Eclipse Over Clemson

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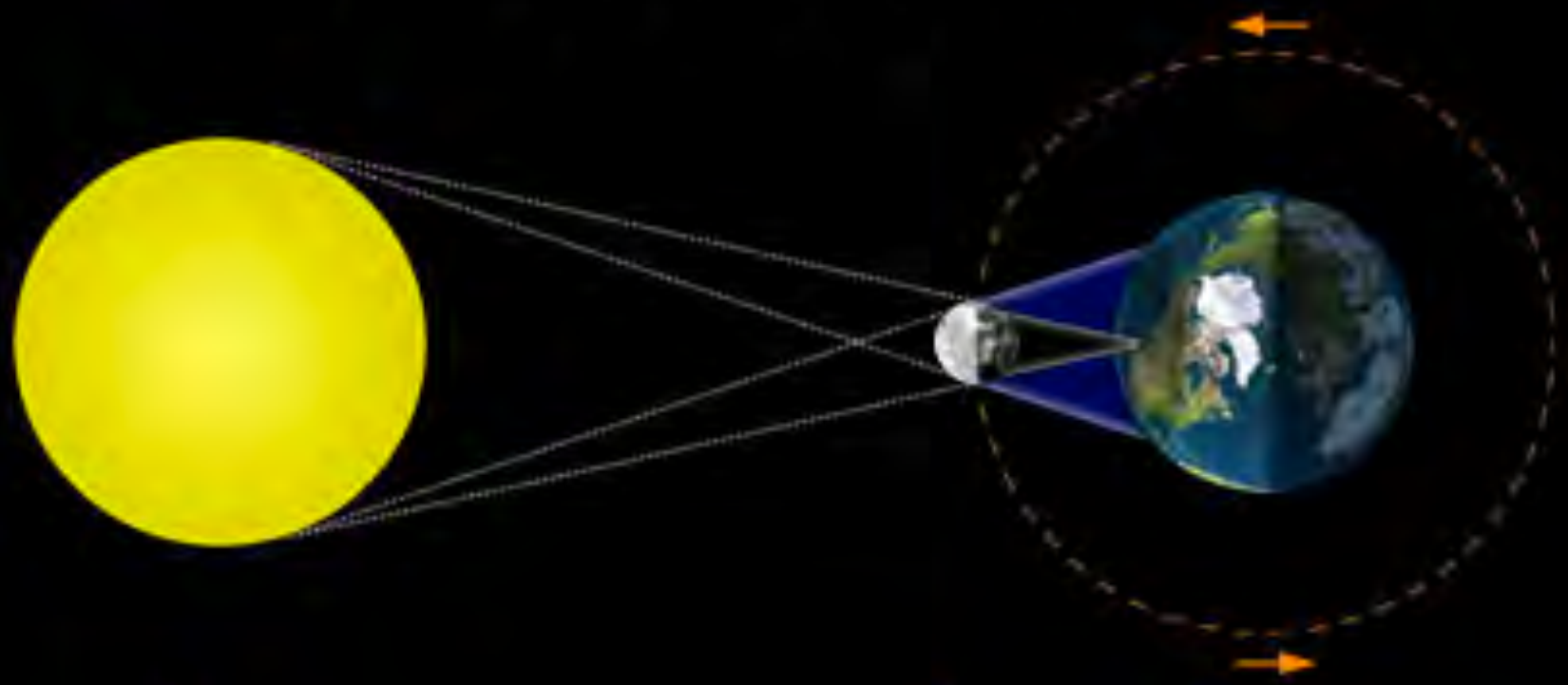
Who has seen an eclipse?

Solar Eclipse Geometry



www.MrEclipse.com

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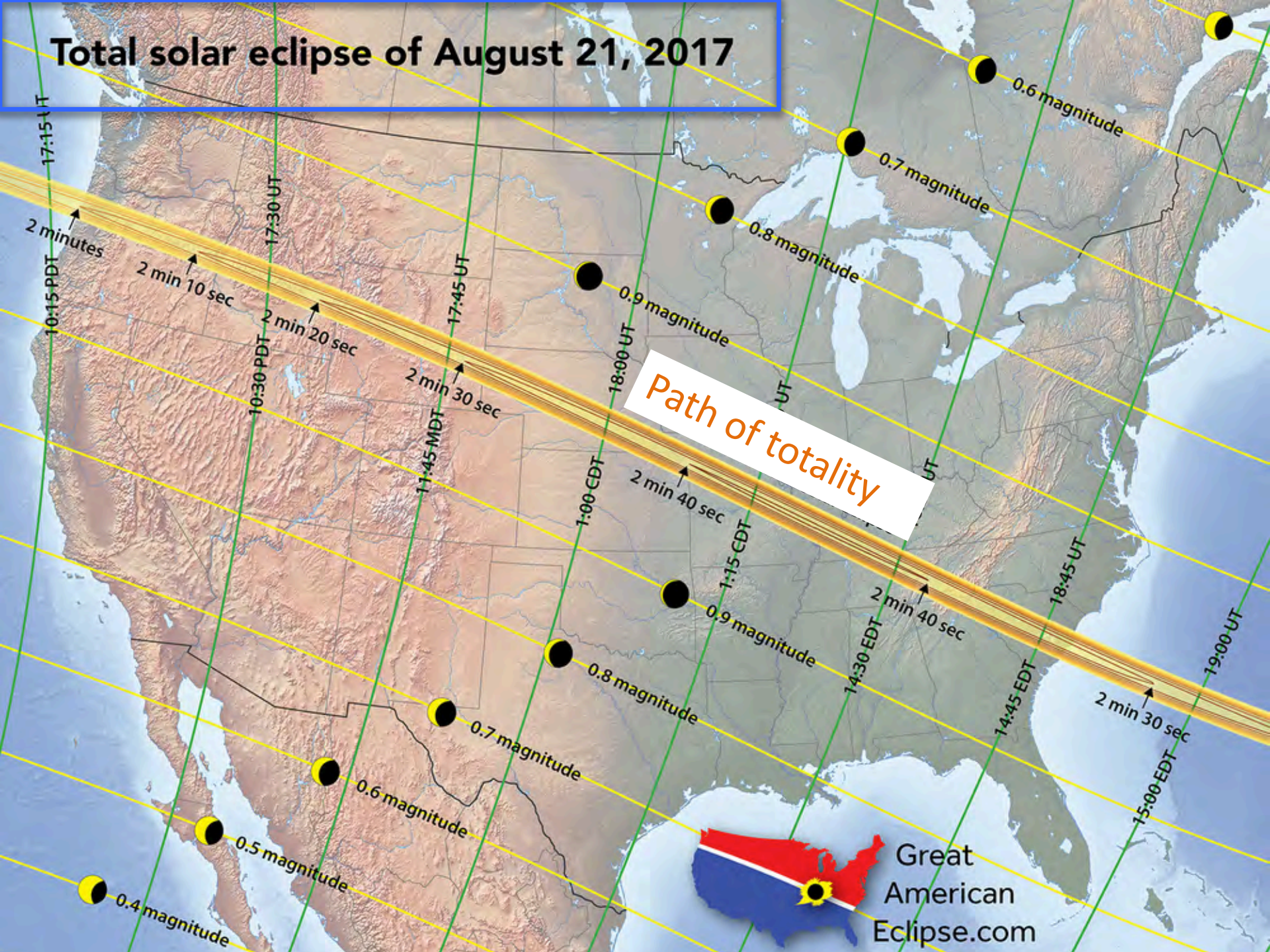
Solar eclipse from Earth

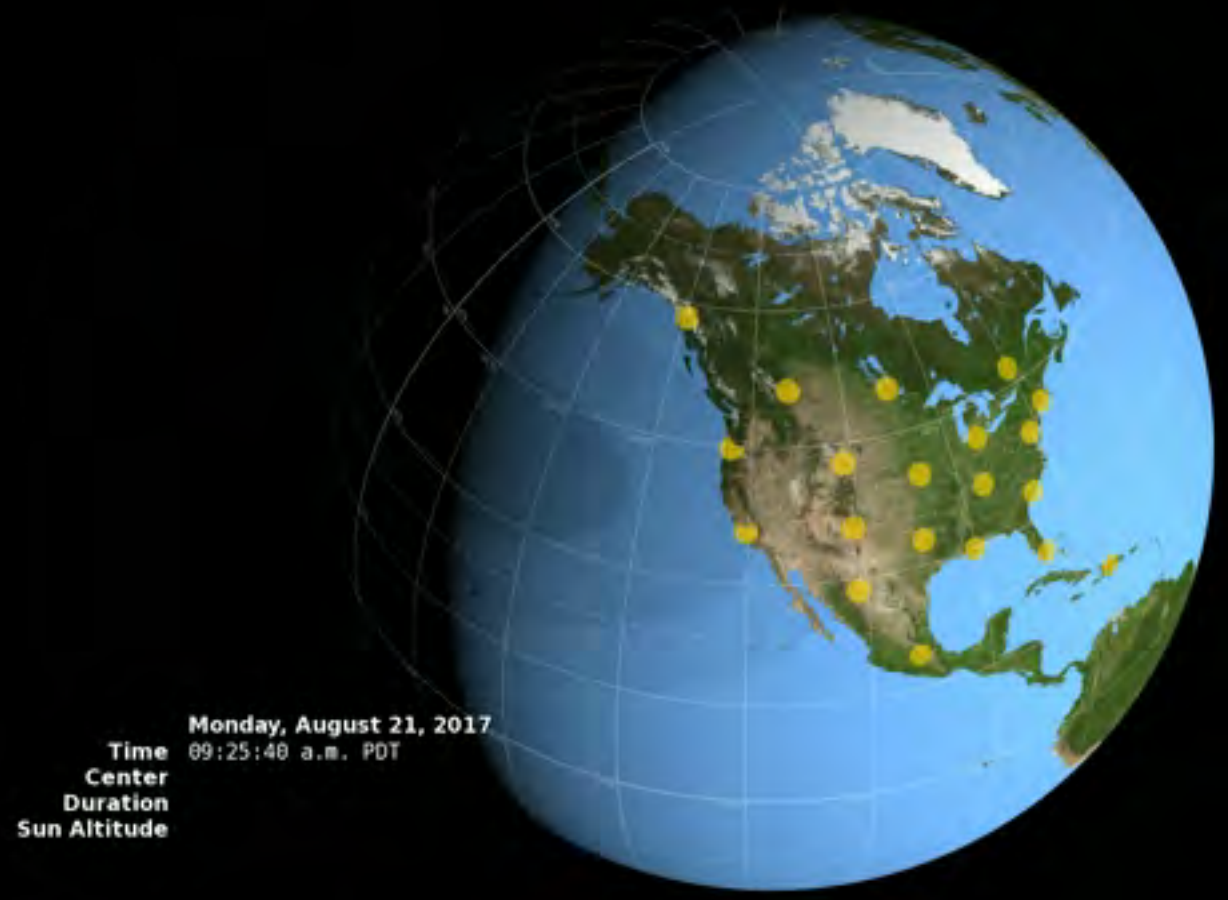
Solar eclipse from space

DSCOVR satellite
1 million miles from Earth

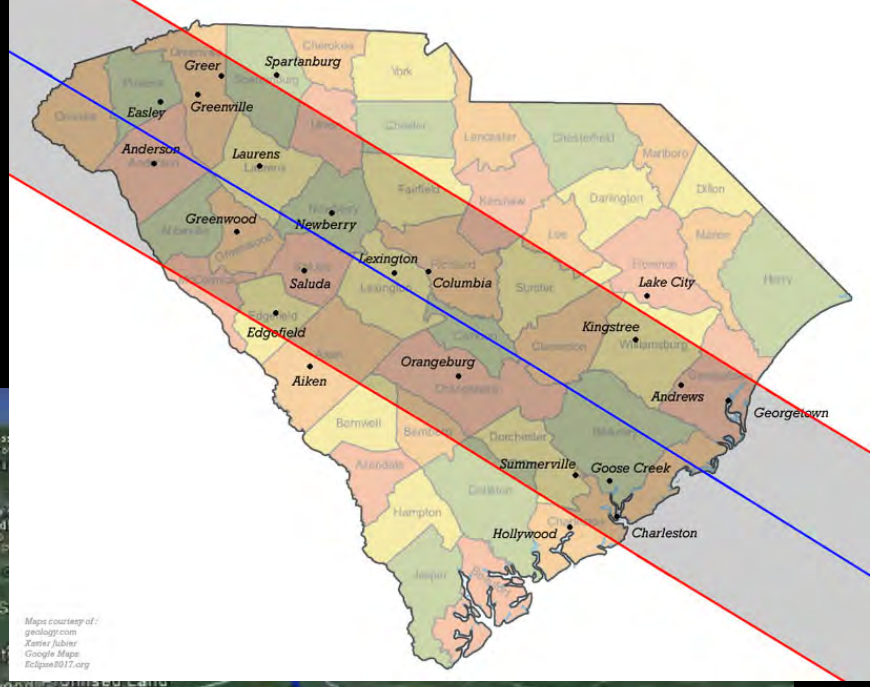
PC: NASA, NOAA

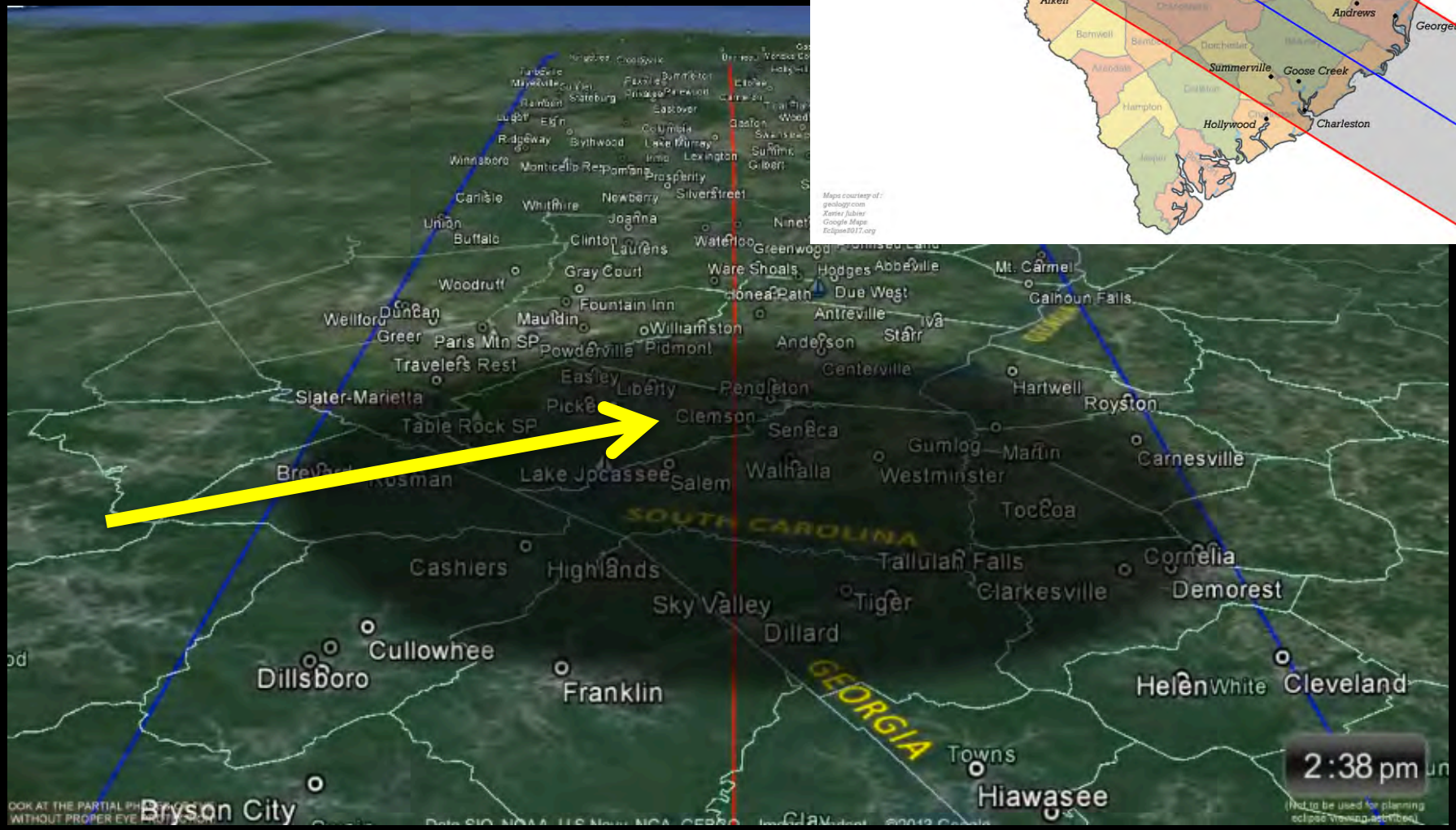

Total solar eclipse of August 21, 2017
Path of totality
17:15 UT
10:15 PDT
17:30 UT
10:30 PDT
17:45 UT
11:45 MDT
18:00 UT
1:00 CDT
1:15 CDT
14:30 EDT
14:45 EDT
18:45 UT
19:00 UT
15:00 EDT
2 minutes
2 min 10 sec
2 min 20 sec
2 min 30 sec
2 min 40 sec
2 min 40 sec
2 min 30 sec
0.6 magnitude
0.7 magnitude
0.8 magnitude
0.9 magnitude
0.9 magnitude
0.8 magnitude
0.7 magnitude
0.6 magnitude
0.5 magnitude
0.4 magnitude
Great American Eclipse.com

“Great American Eclipse”



You live within the path of totality!



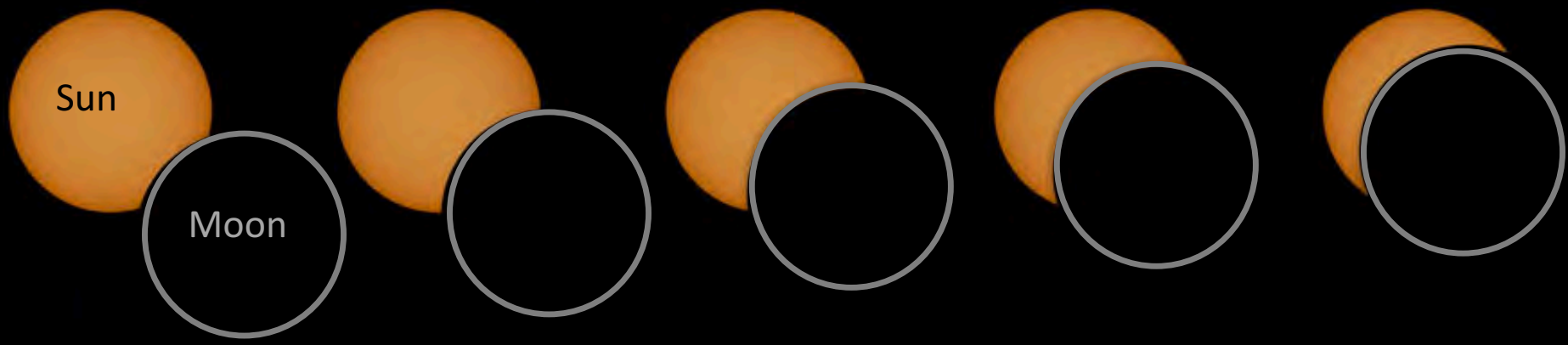


Total solar eclipses over North America in the 21st century
March 30, 2033
May 11, 2097
August 1, 2008
September 23, 2090
August 23, 2044
September 14, 2099
April 8, 2024
May 1, 2079
August 21, 2017
May 11, 2078
August 12, 2045
March 30, 2052
September 23, 2071
December 6, 2067
Great American Eclipse.com

Moon starts to cover the Sun

1:08 pm
Aug 21

Moon starts to cover the Sun



1:08 pm
Aug 21

2:36 pm
Aug 21

Baily's beads and
the diamond ring

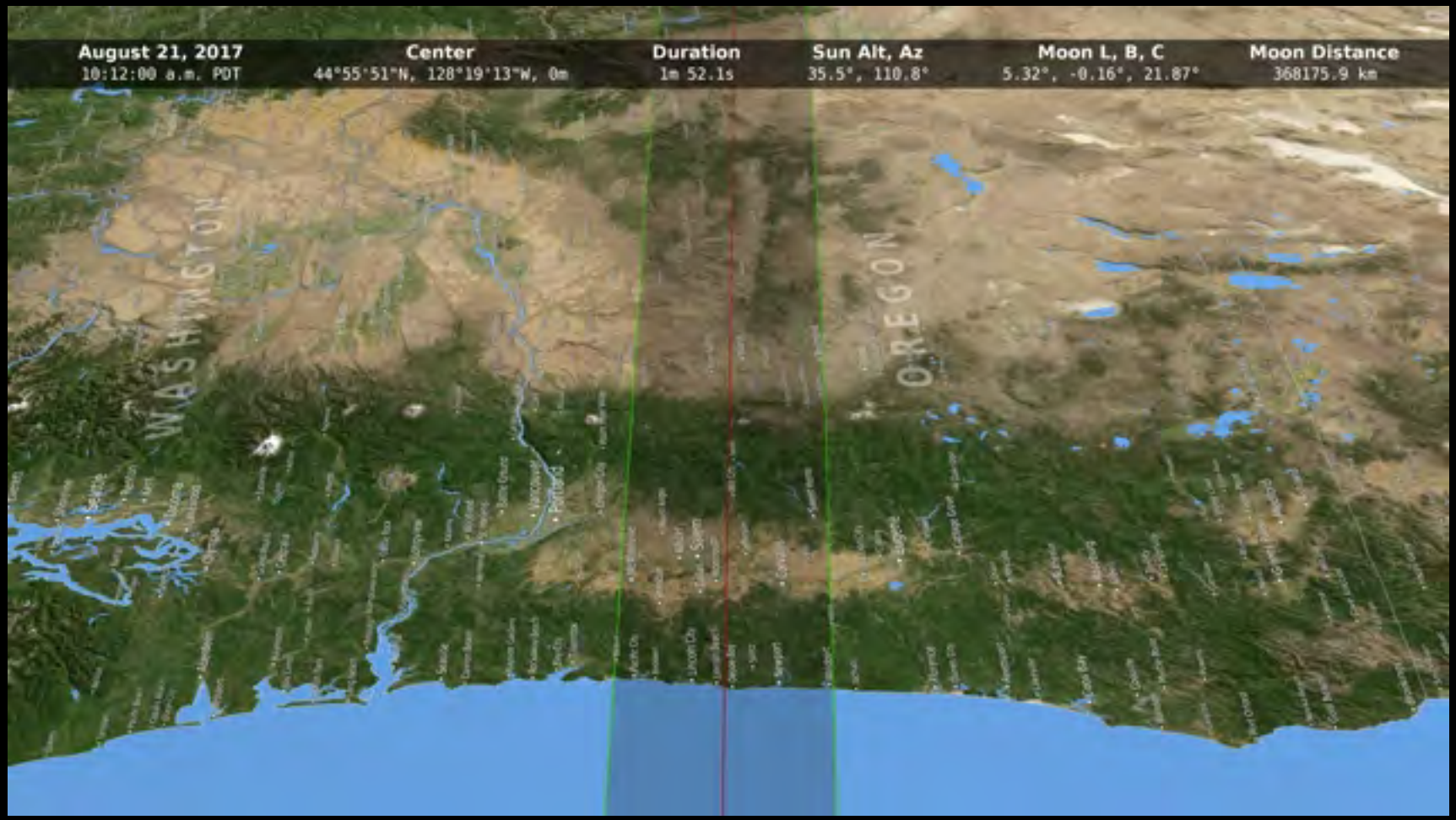
PC: NASA

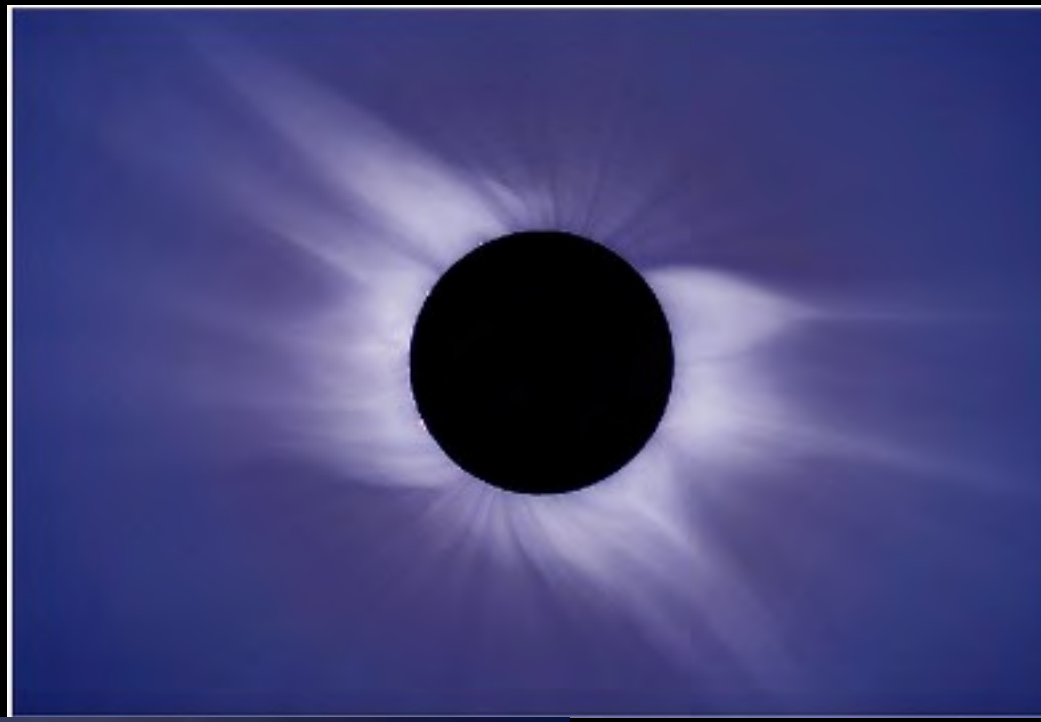
PC: NASA

Totality reveals the Sun's corona

2:37 pm
Aug 21

PC: NASA


August 21, 2017
10:12:00 a.m. PDT
Center
44°55'51"N, 128°19'13"W, 0m
Duration
1m 52.1s
Sun Alt, Az
35.5°, 110.8°
Moon L, B, C
5.32°, -0.16°, 21.87°
Moon Distance
368175.9 km
WASHINGTON
OREGON

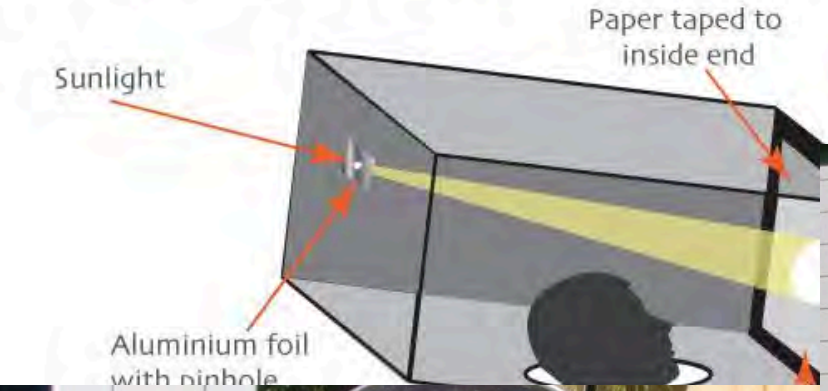


Moon uncovers the Sun

4:03 pm
Aug 21

ECLIPSE
SHADES®

Pinhole projector using a box



Basic Pinhole projector

www.clemson.edu/eclipse

Eclipse Over Clemson

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PHYSICS AND ASTRONOMY

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Eclipse Over Clemson

CALENDAR OF EVENTS

LIBRARY GREEN OUTSIDE
WATT INNOVATION CENTER
AUGUST 21, 2017

ECLIPSE
OVER CLEMSON

CLEMSON
College of SCIENCE

Please join Clemson University on the Library Green adjacent to the Cooper Library and the Watt Family Innovation Center for the Aug. 21, 2017 Eclipse Over Clemson.

8:00 – 10 a.m.	Planetarium shows, by appointment only (hdebra@g.clemson.edu)
11:00 – 11:10 a.m.	Introductions from Amber Porter, astrophysics lecturer
11:10 – 11:30 a.m.	Overview of event with Mark Leising, interim dean for College of Science
11:45 – 12 p.m.	Great American Eclipse from Clemson with Rick Brown, eclipse-chaser
Noon – 12:35 p.m.	Welcome from scientists and guests
12:35 – 12:45 p.m.	Promotion of upcoming book by Jim Melvin, COS communications director
12:45 – 1:10 p.m.	First contact between sun and moon; scientific team launches balloon
1:10 – 1:20 p.m.	Impact on the environment by Clemson conservationist Rob Baldwin
1:30 p.m.	Welcome from Clemson president James Clements
1:35 – 1:45 p.m.	What to look for during totality with Rick Brown
2:30 – 2:45 p.m.	Silence for totality
3:00 – 3:05 p.m.	Promotion of upcoming "Eclipse Over Clemson" book with Jim Melvin
3:05 – 3:30 p.m.	Observations with Amber Porter
4:02 p.m.	Eclipse ends as sun emerges from behind the moon

WHAT:
Eclipse Over Clemson

WHEN:
11:00 – 4:02 PM

WHERE:
South Campus Green

WHY:
To stand in the shadow of the moon

STAND BACK

I'M GOING TO TRY

SCIENCE

Nature…

Art credit: Cedar Lee

thank you!