the Keweenaw Mountain Lodge, and the low amount of snow this winter has proved to require some adaptations to our adventures. In 2023, Keweenaw County reported 55 inches of snowfall for the month of February, this year, we received a mere 21 inches.

This lack of fluffy flakes presented a new opportunity. After assessing the crusty snowshoe trail, the Outdoor Activities Team decided to offer the guided moonlit snowshoe hike as a “hike by moonlight”. Thirteen participants laced up their hiking boots and adventured on to experience something new. Has anyone ever hiked the Keweenaw Mountain Trails without snowshoes in February? A pioneering thrill filled the air!

Guests had arrived with different hopes as to what they would like to experience. Some wanted to challenge their night vision, some came to enjoy the silence and some were excited to see wildlife. Tonight we were hoping to see or at least hear an owl.

Wearing hiking boots allowed our footsteps to be quieter than snowshoes would have. The moon was high and bright and we were able to see clearly. Being in nature is always special – the still of the night adds an almost magical feeling. The calming effect of nature then allows the mind to quiet. As we made our way down the canyon on the Adventurer Snowshoe Route, we heard the rustle of large wings overhead. In unison, our footsteps halted to a stop. We heard the gentleman who had hoped to see an owl: “Look, right there, it’s an owl!” Magic? Maybe. Maybe he wished upon a star that night.

Gazing at our lucky stars, we hiked into the opening on fairway

4 of the golf course. We stopped to admire how the clouds formed shapes in the moonlight. It is funny how pointing at cloud images can make you feel like a kid again! Just then a beautiful rainbow ring encircled the full moon. A lunar halo casts an almost spellbinding glow across the sky. This is caused by the refraction of light from ice crystals in the upper atmosphere. Many times it appears as a white to grayish blue light. But tonight the entire spectrum of light was visible by us all. Yes, definitely magical.

When we adapt, we just may experience something new.



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February 9, 2024: Northern Lights Photography Workshop Recap

written by John Mueller | March 15, 2024

The [February 9, 2024 Northern Lights Photography Workshop](#) was the first workshop this year, as the [January photo workshop was](#)

[cancelled](#) due to a snowstorm. We were excited about the first workshop of the year, and to continue with our [educational initiatives](#) at the Keweenaw Mountain Lodge in association with being the headquarters of the [Keweenaw Dark Sky Park](#).





NIGHT SKY PHOTO WORKSHOP

JOIN PHOTOGRAPHER NATE BETT FOR A DARK SKY PHOTO WORKSHOP
IN THE KEWEENAW DARK SKY PARK



KEWEENAW MOUNTAIN LODGE

FEBRUARY 9, 2024 - 7:00 PM



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We had five attendees for the workshop, all of which were staying at the Keweenaw Mountain Lodge. With the workshop being our monthly [Lights Out!](#), the guests were able to better experience and understand how to see the stars (even when it is snowing outside, which it was during the workshop).

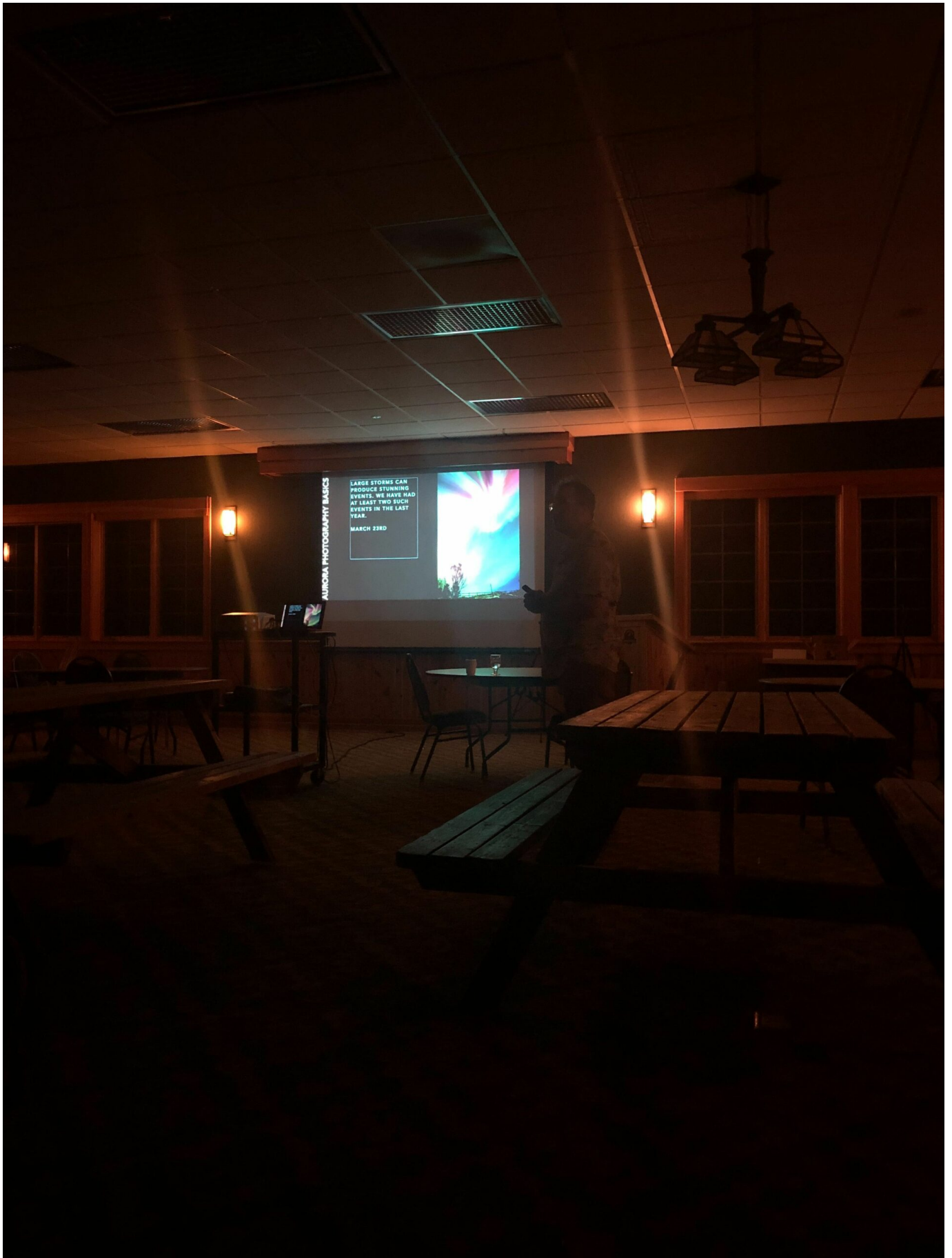
[Nate Bett](#) was the instructor for the class. He has a diverse background in photography including attaining an MFA from [Parsons The New School For Design](#) in 2012, working for [Canon cameras](#) at trade shows and teaching photo classes at [Northern Michigan University \(NMU\)](#).



To reiterate how the night sky photo workshops are structured: The Night Sky Photo Workshops are broken into two segments: an

inside presentation and an outside, hands-on portion. This night's class started at 7:00pm and Nate launched into a digital slideshow covering topics like: preparations for a night sky photo shoot, Aurora basics, camera settings, and picking good locations.







Friday during the day was clear, which gave hope to the workshop attendees being able to get out and take pictures. However, as the workshop began, Mother Nature decided to have snowflakes come down from the sky.



So the attendees and Nate were not able to spend time outside after the inside lecture. Rather, attendees were able to spend time with Nate asking specific questions about cameras and night-time photography – specific to taking photos of the beautiful Northern Lights. The attendees brought their cameras with them, so they were able to get hands on instruction from Nate.







Our next photo workshop will be held during the new moon in March, on March 9th:

- [Stargazing: Northern Lights Photography Workshop, March 9, 2024](#)

And don't forget about the [2024 Upper Peninsula Dark Sky Festival](#) in April.



[Chris Guibert](#)

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Stargazing 2023 Season Recap – Fostering the Night Sky

written by Chris Guibert | March 15, 2024

Stargazing at the Keweenaw Mountain Lodge is an activity that can be enjoyed by anyone. The [Keweenaw Dark Sky Park](#) was [designated as Michigan's third International Dark Sky Park](#) on June 21, 2022, with the [Keweenaw Mountain Lodge](#) (KML) being the

headquarters for the dark sky park. Since then the team at the KML has been working to create great stargazing experiences.

[[View the history of the Keweenaw Dark Sky Park's application](#)]

We view stargazing as a way to get in touch with nature. The Earth, our natural world, is part of our solar system which is a small part of the Milky Way Galaxy which is even a smaller part of the known universe. Looking up and seeing a clear night sky opens the door to our universe. The sheer beauty is one aspect of what draws us to stargazing and chasing the northern lights, however it goes beyond the visual. Looking at the stars has enlarged our perspective; it helps remind us about how insignificant we are and why we are here on planet Earth. Man's impact on our planet, and even the night sky, is significant. More [than 80 percent of humanity is affected by light pollution from artificial light](#). Animals and plants on this planet (as well as humans) have genetically adapted to regular day/night/seasonal cycles that have been completely interrupted by the glow created by artificial lights. One of the goals of the Keweenaw Mountain Lodge in becoming a dark sky park is to foster dark skies across the Keweenaw. We want to provide experiences and educational opportunities so individuals can learn about the impact of artificial light on the natural world. Our hope is that you leave the Lodge more knowledgeable than when you came.

Stargazing is a year round activity at the Lodge. The property is open at night to guests 365 nights of the year. Providing educational materials and information regarding the night sky is a year round endeavor. For lodging guests, telescopes are available to borrow as part of the [telescoping lending program](#). We use a bulletin board inside the lodge to post informational posters about the night sky. Inside the [Outdoor Activity Center](#) (OAC) the Astro Board is updated each week to inform guests of

celestial happenings in the night sky.



Educational posters on the bulletin board

Celestial Events

★ Comet ZTF E₃ is at it's best this week & reaching it's peak predicted brightness while passing the Little Dipper in the Northern Sky.

Saturday 1/28: First Quarter Moon, 10:19am EST

Tuesday 1/31: Comet ZTF E₃ is practically at it's closest to Earth & at it's brightest. Best 1 hr window: 2 1/2 hours before local sunrise. Set your alarms!

Thursday 2/2: Spot the big, bright equilateral Winter triangle in the Southwest. Located to the lower left of the Moon. Sirius is the brightest & lowest Star.

Sunday 2/5: Full Moon at exactly 1:29 pm EST

Tonight 1/28: Night Sky Photography Workshop
7:30 pm, here KML OAC.

Northern Lights



Recommended Apps: Aurora Forecast
Podcast: Sky Tour Astronomy



The Astro Board inside the OAC

In this post, we review some of the night sky activities and celestial events that happened in 2023.

January

- Guided a [Moonlit Snowshoe Hike on January 7th](#): The purpose of our moonlit snowshoe hikes is to provide a night time adventure, introduce them to the Dark Sky Park, and provide an educational experience about the Lodge and property.
- Hosted a [Night Sky Photo Workshop on January 28th](#)



Participants gather outside the Lodge for the January 7th Moonlit Snowshoe Hike

February

- Guided a [Moonlit Snowshoe Hike on February 4th](#). This was part of our annual [Snowshoe Hare](#) event
- [Northern Lights – A G3 solar storm takes place on February 26th](#). A strong solar storm hit the Keweenaw
- Hosted a [Northern Lights Photo Workshop on February 18th](#)



Northern Lights over the cabins during the G3 solar storm on February 26th

March

- Guided a [Moonlit Snowshoe Hike on March 4th](#)
- Hosted a [Night Sky Photo Workshop on March 19th](#)



Full moon over the Lodge during the March 4th Moonlit Snowshoe Hike

April

- Installed the **Keweenaw Dark Sky Park at the main entrance of KML, on US Hwy 41**: We were able to put up an entrance sign for the [Keweenaw Dark Sky Park](#). We removed an outdated KML sign and created a new wooden sign displaying the Keweenaw Dark Sky Park and the International Dark Sky Association's logos. [Note: the International Dark Sky Association has changed its name to [Dark Sky International](#)]
- Hosted the [Upper Peninsula Dark Sky Festival](#): The team wanted to create an educational event that was unique to the Upper Peninsula of Michigan focused on the night sky. We partnered with [Visit Keweenaw](#) to launch a dark sky

festival that will take place annually. Speakers came from across the region to share their expertise on the northern lights, photographing the night sky, and astronomy.

- **Started the Lights Out! Program:** [Installed light switches](#) for the 28 dark sky compliant street lights that are on the property as part of our lighting improvement, and which is inline with [our light management plan](#). Having light switches for each street light allows us to completely shut off the lights for a program we call [Lights Out!](#). We originally started the Lights Out! program for three days a month around the new moon, and later in the year we switched this to seven days a month.



Astro Bob leads a presentation on Meteorites during the Upper Peninsula Dark Sky Festival



The new Keweenaw Dark Sky Park entrance sign

May

- Installed a **Dark Sky Viewing Area Map** in the parking lot
- Hosted a [Night Sky Photo Workshop on May 20th](#)
- **First Northern Lights** captured on the [All-Sky Web Camera](#) on May 19th. Team member Martin Mueller was able to get the All-sky Camera to capture the Northern Lights for the first time! This [special project](#) had gone through multiple tests for the last few years, and it was wonderful to [see the Northern Lights captured on the camera](#).



Installing the new Keweenaw Dark Sky Park map and sign in the parking lot

June

- [Designed new golf course scorecard](#) that incorporates the dark sky park and the night sky activities – *Play golf during the day, stargaze at night*. Implemented a policy that golfers had to be off the golf course by 7pm to allow for people to walk the golf course and scout stargazing locations.
- Hosted a [Night Sky Photo Workshop on June 18th](#)
- **Started working with APT Solar Solutions – 3D Solar Lighting Fixture Pilot:** The Lodge became part of a test project that Mojtaba Akhavan-Tafti of [Adaptable Powerful Transformative \(APT\) Solar Solutions](#) started. APT is partially [funded by a grant](#) from the MDEC ([Michigan](#)

[Economic Development Corporation](#)) MEDC's which works with high-tech startups in Michigan. We agreed to test 10 of the newly developed solar lights to see how they perform in the Keweenaw Dark Sky Park.

- **Worked with National Geographic** on [an article](#) about Michigan's Upper Peninsula and the Keweenaw Dark Sky Park



The new scorecard design – front -back

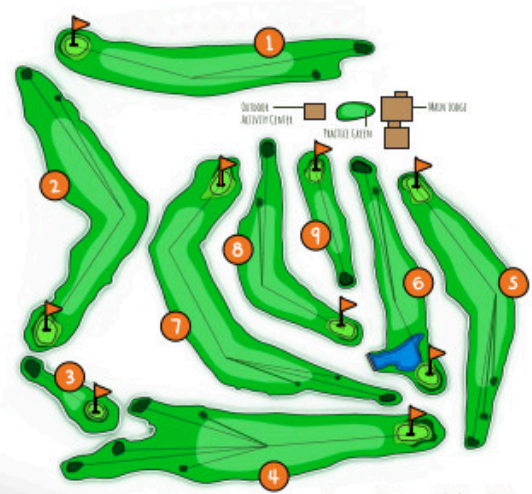


USGA rules shall govern all play except
where modified by the local rules
(see website)

Date:

Hole	1	2	3	4	5	6	7	8	9	Out
Iron	394	395	119	395	372	313	485	318	177	2,968
Copper	341	329	108	295	275	280	407	263	163	2,461
Par	4	4	3	4	4	4	5	4	3	35
Handicap	5	1	9	2	3	6	4	7	8	

Scorer: Attestor:



Course Designer: Ochoa Potter



For more details on each hole, scan the QR code.

The new scorecard design – inside



Image from the National Geographic photo shoot

July

- **Grant awarded to the Keweenaw Mountain Lodge to improve our night sky lighting.** The Keweenaw Mountain Lodge was awarded an \$8,000 grant to install a wireless system to control our street lights remotely. This grant program was offered by the [Michigan Mobility Funding Platform](#) to purchase and install [Synapse TL7-B2 wireless modules](#) for the 28 street lights on the property. These modules allow the Lodge team the ability to easily control the streetlights for better night sky viewing.
- Hosted a [Night Sky Photo Workshop on July 16th](#)
- **Construction of the Dark Sky Walking Path to Hole 4 Fairway:** The team worked on leveling a path to Hole 4 of the golf course. This is one of a few paths that we call a

Dark Sky Walking Path that guide people to some of the darker places in the Keweenaw Dark Sky Park.



Using the Bobcat mini-ex to improve the Dark Sky Walking Path to Hole 4

August

- Aurora August 4 – caught on All Sky Camera
- [Night Sky Photo Workshop on August 18th](#)
- Hosted a [Perseid Meteor Shower Party on August 12th](#)
- Purchased a [Celestron First Scope Telescope](#). This is a Dobsonian style scope that needs to be set on a table.
- Updated the Keweenaw Dark Sky Park Map



Keweenaw Dark Sky Park Night Sky Viewing Area



New map that showcases the Dark Sky Walking Paths

September

- [Northern Lights Photo Workshop on September 17th](#)
- An entrance poster created to notify guests when there is a possibility of Northern Lights that night
- Northern Lights – a G2 level solar storm is visible across the Keweenaw – September 18th – 19th: 10:00pm – 5:00am



Nate Bett instructs the September Northern Lights Photo Workshop

October

- Created an Informational Poster – Using Red Lights in Dark Sky Parks
- Hosted a [Northern Lights Photo Workshop on October 15th](#)
- **Installed light posts and signage for the Dark Sky Walking path to hole 7.** The APT Solar Solutions – 3D Solar lighting fixtures were attached to the top of the posts.
- Started installing the Wifi Modules on street lights. The wireless control system allows us to control the street lights remotely, which helps with improving the guest experience for dark skies.



A boom truck installing the Wifi modules on the street lights



Installing the Wifi modules on the street lights

November

- Hosted a [Night Sky Photo Workshop on November 11th](#)
- Team member John Mueller led a [light management workshop](#) for a third year in a row on November 10th. This time we incorporated the workshop into a seminar with [Visit Keweenaw](#) as part of their [Sustainable Tourism Seminar Series](#). [John Barentine](#), who is the Executive Officer and Principal Consultant at [Dark Sky Consulting, LLC](#), a consultancy offering professional services in the areas of light pollution, joined virtually via Zoom from Tucson, Arizona.



Information about the November sustainable tourism event





December

- Started uploading videos from the [All-sky Camera](#) to the [Keweenaw Mountain Lodge's Youtube account](#)
- Hosted a [Northern Lights Photo Workshop on December 9th](#)
- Finished installing light posts and signage for the Dark Sky Walking path to hole 7
- Testing red lights around the property to enhance night sky viewing, and to let guests understand how red lights are better for stargazing. White LED light bulbs were replaced with red LED light bulbs at the entrance of the Lodge building and on the entry pillars at the entrance of the property on US Hwy 41.



The new red light bulbs light the Lodge. The planet Venus is bright in the night sky.

2023 proved to be an exciting year for stargazing at the [Keweenaw Mountain Lodge](#). The team worked together to provide guests many educational and adventure activities based around the night sky. We continued to have dark skies ([see the dark sky quality measurement readings](#) – measured monthly in 8 of the 12 months in 7 spots on property for 43 readings, with an average SQM of 21.45) and build out more of the infrastructure of the [Keweenaw Dark Sky Park](#). And we learned something new everyday. One of the [Lodge team's core values](#) is to “be fearless and persistent in learning on a daily basis” and our activities in 2023 mirrored that as it related to the dark skies. To see what others have been saying about the Lodge's dark sky activities and read more about the dark sky park, check out the [press coverage page](#) of the website. There were well over 20 wonderful

articles written about the subject in 2023.

The night sky for 2024 is already making headlines. Solar activity is expected to [strengthen in 2024](#), which could activate more frequent displays of the northern lights, according to the [National Oceanic and Atmospheric Administration](#) (NOAA). [Comet C/2023 A3](#) might light up our autumn sky and the [2024 total eclipse](#) will cross most of the United States. Our team looks forward to another year of stargazing and providing some fun adventures to help our guests expand their (and our) perspective of the night sky.



A newly installed APT Solutions solar light



Photographer Steve Hirsch captures the Milky Way Galaxy in the Keweenaw Dark Sky Park on August 12th



This bulletin board is used to share information about the Keweenaw Dark Sky Park



The Keweenaw Dark Sky Park headquarters during the February 26th Northern Lights event

Visit Keweenaw's Video during the 2023 Upper Peninsula Dark Sky Festival about the Keweenaw Dark Sky Park



[Chris Guibert](#)

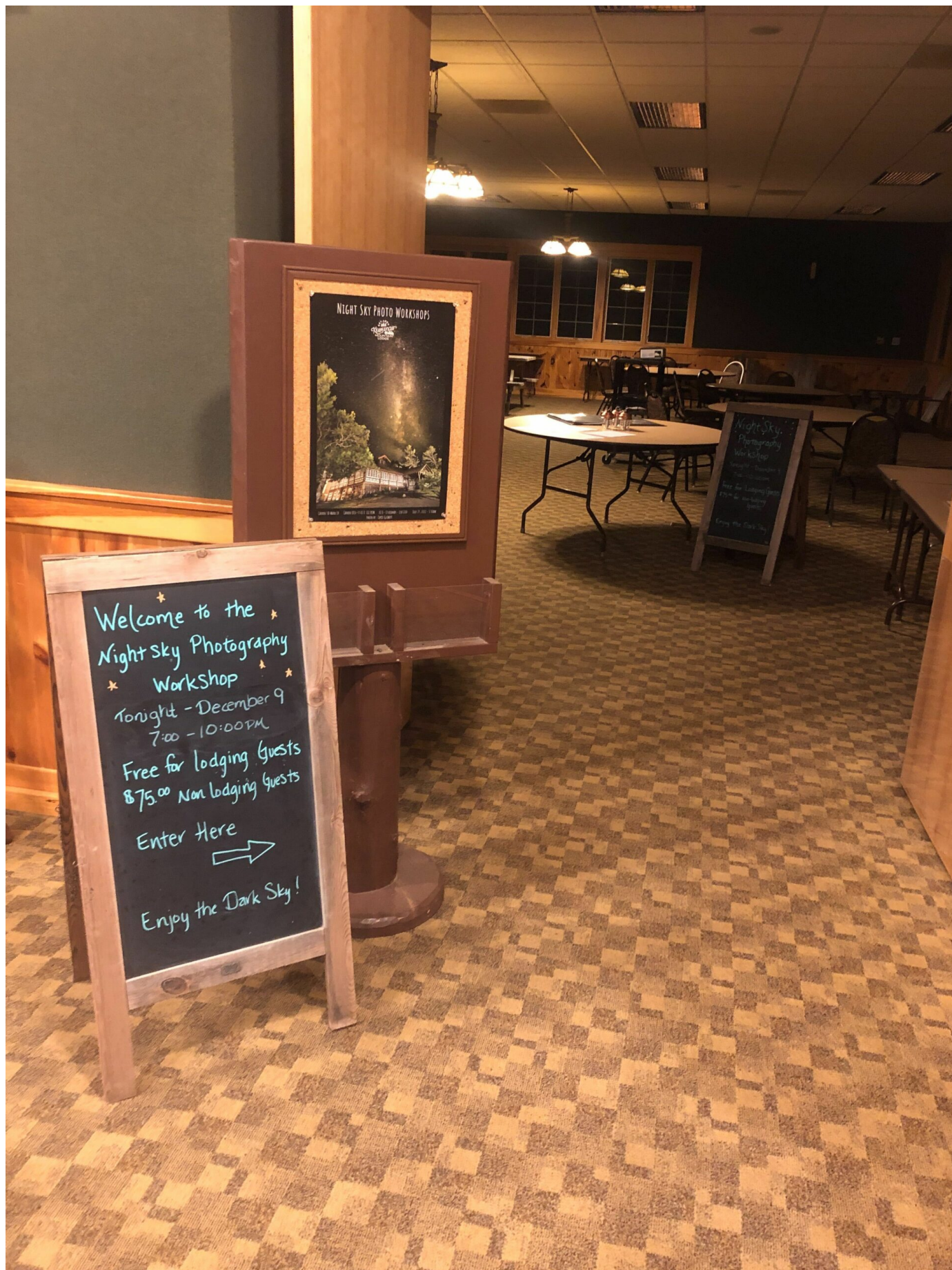
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December 9, 2023: Northern Lights Photography Workshop Recap

written by John Mueller | March 15, 2024

The [December 9, 2023 Aurora Photography Workshop](#) was the twelfth workshop of 2023 at the Keweenaw Mountain Lodge. Throughout the year we held night sky photo workshops every month as part of our [educational initiatives](#) at the Keweenaw Mountain Lodge in association with being the headquarters of the [Keweenaw Dark Sky Park](#).



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Four guests attended the workshop, all of which were staying at the Keweenaw Mountain Lodge. We have noticed over the past year that guests are booking their stay to attend the workshop and take advantage of the [Lights Out!](#) The Lights Out event at the Lodge is a three-to-seven day event where the Lodge turns off all the street lights and other lights to increase one's stargazing experience.

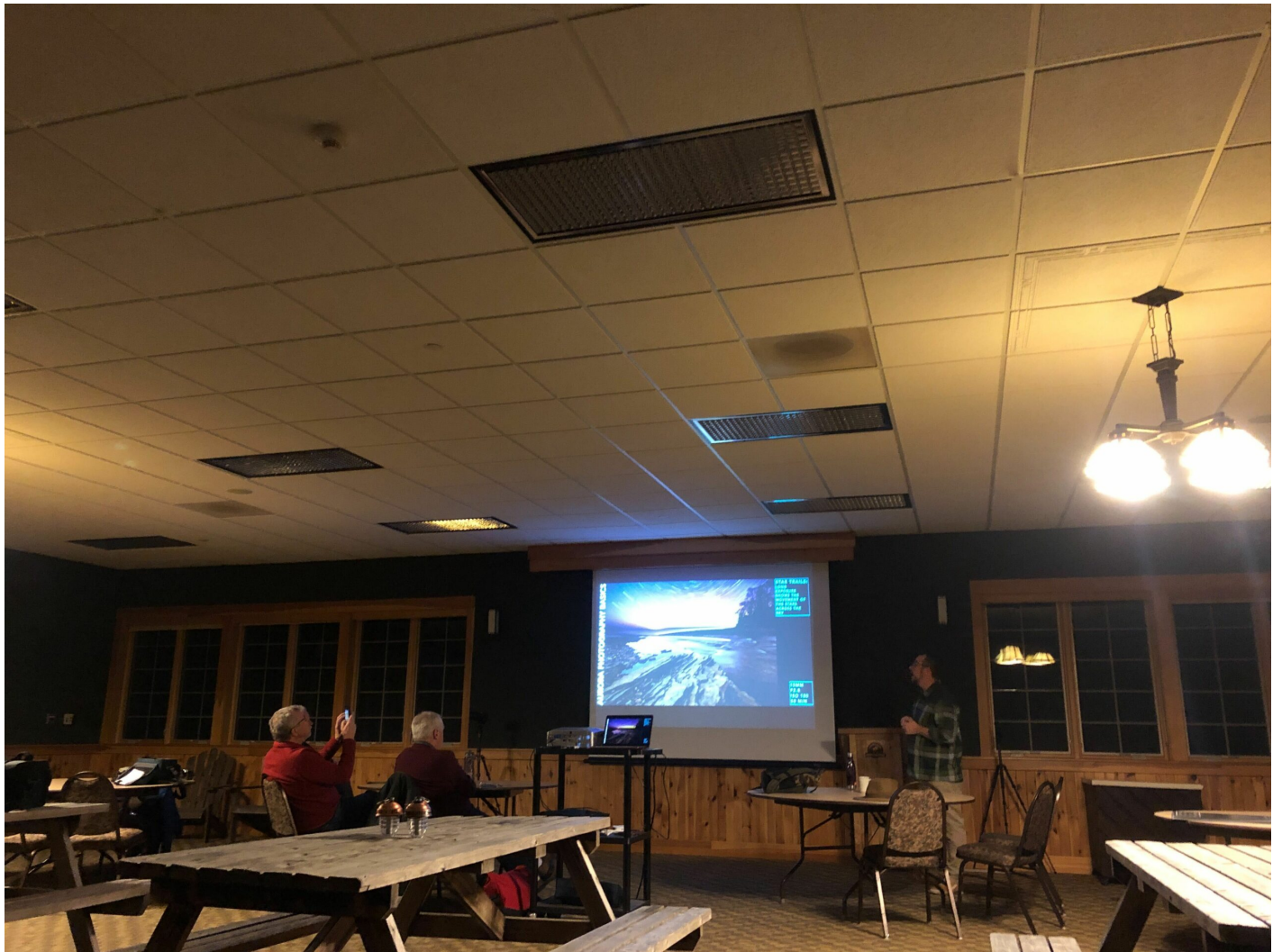
[Nate Bett](#) was the instructor for the class. Nate has a diverse background in photography including attaining an MFA from [Parsons The New School For Design](#) in 2012, working for [Canon cameras](#) at trade shows and teaching photo classes at [NMU](#).

The Night Sky Photo Workshops are broken into two segments: an inside presentation and an outside, hands-on portion. This night's class started at 7:00pm and Nate launched into a digital slideshow covering topics like: preparations for a night sky photo shoot, Aurora basics, camera settings, and picking good locations.



Saturday was an interesting day in terms of weather in December at the Lodge, as the temperatures were near 50 degrees. As well, it was overcast throughout the day with rain mixed into the activities. The evening cooled off, offering some snow, but no open skies for stargazing and night time photography. So the attendees and Nate were not able to spend time outside after the inside lecture. However, attendees were able to spend time with Nate asking specific questions about cameras and night-time photography – specific to taking photos of the beautiful Northern Lights.





Our next photo workshop will be held during the new moon in January, on January 12th:

- [Stargazing: Northern Lights Photography Workshop, January 12, 2024](#)
-



[Chris Guibert](#)

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November 10, 2023: Fostering the Keweenaw Dark Skies Seminar Recap

written by John Mueller | March 15, 2024

We held [our annual light management workshop](#) for the 3rd year in a row. This time we incorporated the workshop into a seminar with [Visit Keweenaw](#) as part of their [Sustainable Tourism Seminar Series](#). This seminar, held November 10th in a lunch-n-learn format, was the kickoff session for seminar series.



In [2022](#) and [2021](#) the light management workshops that we held were at the Lodge. This year, with the partnership with Visit Keweenaw, the event was held in Hancock at the [Keweenaw Community Foundation](#) office (236 Quincy St). There were 13 attendees, including the guests, speakers, and organizers.

By being incorporated in the Sustainable Tourism series we expanded the topic of the seminar. In addition to including info about becoming a designated dark sky park ([Keweenaw Dark Sky Park](#)) and light management, we had a worldly-focused guest that talked about light pollution and how that affects stargazing, our everyday health, and the health of wildlife and ecology.



[Brad Barnett](#) kicked off the seminar by showing a video about the Keweenaw Dark Sky Park and then introducing [John Barentine](#) and

[John Mueller](#) (me). John Barentine joined virtually via Zoom from Tucson, Arizona, where [Dark Sky International](#) (fka, International Dark Association) is located. [Dark Sky International is the governing body of the international dark sky park program and designation.]

[John Barentine](#) is the founder of [Dark Sky Consulting, LLC](#). He is an Arizona native and comes from the “dark side” of science – professional astronomy. He grew up in Phoenix and was involved in amateur astronomy there from grade school. He obtained a master’s degree in physics at Colorado State University and a master’s and Ph.D. in astronomy at the University of Texas at Austin. Throughout his career, he has been involved in education and outreach efforts to help increase the public understanding of science.

His presentation focused on conserving the wilderness of the night sky. He provided data to showing that [light pollution](#) has increased throughout the world, and how special the Keweenaw is in terms of low light pollution. He discussed several examples of how other areas are addressing light pollution, and what the science is behind better lighting. More specifically his talk was organized around:

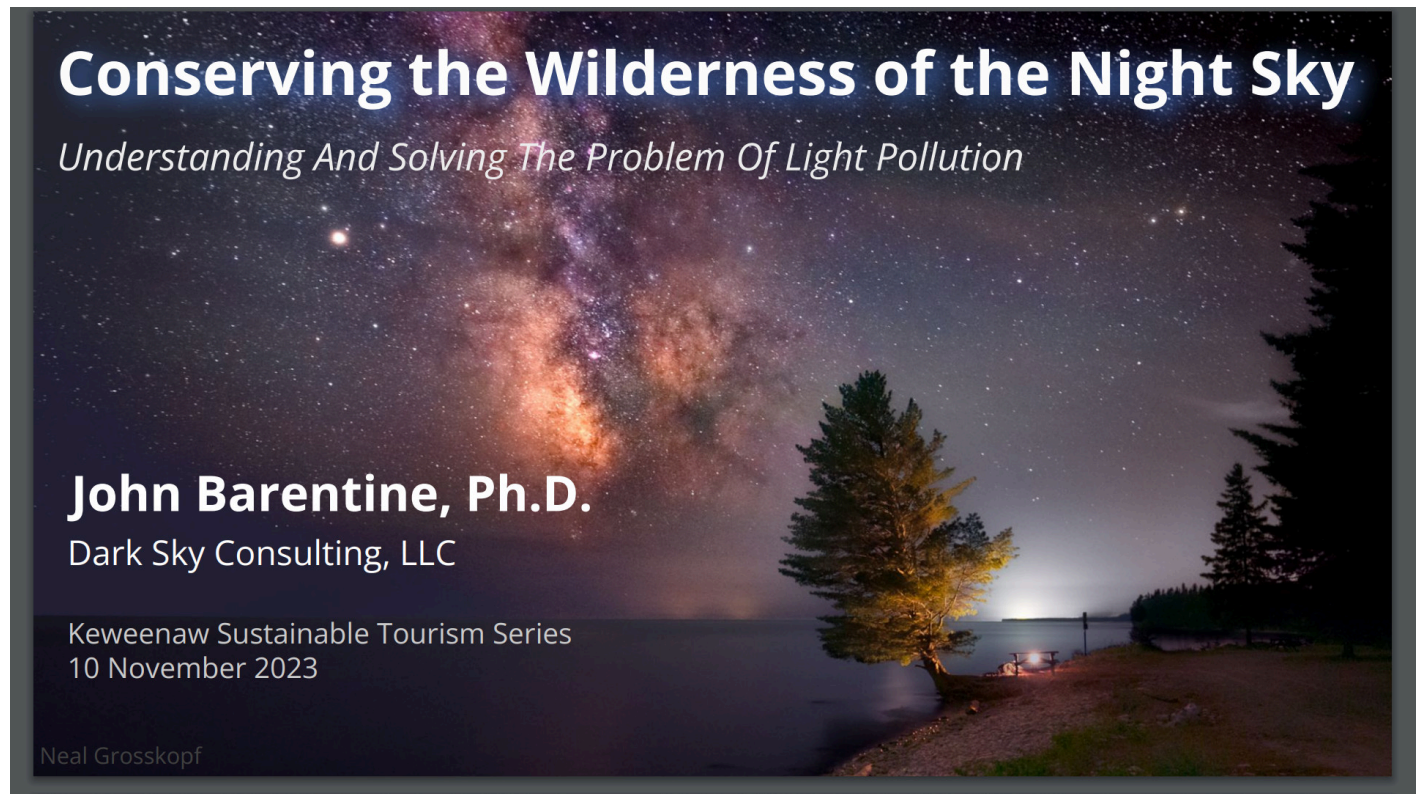
- Why the wilderness of the night sky is important
- What is light pollution
- What are the effects of light pollution
- What is the solution

Interesting points he made:

- Studies show that street lights do not offer more benefit in visibility to the driver when traveling less than 35 mph. The vehicle’s headlights is sufficient.

Below is a link to the slide deck he used during his

presentation.



[[Download John Barentine's Presentation Slide Deck](#)]

The Keweenaw is home to some of the darkest skies in the Midwest. This provides visitors and residents access to incredible stargazing opportunities and even the chance to experience the Northern Lights. During the seminar a discussion on ways to foster the Keweenaw's dark skies and the science behind light pollution prevention. We touched on actions we have been taking to establish the [Keweenaw Dark Sky Park](#) in Copper Harbor and why fostering dark skies are important to the region.

[John Mueller](#) from the [Keweenaw Mountain Lodge](#) & [Keweenaw Dark Sky Park](#) filled in gaps from John Barentine's talk and connected John B's talk with the Keweenaw by providing examples of what the Lodge has been doing the past 2-3 years in terms of minimizing light pollution.



The connection between John B. and John M. is that John B. was the initial Program Manager for the Lodge when the Lodge was going through the [International Dark Sky Places](#) nomination. At the time, John B. was the Director of Public Policy and Director of Conservation for the [International Dark-Sky Association \(IDA\)](#) in Tucson, Arizona.



[[Download John Mueller's Presentation Slide Deck](#)]

Below are pictures from the event.













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**November 11, 2023: Northern
Lights Photography Workshop**

Recap

written by John Mueller | March 15, 2024

The November 11, 2023 Aurora Photography Workshop was the third photo workshop of the fall at the Keweenaw Mountain Lodge and the eleventh workshop of 2023. Throughout the year we offer night sky photo workshops every month as part of our [educational initiatives](#) at the Keweenaw Mountain in association with being the headquarters of the [Keweenaw Dark Sky Park](#).



It was a calm fall day and a peaceful evening at the Keweenaw Mountain Lodge. When reviewing data from [our weather station](#) after the workshop, the temperature only fluctuated 4 degrees in a 24 hour period. One of the good things (or bad things, depending whom you ask) about being on the [Keweenaw Peninsula](#) is that the weather can change quickly. The old statement, "If you don't like the weather, just wait an hour" resonates with the Keweenaw residents (but is said by many around the country – Keweenaw residents fully grasp that we are surrounded by Mother Superior on 3 of our sides).

NORTHERN LIGHTS PHOTO WORKSHOP

JOIN PHOTOGRAPHER NATE BETT FOR A DARK SKY PHOTO WORKSHOP
IN THE KEWEENAW DARK SKY PARK



KEWEENAW MOUNTAIN LODGE

NOVEMBER 11, 2023 - 7:00 PM

LODGING GUESTS FREE • \$75 PUBLIC • LIMITED AVAILABILITY

KEWEENAWMOUNTAINLODGE.COM FOR DETAILS



Five guests attended the workshop, all of which were staying at the Keweenaw Mountain Lodge. We have noticed over the past year that guests are booking their stay to attend the workshop and take advantage of the [Lights Out!](#) The Lights Out event at the Lodge is a three-to-seven day event where the Lodge turns off all the street lights and other lights to increase one's stargazing experience.

[Nate Bett](#) was the instructor for the class. Nate has a diverse background in photography including attaining an MFA from [Parsons The New School For Design](#) in 2012, working for [Canon cameras](#) at trade shows and teaching photo classes at [NMU](#).

The Night Sky Photo Workshops are broken into two segments: an inside presentation and an outside, hands-on portion. This night's class started at 7:00pm and Nate launched into a digital slideshow covering topics like: preparations for a night sky photo shoot, Aurora basics, camera settings, and picking good locations.



The weather stayed mostly agreeable for the outside portion of the class. Nate gathered the group and they headed to Hole 5 of the golf course. Nate did a demonstration with his camera and helped a participant to focus her camera.



The clouds started to move in quickly and some light was reflecting off of them from the town of Copper Harbor. I frantically set up my camera to show the group my process. I was able to take this image of Jupiter framed between the trees before the clouds rolled in and the class ended.

Our next photo workshop will be held during the new moon in December, on December 9th:

- [Stargazing: Northern Lights Photography Workshop, December 9, 2023](#)
-



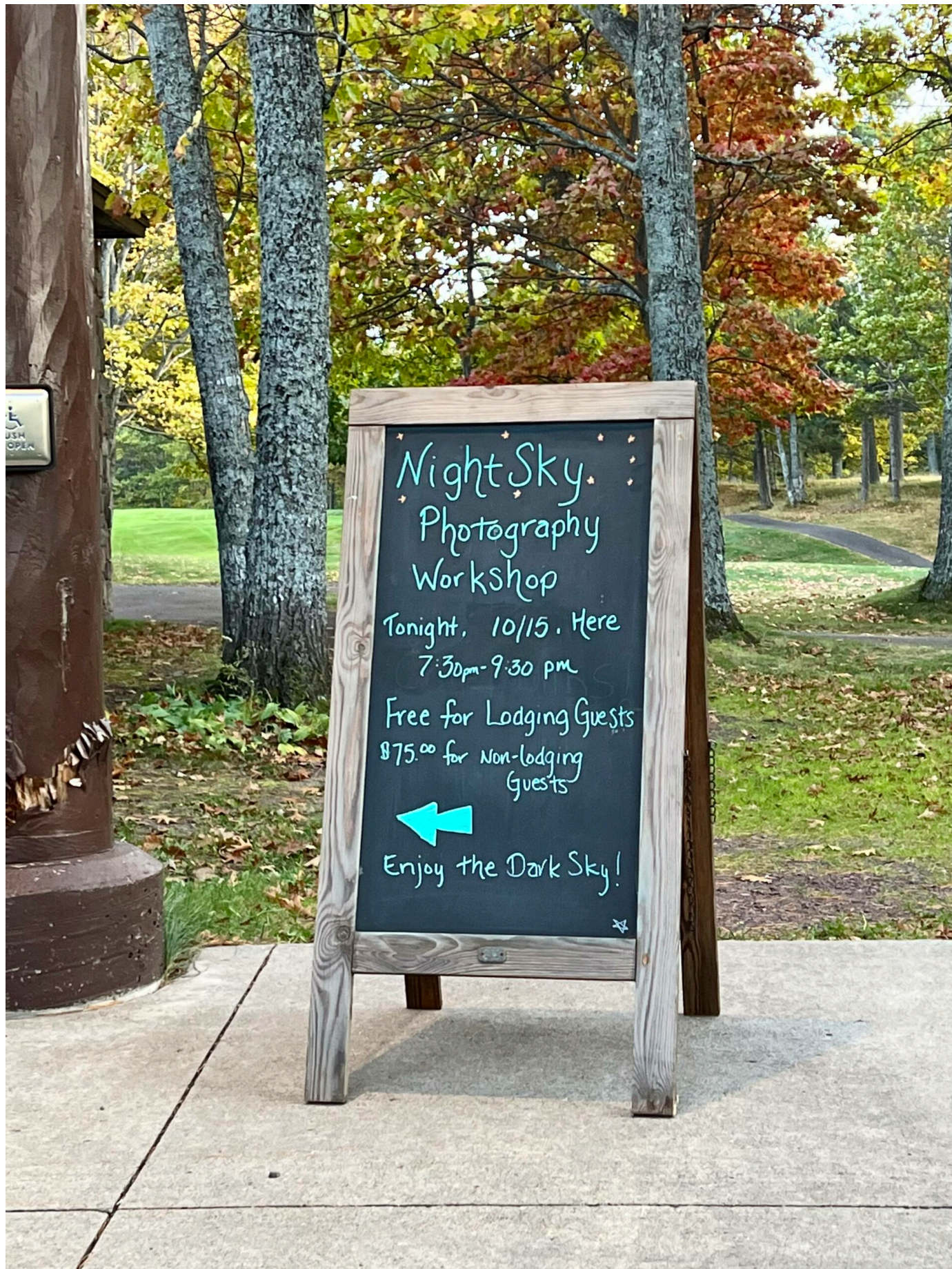
Chris Guibert

Chris Guibert: I have a strong passion for all things outdoors and have worked as a tour guide and professional photographer for the last twenty five years. As the Lead of Outdoor Activities at the Mountain Lodge I want make sure you and your family have a great experience while staying and playing. Please feel free to ask me any questions about the trails, regional activities and local secrets.

October 15, 2023: Northern Lights Photography Workshop Recap

written by Chris Guibert | March 15, 2024

The October 15, 2023 Aurora Photography Workshop was the second photo workshop of the fall at the Keweenaw Mountain Lodge and the tenth workshop of 2023. Throughout the year we offer night sky photo workshops every month as part of our [educational initiatives](#) at the Keweenaw Mountain in association with being the headquarters of the [Keweenaw Dark Sky Park](#).



Night Sky
Photography
Workshop

Tonight, 10/15. Here
7:30pm-9:30 pm

Free for Lodging Guests
\$75.00 for Non-lodging
Guests



Enjoy the Dark Sky!

It was a calm fall day and a peaceful evening at the Keweenaw Mountain Lodge. When reviewing data from [our weather station](#) after the workshop, the temperature only fluctuated 4 degrees in a 24 hour period. One of the good things (or bad things, depending whom you ask) about being on the [Keweenaw Peninsula](#) is that the weather can change quickly. The old statement, "If you don't like the weather, just wait an hour" resonates with the Keweenaw residents (but is said by many around the country – Keweenaw residents fully grasp that we are surrounded by Mother Superior on 3 of our sides).

NORTHERN LIGHTS PHOTO WORKSHOP

JOIN PHOTOGRAPHER NATE BETT FOR A DARK SKY PHOTO WORKSHOP
IN THE KEWEENAW DARK SKY PARK



KEWEENAW MOUNTAIN LODGE

OCTOBER 15, 2023 - 7:30 PM



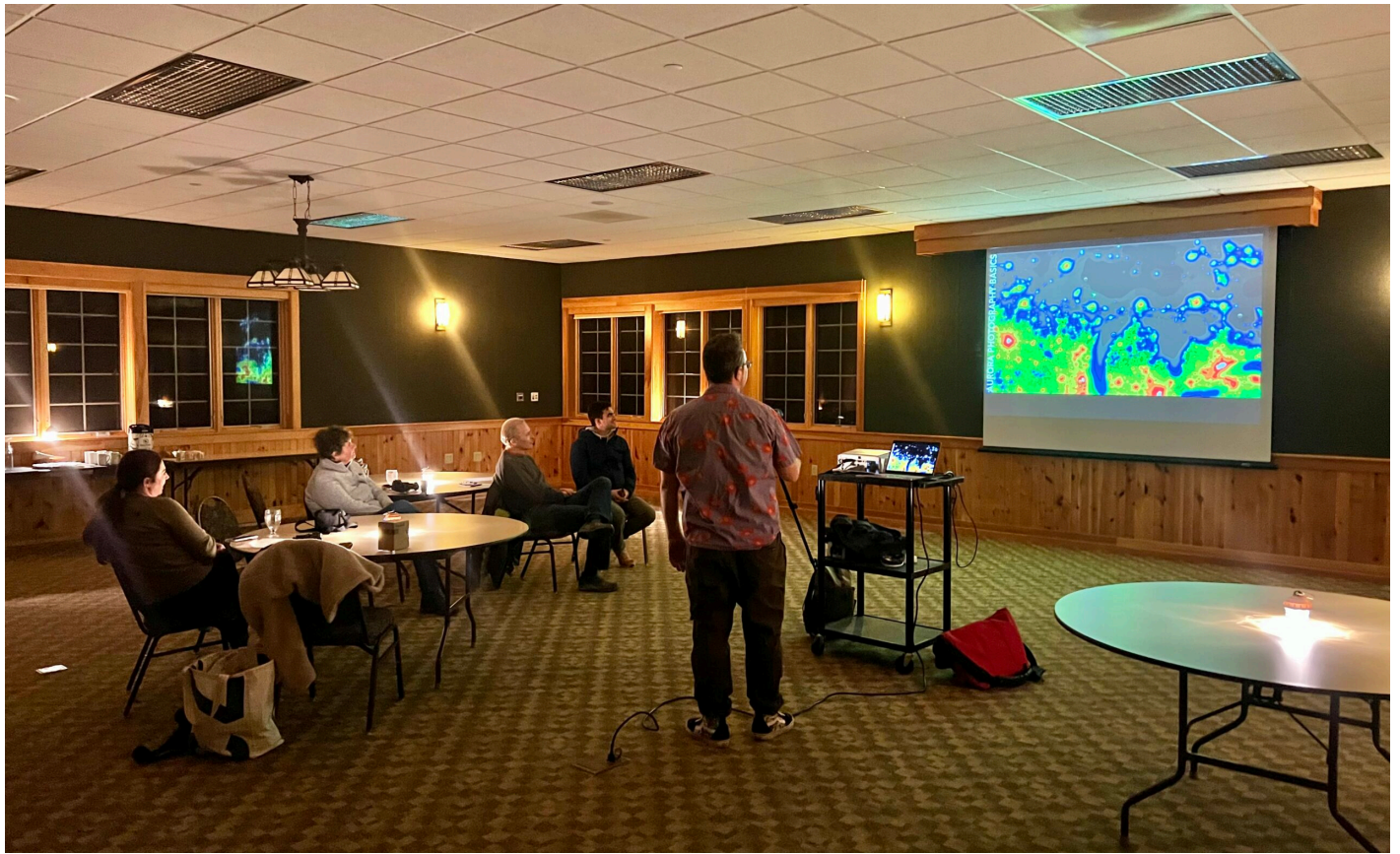
LODGING GUESTS FREE • \$75 PUBLIC • LIMITED AVAILABILITY

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Four guests attended the workshop, all of which were staying at the Keweenaw Mountain Lodge. We have noticed over the past year that guests are booking their stay to attend the workshop and take advantage of the [Lights Out!](#) The Lights Out event at the Lodge is a three-to-seven day event where the Lodge turns off all the street lights and other lights to increase one's stargazing experience.

[Nate Bett](#) was the instructor for the class. Nate has a diverse background in photography including attaining an MFA from [Parsons The New School For Design](#) in 2012, working for [Canon cameras](#) at trade shows and teaching photo classes at [NMU](#).

The Night Sky Photo Workshops are broken into two segments: an inside presentation and an outside, hands-on portion. This night's class started at 7:00pm and Nate launched into a digital slideshow covering topics like: preparations for a night sky photo shoot, Aurora basics, camera settings, and picking good locations.



The weather stayed mostly agreeable for the outside portion of the class. Nate gathered the group and they headed to Hole 5 of the golf course. Nate did a demonstration with his camera and helped a participant to focus her camera.



The clouds started to move in quickly and some light was reflecting off of them from the town of Copper Harbor. I frantically set up my camera to show the group my process. I was able to take this image of Jupiter framed between the trees before the clouds rolled in and the class ended.



Our next photo workshop will be held during the new moon in November, on November 11th:

- [Stargazing: Northern Lights Photography Workshop, November 11, 2023](#)
-



[Chris Guibert](#)

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September 17, 2023: Northern Lights Photography Workshop Recap

written by Chris Guibert | March 15, 2024

The September 17, 2023 Aurora Photography Workshop was the first photo workshop of the fall at the Keweenaw Mountain Lodge and

the ninth workshop of 2023. Throughout the year we offer night sky photo workshops every month as part of our [educational initiatives](#) at the Keweenaw Mountain in association with being the headquarters of the [Keweenaw Dark Sky Park](#).

Night Sky
Photography
Workshop

Tonight, 9/17 . Here
8:00pm- 10:30pm

Free for Lodging Guests
\$75.00 for Non-lodging
Guests



Enjoy the Dark Sky!

Signs posted at the Lodge directing guests to the workshop.

During the spring and fall we change the theme of the night sky photo workshops to focus on capturing the auroras, commonly known as the [Northern Lights](#). This time of year is loosely called the [aurora season](#).

NORTHERN LIGHTS PHOTO WORKSHOP

JOIN PHOTOGRAPHER NATE BETT FOR A DARK SKY PHOTO WORKSHOP
IN THE KEWEENAW DARK SKY PARK



KEWEENAW MOUNTAIN LODGE

SEPTEMBER 17, 2023 - 8:00 PM



LODGING GUESTS FREE • \$75 PUBLIC • LIMITED AVAILABILITY

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Poster for the September 17, 2023 Northern Lights Photo Workshop.

Twenty (20) people signed up for the class – which is the limit for the workshop. So we turned people away that wanted to attend after we hit the 20-person mark. That said, only 11 people attended.

[Nate Bett](#) was the instructor for the class. Every time I listen to Nate teach, I hear his passion for photography in every word that comes out of his mouth. He is one of those teachers that loves sharing his extensive knowledge.

The Night Sky photo workshops are broken into two segments: an inside presentation and an outside, hands-on portion. This night's class started at 8:00pm and Nate launched into a digital slideshow covering topics like: preparations for a night sky photo shoot, Aurora basics, camera settings, and picking good locations.



Instructor Nate Bett leads the workshop in a discussion about the northern lights.

Throughout the class, coffee and water are provided, and usually a special treat is created by [Chef Wi](#). For this class, she made zucchini muffins with white chocolate chips, orange zest and currants from South Africa. These delicious muffins were right out of her personal recipe book that follows our [Rustic Worldly Food](#) dining concept.



Zucchini muffins made with white chocolate chips, orange zest and currants from South Africa.

As the class worked through the digital presentation I kept looking outside to check the weather. The clouds were not going to break and it was going to remain overcast. I informed the class we would not be able to do the hands-on, outside portion of the workshop. Nate offered to stick around and work with people on any camera questions they might have. The guests were excited to get some one on one time with Nate and his expertise.



Instructor Nate Bett helps participants with personal camera questions.

During the class I did receive an update from the [Michigan](#)

[Aurora Chasers Facebook group](#) stating that a major solar G2 storm was going to hit the next night. I shared this information with the class and a wave of excitement filled the room. After the class I went right to bed to be rested for the potential showing of the next night's aurora. And what a show it was...

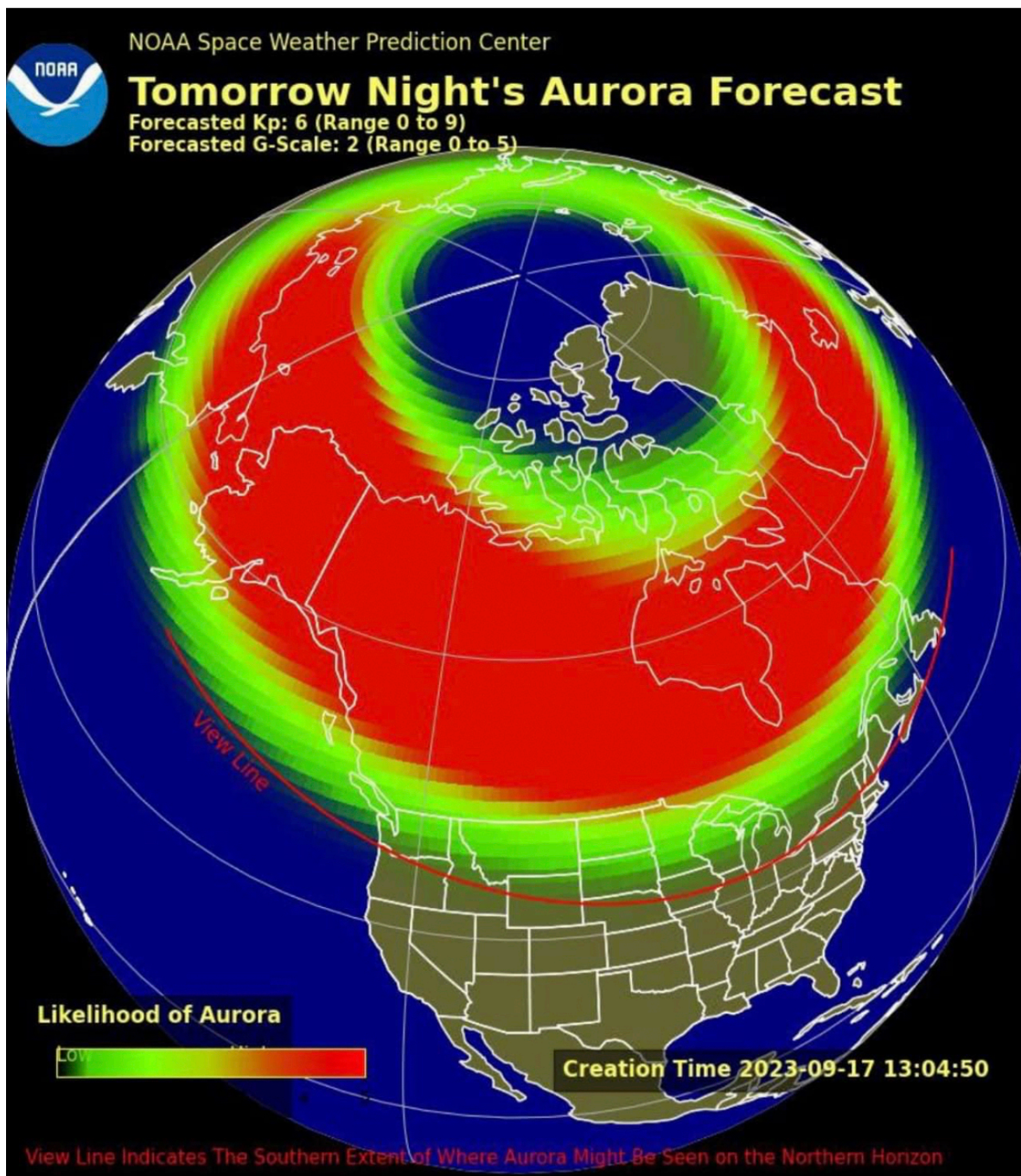


Michigan Aurora Chasers

Derek Wilder · 7h · 



Heads up for chasers SWPC has issued a G2 watch for a eruption that occurred the morning of the 16th. KP 5-6 anticipated for September 18th-19th 10pm-5am that should be visible well below the 45th parallel. Good luck everyone keep a eye to the north if the CME hits and let's hope for clear skies.



Aurora forecast model for September 18-19, 2023



Northern lights over Bete Grise Beach in the early morning hours of September 19, 2023.

Our next photo workshop will be held during the new moon in October, on October 15th:

- [Stargazing: Northern Lights Photography Workshop, October 15, 2023](#)



[Chris Guibert](#)

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August 18, 2023: Night Sky Photography Workshop Recap

written by Chris Guibert | March 15, 2024

The [August 18th Night Sky Workshop](#) was the third photo workshop this summer at the Keweenaw Mountain Lodge and the eighth workshop of 2023. We offer night sky photo workshops every month of the year as part of our [educational initiatives](#) for the [Keweenaw Dark Sky Park](#).

NIGHT SKY PHOTO WORKSHOP

JOIN PHOTOGRAPHER TOM OLIVER FOR A DARK SKY PHOTO WORKSHOP
IN THE KEWEENAW DARK SKY PARK



KEWEENAW MOUNTAIN LODGE

AUGUST 18, 2023 - 8:30 PM



LODGING GUESTS FREE • \$75 PUBLIC • LIMITED AVAILABILITY

KEWEENAWMOUNTAINLODGE.COM FOR DETAILS

[Tom Oliver](#), a former KML team member, now working in outreach for Michigan Tech, instructed the class of eleven appreciative learners from across the Midwest. Tom has a very engaging and enthusiastic teaching style and knowledge of the Keweenaw Dark Sky Park that makes him a great fit for instructing these workshops. These classes are broken into two segments: an inside presentation and an outside, hands-on portion.

The class started at 8:30pm and Tom launched into a digital slideshow covering topics like: preparations for a night sky photo shoot, astronomy basics, camera settings, and picking good locations.



The “inside” part of the workshop takes place in the Lodge’s Banquet Room.

Even though I have been a professional photographer for over

twenty years, I always try to *be fearless and persistent in learning on a daily basis*, which is one of the [core values](#) of the Keweenaw Mountain Lodge. For this workshop I wanted to try to get a good picture of the night sky with my [iPhone Pro Max 13](#). Many guests come to the workshop with just their phones and I wanted to expand my skill-set of using a phone for night sky photography. The OAC recently purchased a [Kobra Tech](#) tripod mount to hold smartphones for photography. I have been wanting to test this mount out so I thought the outside portion of the workshop would be the perfect time to test the mount.



The Kobra Tech smart-phone tripod mount.

As Tom was finishing up the main presentation I ran outside to check the weather. It was 10:10 pm and there was still some twilight blue sky to the west and north.



The Lodge at twilight.

I suggested to Tom that we hold off for about 20 minutes for total darkness before bringing the group outside. "Does anyone want to see my presentation on the Northern Lights?" Tom asked. The group, eager for knowledge, enthusiastically said "Yes!". We finished up inside around 10:30pm and headed outside. It was dark with just a little smoke in the air from the Canadian forest fires. The core of the Milky Way was already looming over the southern horizon. Tom and the group headed over to the fairway of Hole 5 of the golf course to work on capturing images of our home galaxy.

I decided to head to the front of the Lodge to do the test of the Kobra Tech phone holder. I set the phone to capture a 30 second exposure in a raw digital format file. This type of file would give me the best post-processing capabilities in Photoshop later. I then shot it with my Canon 5D Mark IV with a 2.8 L 16-35 III lens attached. I used these settings: lens set to 16mm focused on infinity – ISO 3200 – 15 seconds at 2.8.



Image information: iPhone Pro Max 13 – Settings: ISO 3200 – 30 seconds f1.8 – lens set to 13mm – photo by Chris Guibert



Image information: Camera: Canon 5D Mark 4 – Lens: Canon 16-35 L III Settings: ISO 3200 – 15 seconds f2.8 – lens set to infinity – photo by Chris Guibert

As you can see the Canon camera had a superior image quality. Since this is just my first test with the iPhone on a tripod I still need to do some more experimenting. Afterwards I did some web searching and found this [article](#) stating that “Night Mode isn’t available when the 48-megapixel setting is on”. This made me rethink what I did and what I need to do next time.

I circled back to Hole 5 to meet with Tom and the rest of the group. Tom was working with a couple from downstate on their first night sky photos they have ever taken. They were ecstatic with their results. The wife had given this trip to her husband as a birthday surprise since he was interested in learning astrophotography. It was dark and I could not see their faces,

however, I could feel the smiles on their faces. They were done for the night; happy with their results. Tom walked over to another individual to give some pointers while I walked back with the couple towards their [cabin](#). “Thank you, thank you, thank you for offering these classes,” the wife exclaimed! “You are welcome!” I joyfully responded, “This is what we love to do.”



[Chris Guibert](#)

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