

AAS Eclipse Conference

30 Sep 2023 – San Antonio, TX

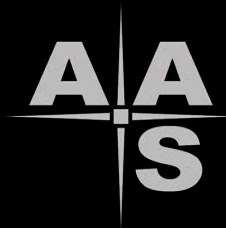
What do we do AFTER...

The Opening Act!

Saturday, 14 October, 2023

The Main Event!

Monday, 8 April, 2024



Legal Stuff

The statements made herein reflect the best effort of Dan McGlaun, the presenter of this presentation (the “Presenter”) to offer in good faith, suggestions for event planners and scientists in organizing, planning, educating, and otherwise hosting eclipse-viewing activities for the annular solar eclipse of October 14, 2023 and the total solar eclipse of 8 April 2024 (collectively, the “Events”); these statements are intended to be anecdotal rather than consultative, based on the Presenter’s actual experience in having successfully observed a large number of solar eclipses. The Presenter, and eclipse2024.org, along with their sponsors, business partners, vendors and suppliers, and heirs and assigns, cannot be held liable for weather, or for actions of any third party, and will therefore not accept responsibility for personal injury, property damage, lost revenue or any other damage or alleged damage, resulting from the actions or inactions of any person or organization with regard to the Events. Persons participating in the Events are advised that this participation, as well as planning for the Events (including the acquisition of knowledge through this presentation or from the Presenter at any time) requires that they agree to hold harmless both the Presenter and Eclipse2024.org, and their sponsors, vendors and suppliers, heirs and assigns, from any and all legal action and/or claim for damages of any kind, which result or are alleged to result from such participation and/or preparation.

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Presented by

Dan McGlaun

Clayton IN, USA





Eclipse2024.org

All the features from Eclipse2017.org, plus "MUCH MORE FOR '24"!



Everything is available in English, Spanish and French.

Detailed eclipse information for :
Educators • Local Governments • General Public
Eclipse Chasers • Media • Chambers of Commerce



Eclipse2024.org has all the standard eclipse education and eye safety information, PLUS these unique features:



ECLIPSE VIEWING INFORMATION

Eclipse viewing blogs

- Available for 75 major regions along the path
- Answers the questions "Where? When? What? How?"
- Eye safety
- Travel considerations
- Select local viewing locations
- Interactive map showing eclipse times and phases

The perfect place for everyone to plan eclipse viewing!

eclipse2024.org/viewing-blogs/?lang=en



ECLIPSE SIMULATOR

Incredibly realistic eclipse simulation

- Shows the 2023 / 2024 eclipses from any location
- Realistic prominences and chromosphere
- Full-disk Baily's Beads (generated with LRO data)
- Sun / Moon outlines • Stars and Planets
- Sunrise / Sunset effects • Eye Safety warning
- Library of foregrounds and coronas
- Many other realistic details!
(Contact Dan for a personal tour of all the features)

* 2023 Annular-Total eclipse now also available! *

eclipse2024.org/eclipse-simulator/?lang=en



ECLIPSE SIMULATION VIDEOS

The easiest way to preview the eclipse!

- Extracted from the Eclipse Simulator
- >2,200 cities in North and Central America!
- 2023 and 2024 eclipses are included
- Now available for viewing on YouTube

Eclipse sequence videos are available for official use by Educators / Tourism / Government / Media (Attribution requested)

- Search directly in YouTube -OR - Visit the Eclipse2024.org video landing page
- Searchable city list / Detailed selection map

eclipse2024.org/eclipsevideos/video.html?lang=en



ECLIPSE VIEWING INSTRUCTIONS

Simple eclipse viewing instruction booklet

- Great resource for everyone
- FREE to download and use
- Perfect for eclipse outreach
- Easy-to-understand style
- Accurate and detailed
- Available in English, French and Spanish

eclipse2024.org/instructions/translations/English.pdf



LOCAL ECLIPSE CIRCUMSTANCES

Collection of location-specific eclipse information

Celebrating the eclipse viewing experience of EVERY locality in North America!

- Complete 2023 and 2024 eclipse circumstances
- >140,000 cities in North / Central / South America
- Links to maps, blog posts, simulator, videos and community information.

eclipse2024.org/eclipse_cities/?lang=en
eclipse2024.org/2023eclipse/eclipse_cities/?lang=en



COMMUNITY PAGES

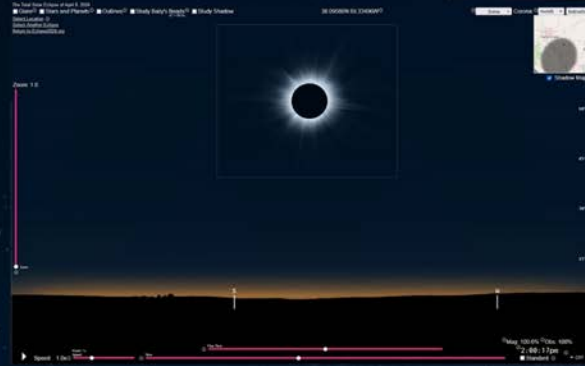
FREE resources for official community plans

- ALL 140,000 communities have a community page!
- Back by popular demand from 2017
- Communities can host eclipse-weekend plans COMPLETELY FREE!
- 2023 and 2024 eclipse sections
- NOT just for cities in the path!

eclipse2024.org/communities/?lang=en
eclipse2024.org/2023eclipse/communities/?lang=en

All of the above resources are summarized for your community in one convenient location! Visit EclipseResources.Solar to find YOUR community's information and resources!

ECLIPSE2024.ORG'S ECLIPSE SIMULATOR



WHAT WILL THE ECLIPSE
LOOK LIKE FOR YOUR

PATRONS / VISITORS / MEMBERS
STUDENTS / AUDIENCE?

Show them with the **FANTASTIC
Eclipse Simulator**
from Eclipse2024.org!



(Featured in leading publications!)

BEADED ANNULAR



BAILY'S BEADS



Accurate, Ultra-Realistic Simulation of the
Annular Eclipse of October 14, 2023
and the
Total Eclipse of April 8, 2024

See all the great effects that occur during totality and annularity!

Preview the eclipses from any location, to help you plan for eclipse day!

Shows the eclipse experience from inside, outside, or at the edge of the path!

Comprehensive instructions help you learn (or teach) about eclipses!

SHADOW MAP



LUNAR OUTLINE



REFRACTION



TOTALITY!



Eclipse circumstances are calculated for any location
Accurate eclipse times are displayed in local time or user-selectable time zone
Baily's Beads preview uses LRO LOLA data for complete realism
Calculations are performed using latest values of Besselian Elements and ΔT
Eye protection requirements are prominently displayed
Real-time clock shows the eclipse's progress with user-selectable speeds

Atmospheric refraction and sunrise/sunset effects
Chromosphere, diamond ring, and accurate full-limb Baily's Beads
Stars and Planets displayed during totality
User-selectable coronas and foregrounds
Limb darkening, solar glare, prominences and orange horizon glow
Aerial shadow preview and eclipse shadow outline map



STARS AND PLANETS



DIAMOND RING



VISIT: simulator.eclipse2024.org

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EclipseSimulator.Solar

Update Requests

Weather

USB fan :-)

Crowd noise

Animals / Insects

Most Likely

360° view

Double Diamonds

Movable center (zenith)

LRO data manipulation

Nice to Have

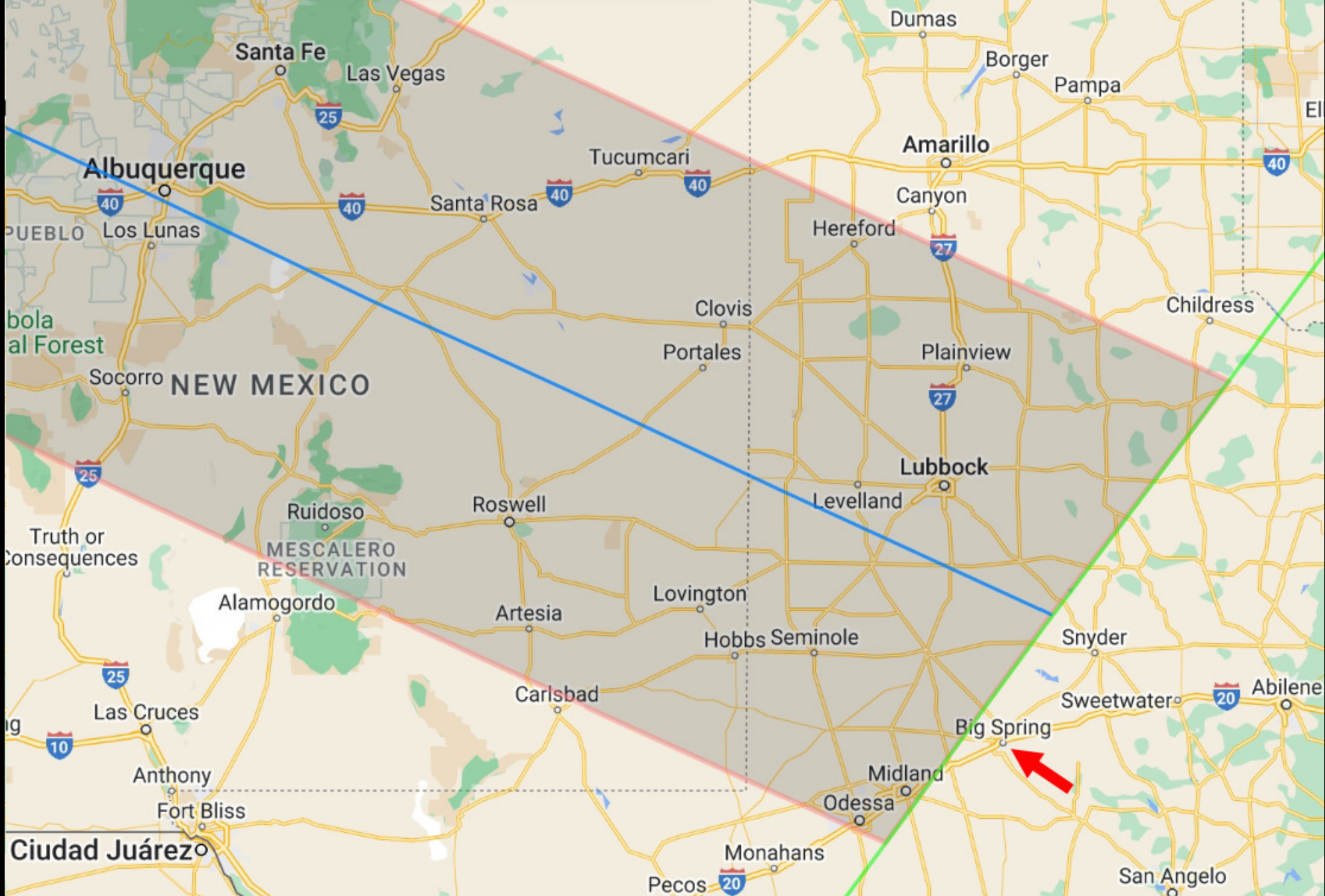
Solar radius

Oblateness

Calculations Mentee

Comments on Oz and 2045

May 20, 2012



Map by Xavier Jubier





How to Predict...

Refraction!

Alt: 12.7°
Az: 286.1°

7:32:18pm GMT-5



Refraction
Big Spring, TX

© 2023 Eclipse2024.org



Alt: 12.7°
Az: 286.1°

7:32:18pm GMT-5



Min

0

Max



Refraction
Big Spring, TX



© 2023 Eclipse2024.org

Alt: -0.4° (0.28° apparent)
Az: 294.4°

8:38:07pm GMT-5



Horizon



Refraction
Big Spring, TX

© 2023 Eclipse2024.org



Alt: -0.4° (0.28° apparent)
Az: 294.4°

8:38:07pm GMT-5

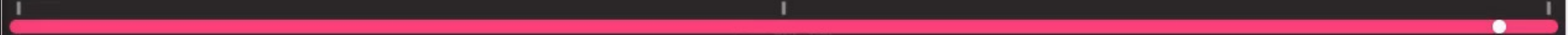


Horizon

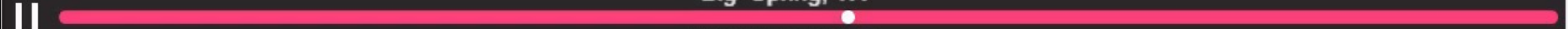
Min

0

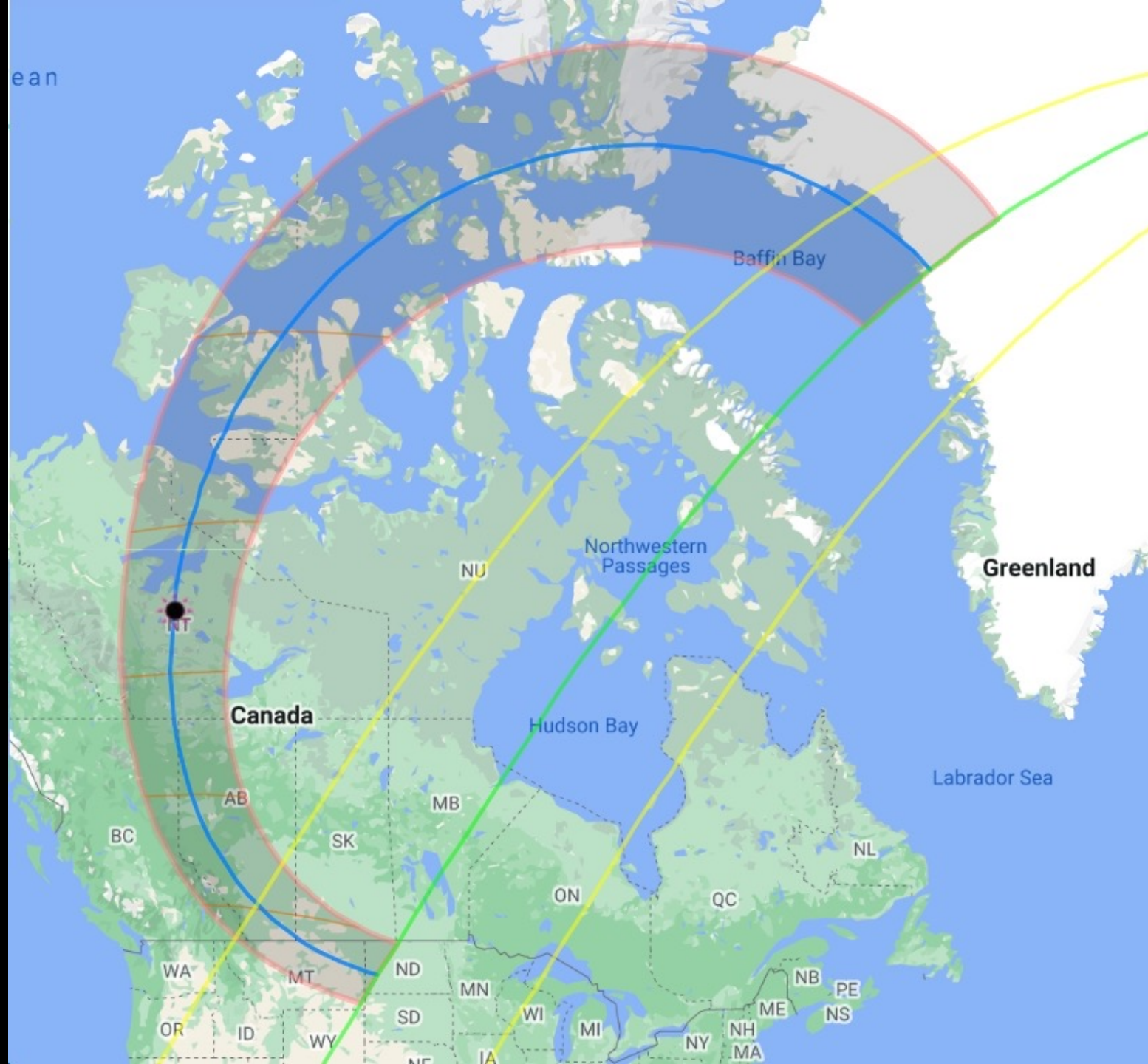
Max



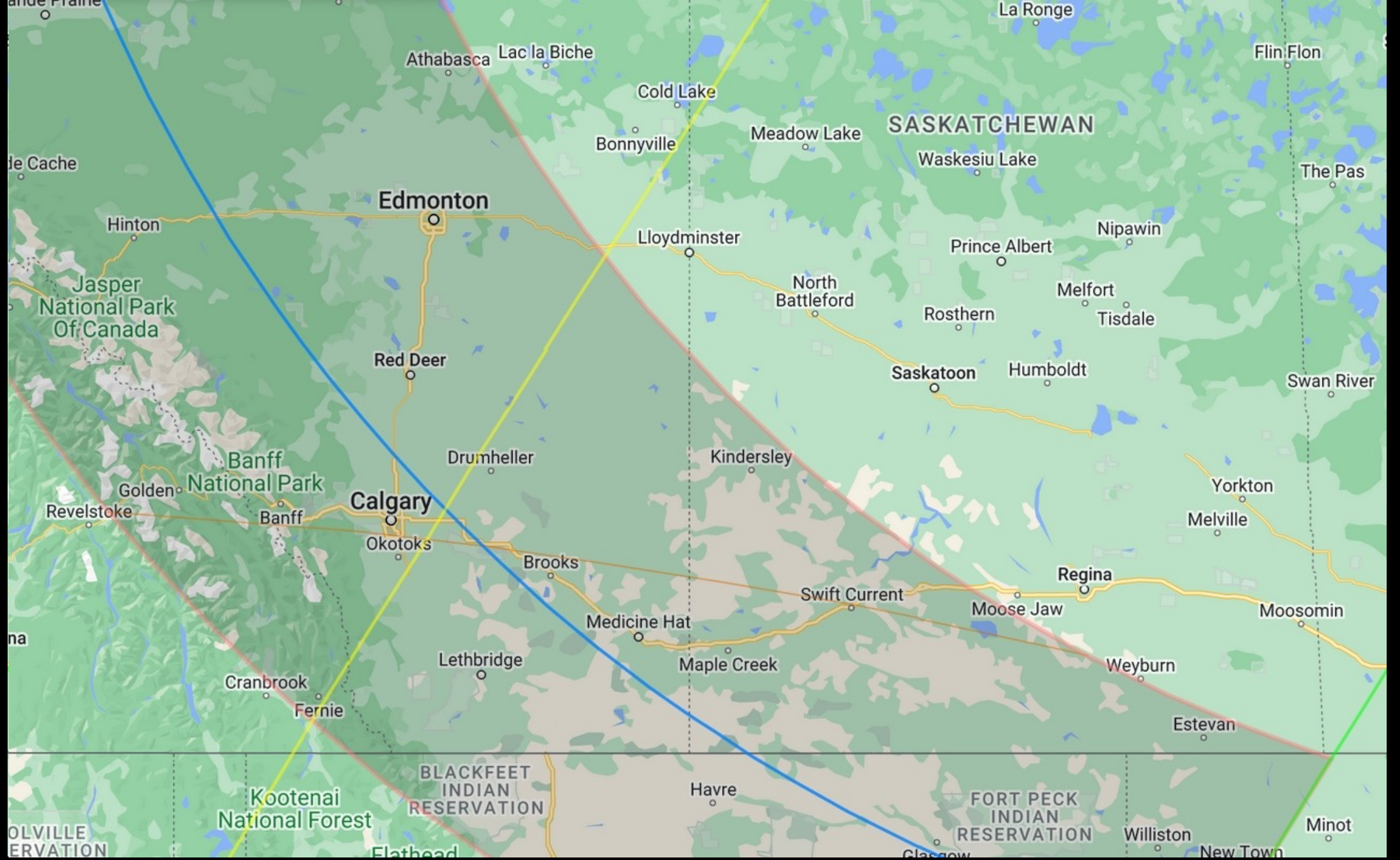
Refraction
Big Spring, TX



© 2023 Eclipse2024.org

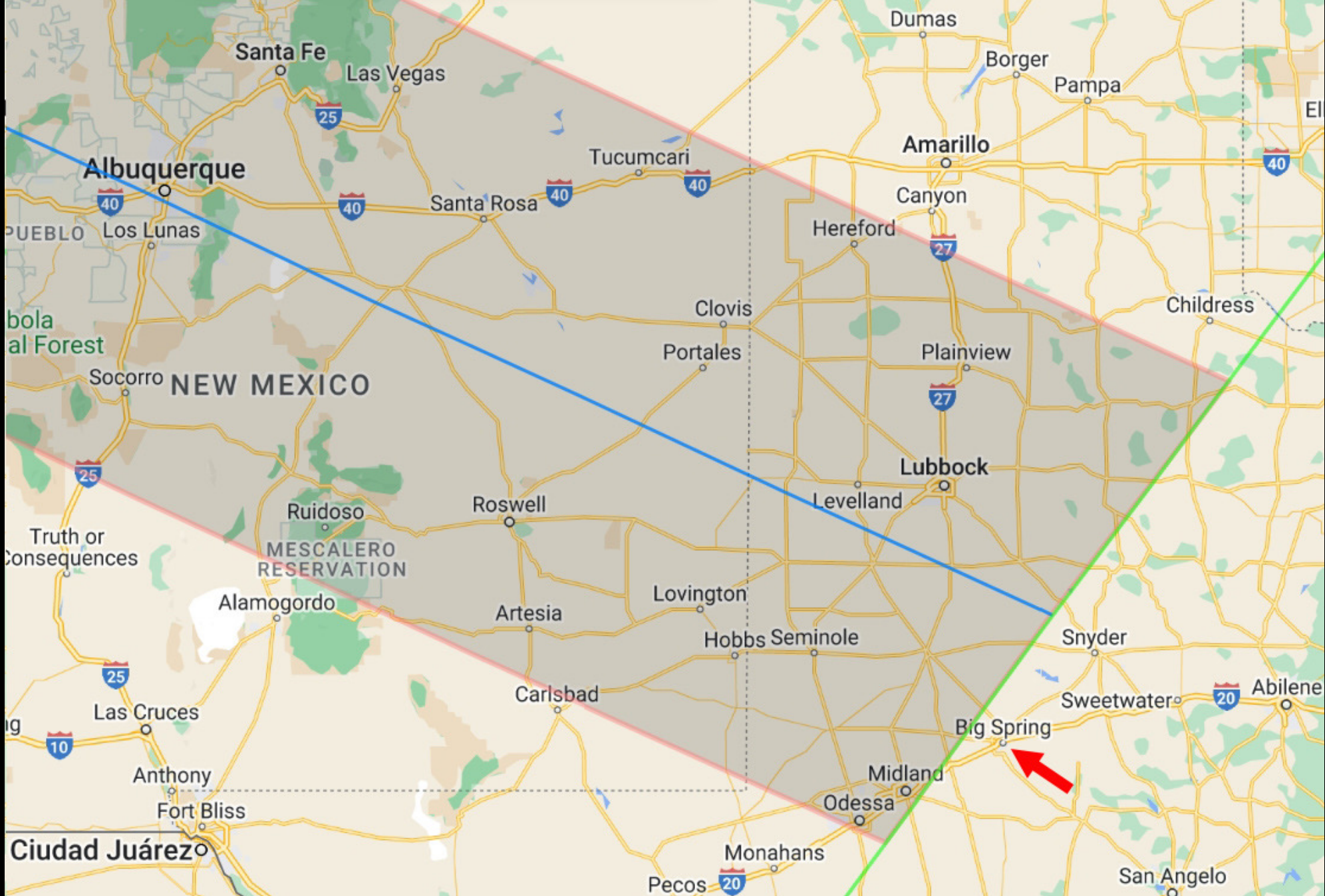


Map by Xavier Jubier



Map by Xavier Jubier





Map by Xavier Jubier



Alt: 8.8° (8.88° apparent)
Az: 277.2°

6:50:15pm GMT-6



© 2023 Eclipse2024.org

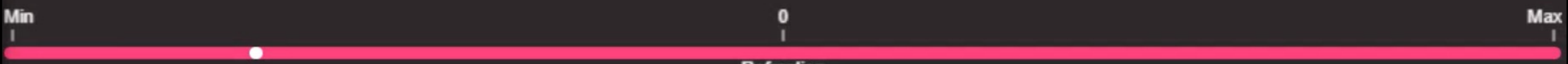


Alt: -0.1° (0.31° apparent)
Az: 286.7°

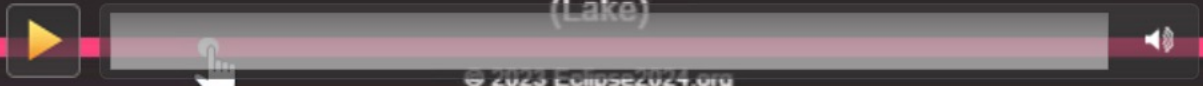
7:39:25pm GMT-6



Horizon



Refraction
(Lake)

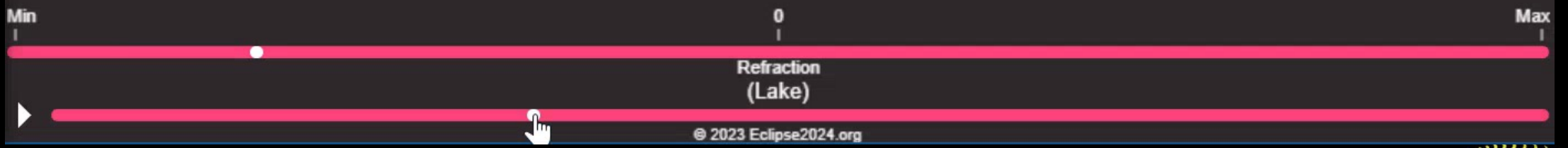


Alt: -0.1° (0.31° apparent)
Az: 286.7°

7:39:25pm GMT-6



Horizon



© 2023 Eclipse2024.org



One more view

Create Your Own Eclipse

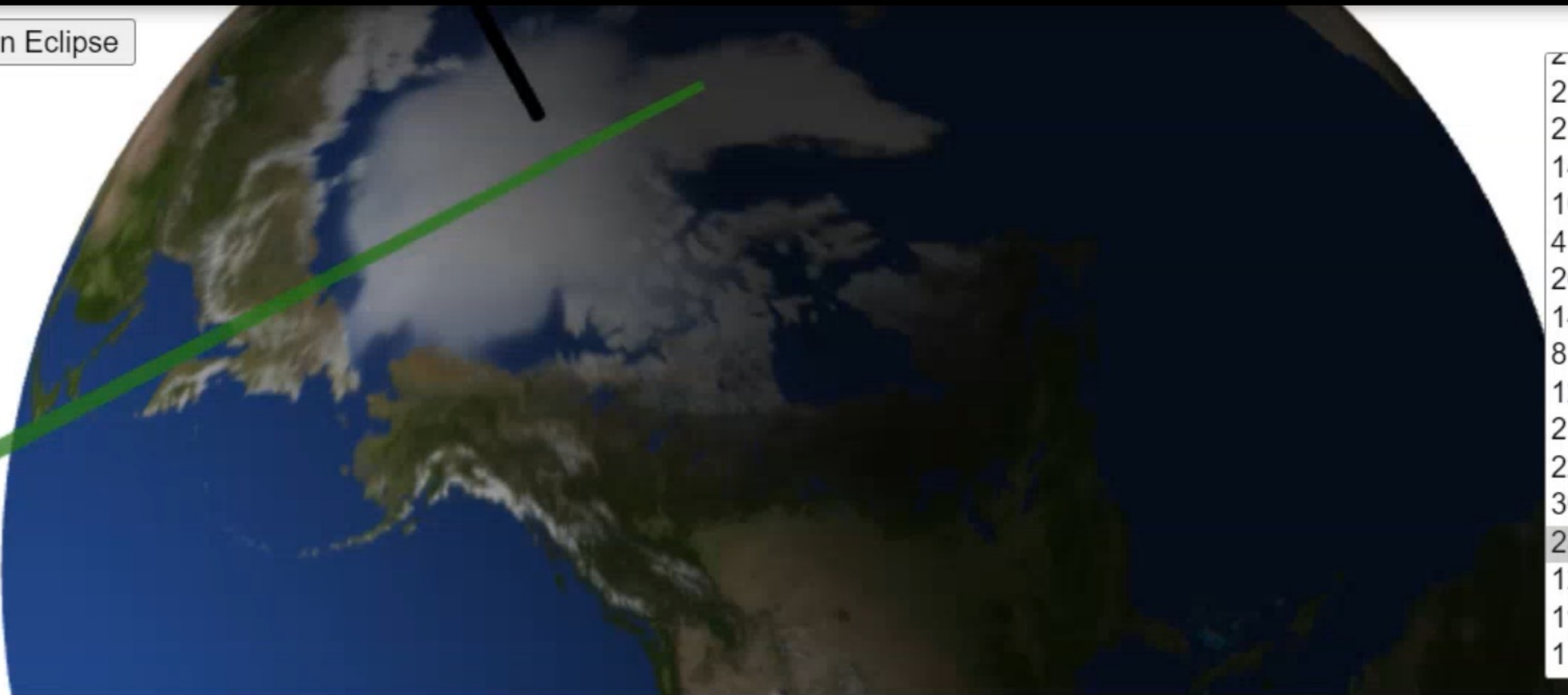
Instructions

Zoom

+



-



Select an Eclipse

- 21 Aug 2017
- 2 Jul 2019
- 21 Jun 2020
- 14 Dec 2020
- 10 Jun 2021
- 4 Dec 2021
- 20 Apr 2023
- 14 Oct 2023
- 8 Apr 2024
- 12 Aug 2026
- 2 Aug 2027
- 22 Jul 2028
- 30 Mar 2033
- 23 Aug 2044
- 12 Aug 2045
- 11 May 2078
- 1 May 2079

Mode **3D + Hide** Reset Equator Reset Ecliptic Daylight View

- Show Penumbra
- Show Fundamental Plane - Opacity
- Hide Equator and Ecliptic
- Show Shadow Axis
- Hide Controls
- Highlight Text

Total Eclipse

Pan X Y

Path

-0.258 R_{\oplus}

Create Your Own Eclipse

Instructions

Zoom

+

-

Select an Eclipse

- 21 Aug 2017
- 2 Jul 2019
- 21 Jun 2020
- 14 Dec 2020
- 10 Jun 2021
- 4 Dec 2021
- 20 Apr 2023
- 14 Oct 2023
- 8 Apr 2024
- 12 Aug 2026
- 2 Aug 2027
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Mode **3D + Hide**

- Show Penumbra
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- Highlight Text

Total Eclipse

Pan X Y

Path

-0.258 R_{\oplus}

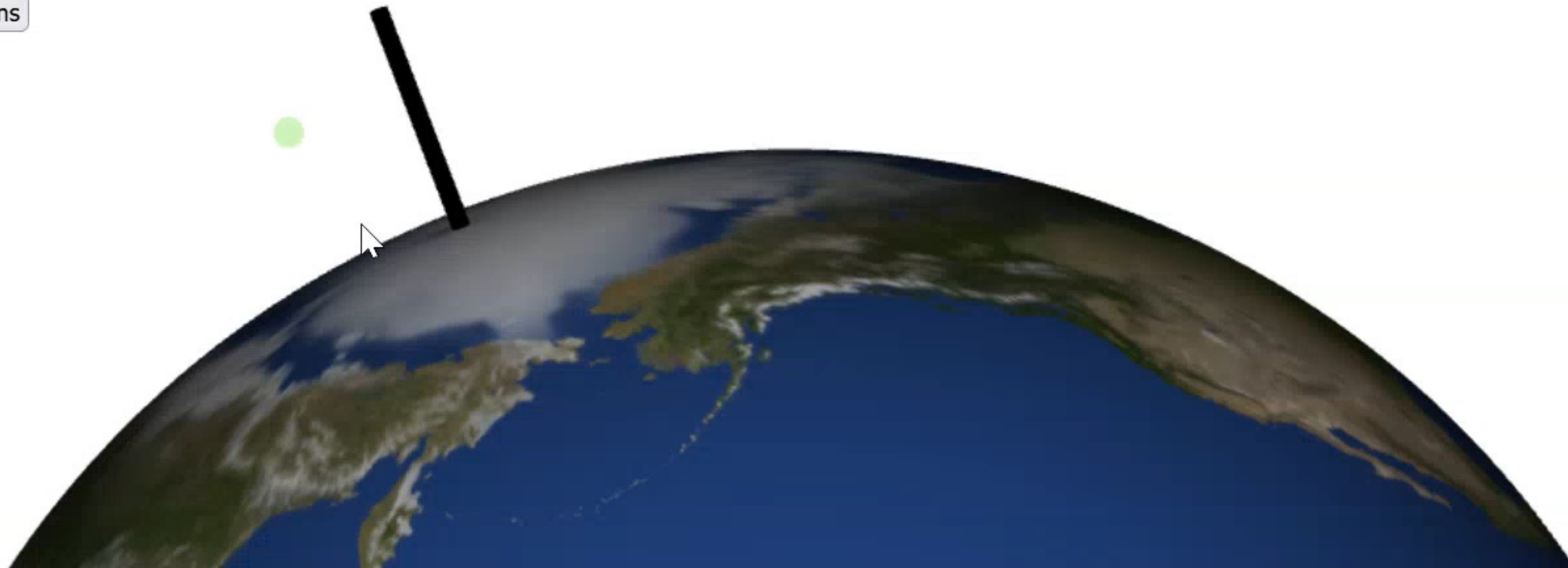
Create Your Own Eclipse

Instructions

Zoom

+

-



Select an Eclipse

- 14 Dec 2020
- 10 Jun 2021
- 4 Dec 2021
- 20 Apr 2023
- 14 Oct 2023
- 8 Apr 2024
- 12 Aug 2026
- 2 Aug 2027
- 22 Jul 2028
- 30 Mar 2033
- 23 Aug 2044
- 12 Aug 2045
- 11 May 2078
- 1 May 2079
- 14 Sep 2099
- 16 Jul 2186

Mode 3D Reset Equator Reset Ecliptic Daylight View

Show Penumbra

Show Fundamental Plane - Opacity

Hide Equator and Ecliptic

Total Eclipse

Show Shadow Axis

Hide Controls

Highlight Text

Pan X

Y

Path <<< << >> >>> Reset

-0.536 R_⊕

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Videos.Eclipse2024.org