New Hampshire

TOTAL SOLAR ECLIPSE

APRIL 8, 2024
Moderator:

Pam Sullivan
President, Sullivan Creative
Executive Director, Women’s Rural Entrepreneurial Network

Panelists:

Douglas Arion, PhD
Executive Director, Mountains of Stars
Professor Emeritus, Carthage College

Rick Fienberg, PhD
Senior Contributing Editor, Sky & Telescope
Project Manager, Solar Eclipse Task Force, American Astronomical Society

Amy Bassett
Deputy Director, Division of Travel & Tourism Development
Dept. of Business & Economic Affairs, State of New Hampshire
When the Sun Disappears in the Daytime: A Grand Opportunity for NH

Dr. Douglas Arion
Executive Director Mountains of Stars
Professor Emeritus Carthage College
Astrotourism

Star gazers, eclipse chasers, and the dark sky movement

Marlin
Two Upcoming Solar Eclipses: 2023 and 2024
A Rare Opportunity: Total Solar Eclipses in the United States

-------1979 ------- 2017 -------2024 ------- 2045 -------

The wait in any One Location: 300-400 Years!
Opportunities/Challenges

• Lodging, Restaurants, Vendors
  – Tourist influx during ‘mud season’
  – Sales of goods/memorabilia

• Issues:
  – Traffic (Especially after!)
  – Emergency services
  – Opening businesses
  – Marketing/Promotion
  – Getting ahead of the ‘power curve’
Processes in Place Now

• NH Eclipse Day Declaration
• Joint Agreement Coos County NH/Coos, OR
• Hosting AAS Eclipse Workshop – Fall 2023
  – AMC Highland Center
  – 150+ people from US, Canada, Mexico planning for eclipse
• New Hampshire Coordination Group Preparing for Eclipse
  – NH Grand/WREN
  – CEDC
  – NH Travel and Tourism
  – American Astronomical Society
Facebook: mountainsofstars

www.mountainsofstars.org

Douglas Arion
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Solar Eclipse Resources from the American Astronomical Society

Rick Fienberg
The mission of the AAS is to enhance and share humanity’s scientific understanding of the universe as a diverse and inclusive astronomical community.

Major activities:
- Meetings
- Public Policy
- Media Relations
- Awards & Prizes
- Educ. & Outreach
- Prof. Development
- Publishing
Purpose: To function as a think tank, coordinating body, and communication gateway/hub.

Principal activities:

- Website: eclipse.aas.org
- Working groups
- Planning workshops
- Encourage people to get into path of totality
- Promote eye safety
Americans and the 2017 Eclipse, Jon Miller (U. Michigan):

- 154 million people watched the eclipse directly.
- 62 million more watched it on TV or online.
- The response was overwhelmingly positive.
HOW COOL IT IS TO SEE IN PERSON

HOW COOL IT SOUNDS LIKE IT WOULD BE

TOTAL SOLAR ECLIPSE

PARTIAL SOLAR ECLIPSE

LUNAR ECLIPSE

PLANETARY CONJUNCTION

SUPERMOON
Seeing a partial eclipse bears the same relation to seeing a total eclipse as kissing a man does to marrying him.

— Annie Dillard
Two major solar eclipses are coming to North America! On Saturday, October 14, 2023, an annular ("ring of fire") eclipse sweeps from Oregon to Texas in a 125-mile-wide path that continues to the Yucatán peninsula and northern South America. Six months later, on Monday, April 8, 2024, a total solar eclipse darkens a 115-mile-wide swath from Mexico to the Canadian maritimes, traversing the U.S. from Texas to Maine in the process. In both cases all of North America will have at least a partial solar eclipse.
Two major solar eclipses are coming to North America! On Saturday, April 8, 2023, a partial solar eclipse sweeps from Oregon to Texas in a 125-mile-wide path across the western and northern United States and northern South America. Six months later, on Monday, April 8, 2024, a total solar eclipse will cross from Mexico to the Canadian maritimes, traversing the U.S. from Texas to the East Coast. All of North America will have at least a partial solar eclipse.
Get your eclipse glasses/viewers *early*!
Two major solar eclipses are coming to North America! On Saturday, October 14, 2023, an annular ("ring of fire") eclipse sweeps from Oregon to Texas in a 125-mile-wide path that continues to the Yucatán peninsula and northern South America. Six months later, on Monday, April 8, 2024, a total solar eclipse darkens a 115-mile-wide swath from Mexico to the Canadian maritimes, traversing the U.S. from Texas to Maine in the process. In both cases all of North America will have at least a partial solar eclipse.
Here you’ll find lists of reputable manufacturers of solar filters and viewers; these include companies with which members of the AAS Solar Eclipse Task Force have had prior (and positive!) experience as well as companies whose products have been certified safe by authorities we recognize and whose certification we have confirmed to be genuine. Your eyes are precious! You don’t need astronomers to tell you that, but you do need astronomers to tell you where to get safe solar filters: from the companies listed on this page. To do otherwise is to take unnecessary risks. If a supplier isn’t listed here, that doesn’t mean its products are unsafe — only that we have no knowledge of them or that we haven’t confirmed that their products meet the transmission requirements of the ISO 12312-2 international safety standard. For more information see our Eye Safety pages.

"Eclipse Glasses" & Handheld Viewers

The following telescope and solar-filter companies manufacture and/or sell eclipse glasses (sometimes called eclipse shades) and/or handheld solar viewers that have been verified by an accredited testing laboratory to meet the ISO 12312-2 international safety standard for such products. They are listed in alphabetical order; those with an asterisk (*) are based outside the United States.

- American Paper Optics (Eclipser) / EclipseGlasses.com / 3dglassesonline.com
- American Paperwear (Solar Eclipse Glasses)
- APM Telescopes (Sunfilter Glasses)*
- Baader Planetarium (AstroSolar Silver/Gold Film)* [see note 1]

Top U.S. suppliers:
- American Paper Optics
- Rainbow Symphony
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Fail to plan = Plan to fail!
Arrive early, leave late!
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Solar Eclipse Planning Workshop, 8-9 April 2022, Virtually Anywhere

Who Should Attend | How to Register | Registrants List | How to Contribute a Poster | Workshop Program

The American Astronomical Society (AAS) Solar Eclipse Task Force invites you to join us for a virtual eclipse-planning workshop to be held Friday-Saturday, April 8-9, 2022, online via Zoom. This event will bring together astronomers, educators, local and state officials, and others involved (or wanting to become involved) in preparing their communities for the 2023 and 2024 North American solar eclipses. Each day’s program will run from 9 am to 2 pm PDT (12 pm to 5 pm EDT) on Zoom, followed by a 2-hour networking and poster session in Gather.

In addition to talks, panel discussions, and breakout sessions on strategies for eclipse-related engagement, we now invite contributed posters (see details below). The oral sessions will focus on best practices in eclipse-related formal and informal education and public outreach, including effective ways to reach underserved and indigenous populations. Newcomers to eclipse planning will learn about the 2023 and 2024 eclipses and about appropriate resources to help their communities prepare for them. Posters will cover the full gamut of eclipse-related topics.

North America will soon be treated to two major solar eclipses, when the Sun, Moon, and Earth align. On both occasions, nearly everyone in the Americas will have at least a partial solar eclipse. Map courtesy Michael Zeiler, GreatAmericanEclipse.com.
Here We Go Again...And Again

Dr. Angela Speck Explains

The Great American Eclipses
2023 & 2024

Live on YouTube
April 8, 2022
7 pm EDT / 4 pm PDT
eclipse.aas.org/youtube

eclipse.aas.org/youtube

Public Talk
April 8th
7 pm EDT
We are particularly keen to welcome workshop participants from Canada and Mexico, as both the October 2023 ASE and April 2024 TSE grace one or both of those countries too. And we welcome community leaders and other stakeholders both inside and outside the paths of annularity (2023) and/or totality (2024).

**Upcoming Workshops**

- **April 8-9, 2022, Virtually Anywhere** (host: AAS Solar Eclipse Task Force)
- **October 21-22, 2022, Rochester, New York** (host: Rochester Museum & Science Center)
- **Spring 2023, Cleveland, Ohio** (hosts: Great Lakes Science Center, NASA Glenn Research Center)

**Recent Workshops**

- **2021 Solar Eclipse Planning Workshop** (9-10 April 2021, Virtually Anywhere)
- **2019 Solar Eclipse Planning Workshop** (8-9 June 2019, St. Louis, Missouri)

**More About the AAS Solar Eclipse Planning Workshops**

According to a survey conducted by researchers at the University of Michigan, more Americans watched the August 21, 2017, solar eclipse than tuned in to any previous scientific, athletic, or entertainment event. From Oregon to South Carolina some 20 million people witnessed totality, or “darkness at midday,” when the Moon completely covered the Sun’s bright face. For more than 2 minutes, these lucky sky gazers enjoyed a truly awesome sight: the diaphanous solar corona surrounding the black silhouette of the Moon in a twilight-blue sky with pastel sunset colors all around the horizon.

Scenes from the June 2019 eclipse planning workshop in St. Louis, Missouri. AAS photos by Rick Fienberg.
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2017 Solar Eclipse Research
State Agency Coordination
Solar Eclipse Branding & Industry Support

New Hampshire
TOTAL SOLAR ECLIPSE
APRIL 8, 2024

603
SOLAR ECLIPSE
4/8/24 • NEW HAMPSHIRE
What Can You Do?

Mark Your Calendars: April 8, 2024

On April 8, 2024, a Total Solar Eclipse will darken New Hampshire's skies in one of nature's most amazing spectacles. Skiers will gather, temperatures will drop, and the country will pause to watch as the Moon completely blocks the light.

VisitNH.gov
### Total Solar Eclipse

- **Latitude:** 45.066° N
- **Longitude:** 71.3894° W
- **Time Zone:** UTI-4 AST/EDT
- **Duration of Totality:** 3m 16.4s
- **Magnitude:** 1.016
- **Obscuration:** 1.000

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<td>16:38:41.1</td>
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<td>251.6°</td>
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Typical Cloud Fraction on April 8th

Best viewing locations for this eclipse: Texas and Mexico
7½ min.

- Brightness fades by 5,000x to 10,000x in last minute or so before totality.

Outside the path of totality:
- Little to no temperature change
- Little to no brightness change
- Little to no behavioral changes
- Little to no shadow bands
- No Baily’s beads
- No diamond ring effects
- No chromosphere & prominences
- No corona (the main attraction)
- No sunrise/sunset colors on horizon
- No bright stars and planets

ASE 2023

Brightness fades by 5,000x to 10,000x in last minute or so before totality.
More Information

Information Links
https://eclipse.aas.org/
https://eclipse.aas.org/workshops/2022
https://eclipse.aas.org/resources/downloads#white_paper
https://www.youtube.com/watch?v=QZJxVRPkXzw
http://eclipsewise.com/eclipse.html

Maps
https://nso.edu/eclipse-map-2024/

Publications
https://www.beingintheshadow.com/

Solar Filters
https://spectrumtelescope.com/shop/
http://thousandoaksoptical.com/shop/solar-filters/bulk-rolls/

https://www.ebay.com/itm/233923682383?chn=ps&norover=1&mkevt=1&mkrain=711-117182-37290-0&mkrain=2&itemid=233923682383&targetid=1068831113859&device=c&mkrain=pla&googleloc=9019169&poi=1&campaignid=11615951275&mkguid=116843212927&rlsationtarget=pla-1068831113859&abclid=9300457&merchantid=114599598&gclid=Cj0KCQjwmCm8BhCOARIsALgJ2Qe6QarX8PKERHGWEjEoB4sW1q5s-qHM10K9G7aL-__QrnlPL8NbuQZgaAok6EALw_wcB