

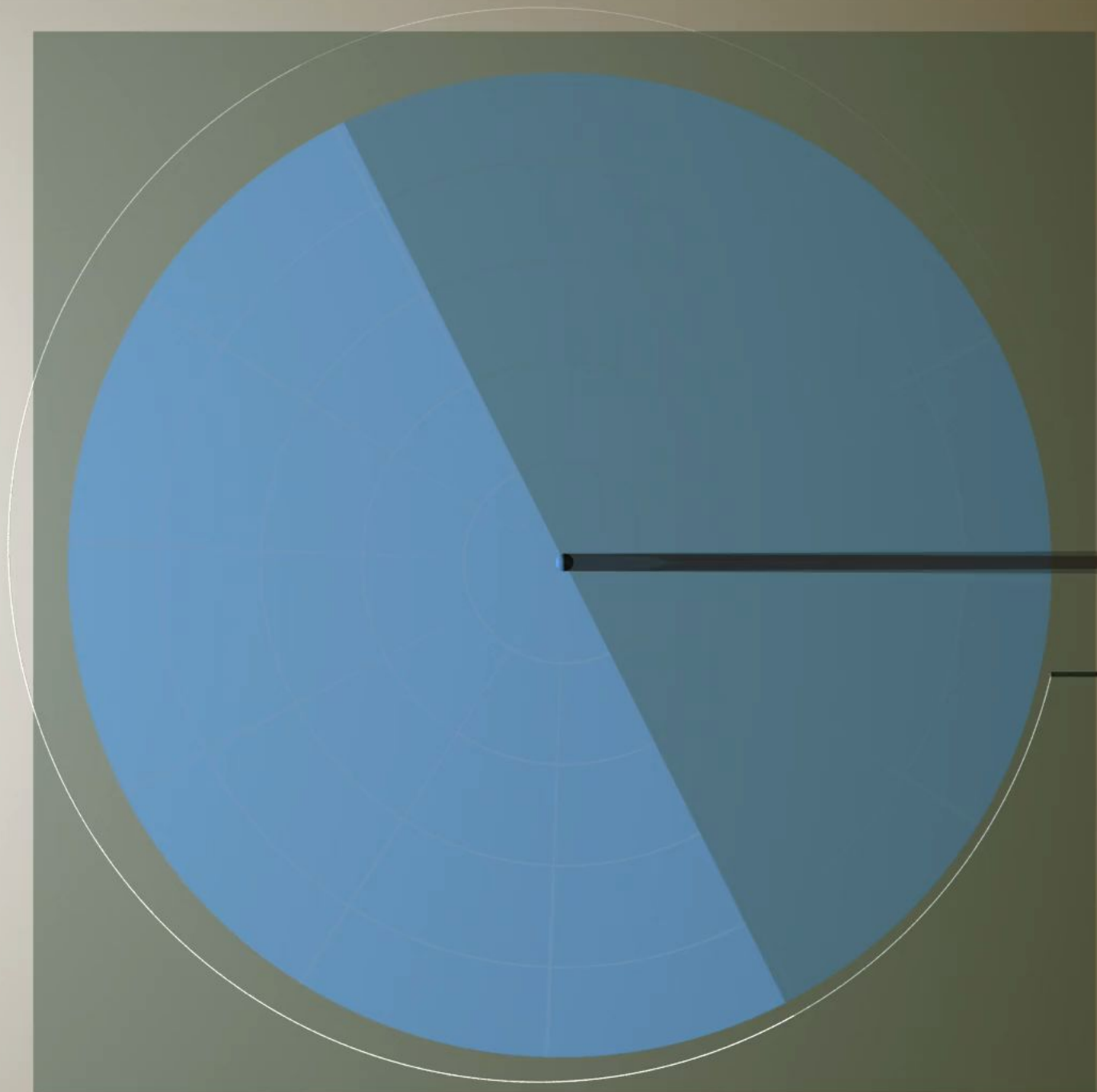


**OPTICAL**



**RADIO**

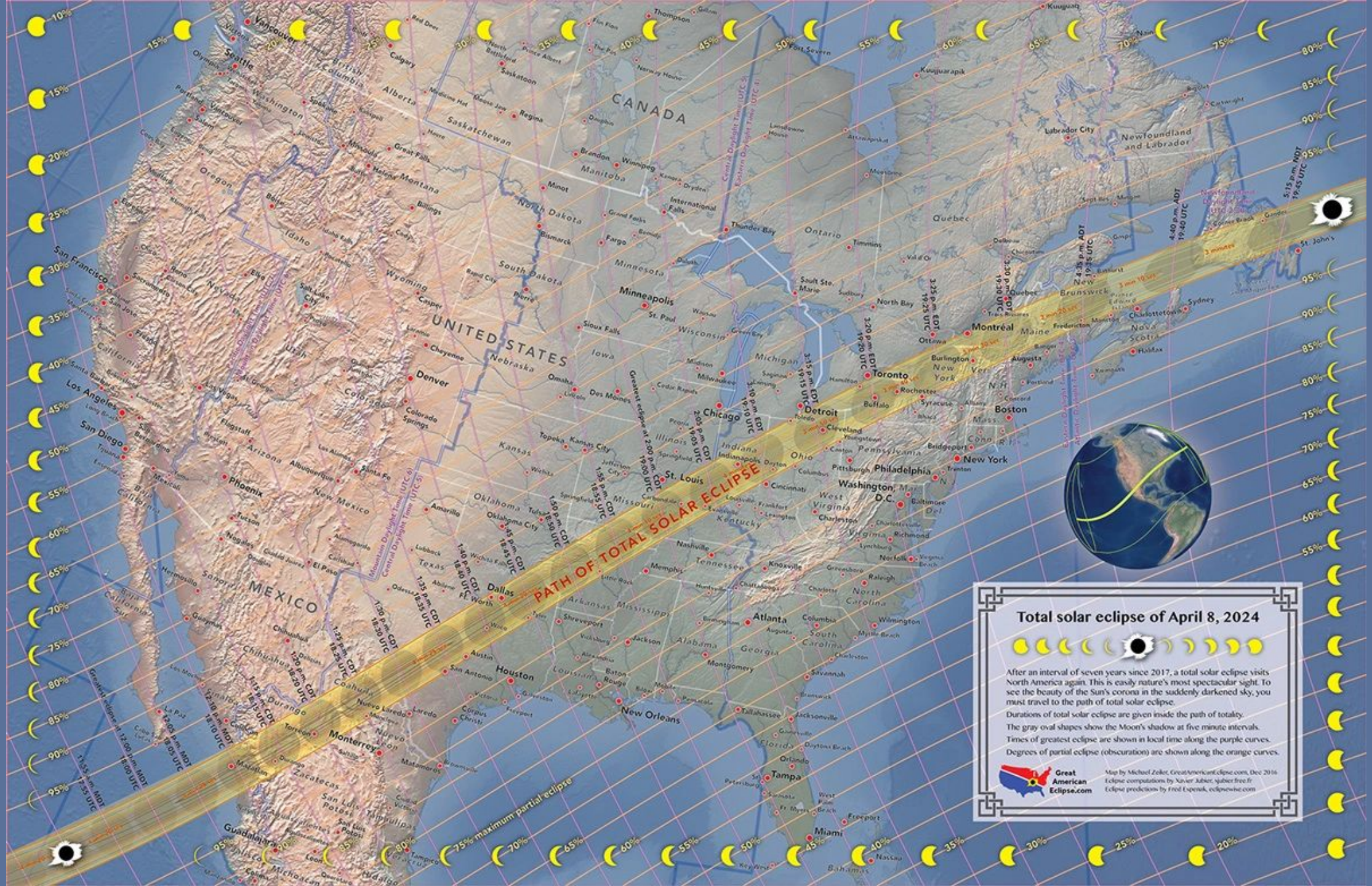




*Solar Corona*







### Total solar eclipse of April 8, 2024

After an interval of seven years since 2017, a total solar eclipse visits North America again. This is easily nature's most spectacular sight. To see the beauty of the Sun's corona in the suddenly darkened sky, you must travel to the path of total solar eclipse.

Durations of total solar eclipse are given inside the path of totality.  
 The gray oval shapes show the Moon's shadow at five minute intervals.  
 Times of greatest eclipse are shown in local time along the purple curves.  
 Degrees of partial eclipse (obscuration) are shown along the orange curves.

Great American Eclipse.com

Map by Michael Zeiler, GreatAmericanEclipse.com, Dec 2016  
 Eclipse computations by Xavier Jubier, xjuber.free.fr  
 Eclipse predictions by Fred Espenak, eclipsewise.com



*Safety First!*

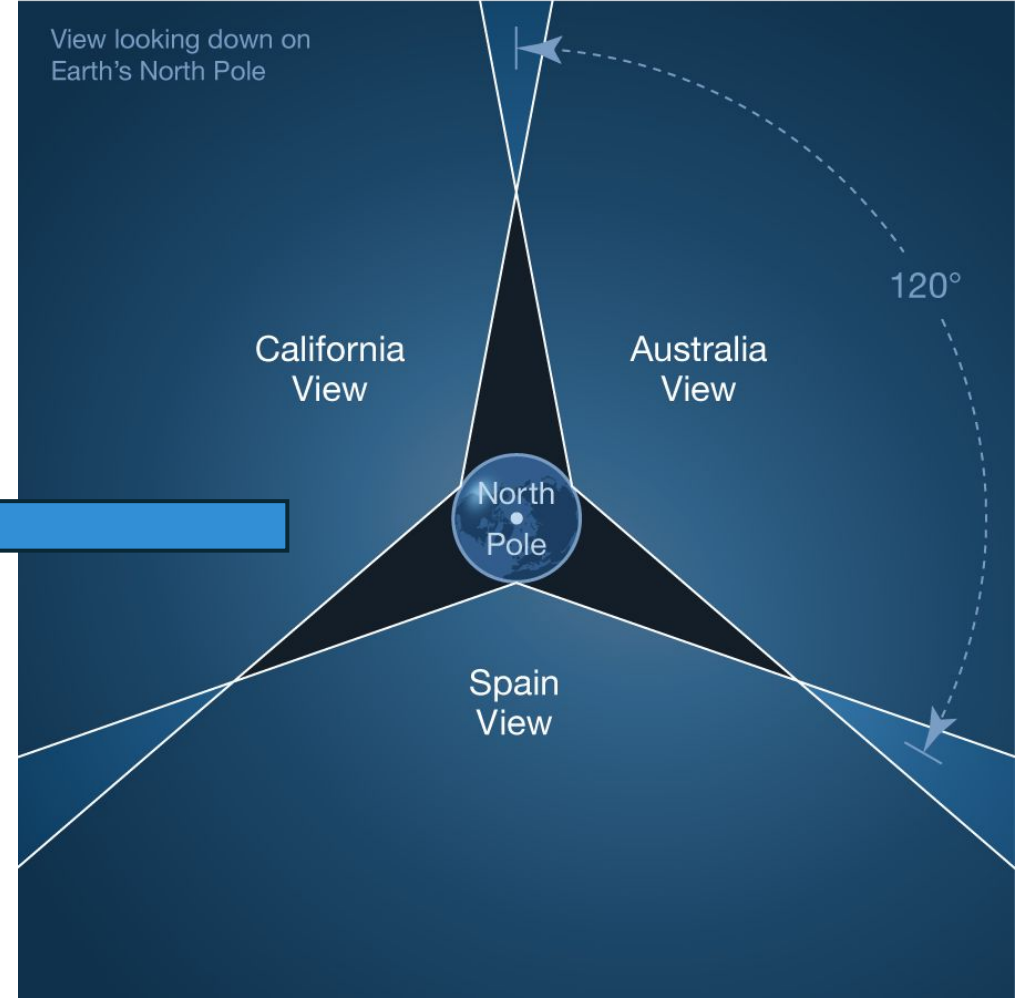
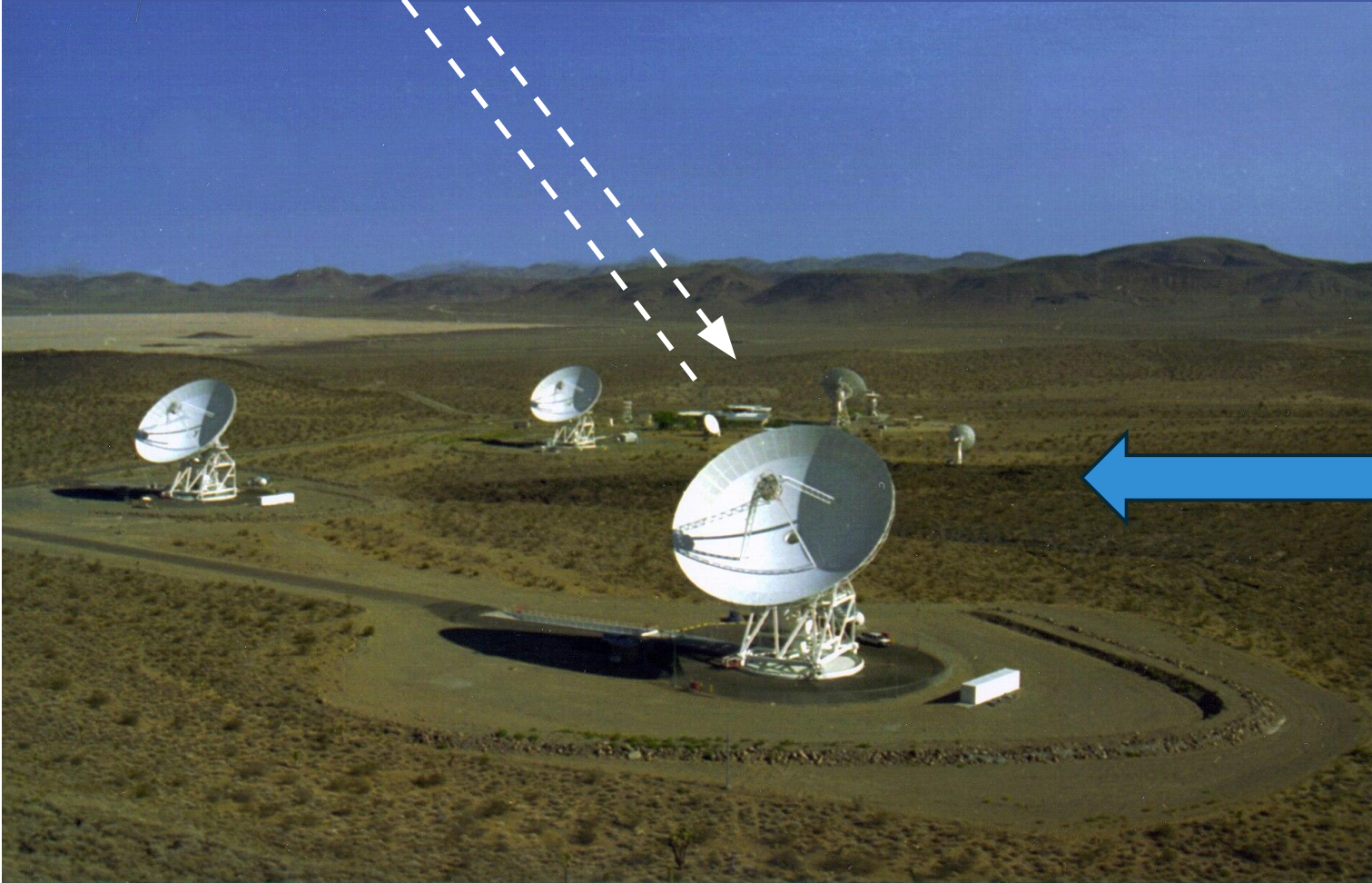
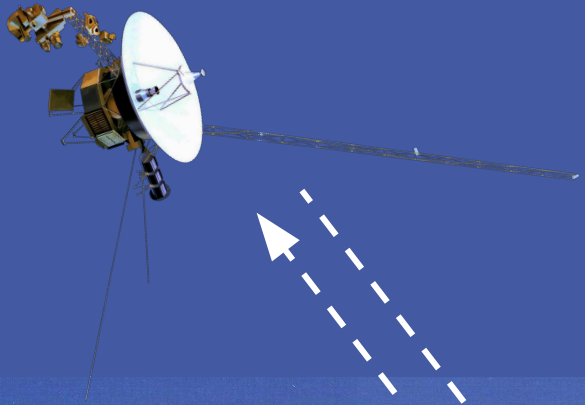






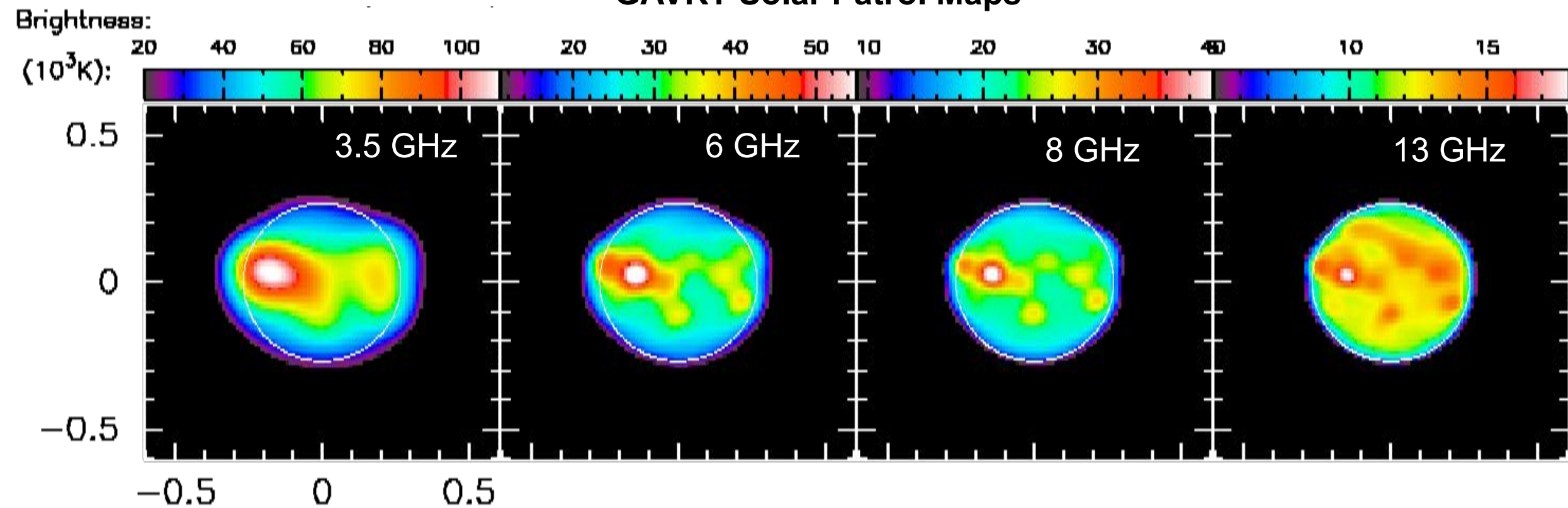
*The Goldstone Apple Valley  
Radio Telescope (GAVRT)*







# GAVRT Solar Patrol Maps

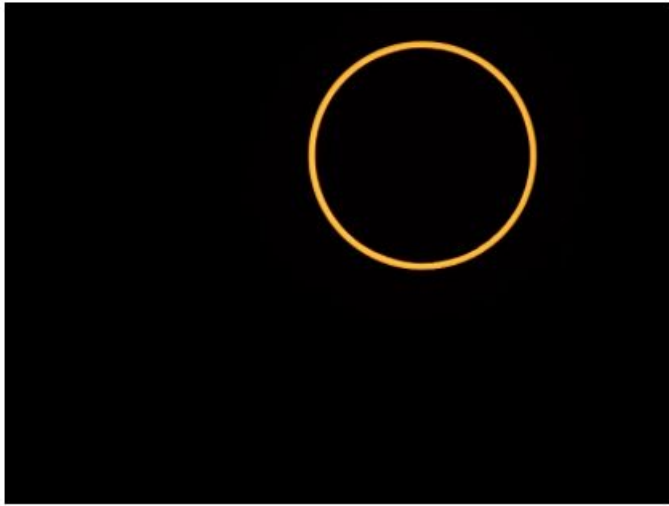




GAVRT Website QR Code  
TBD



## Highlights of the Big Year



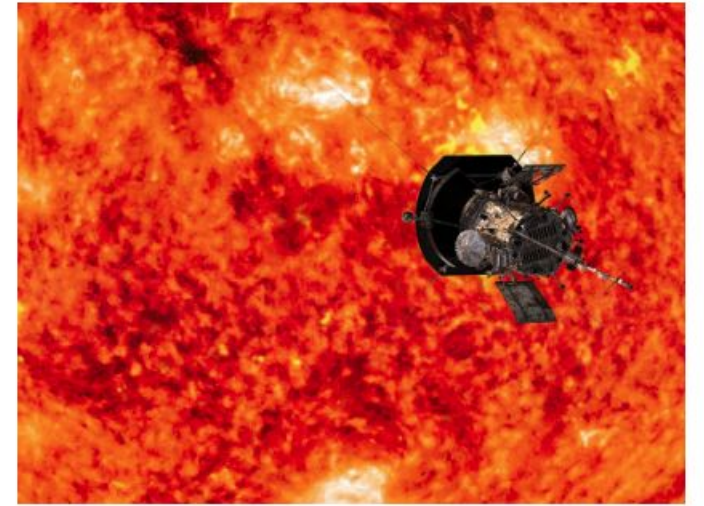
### **Annular Eclipse**

On Oct. 14, 2023, an annular eclipse was visible from parts of the western United States.



### **Total Solar Eclipse**

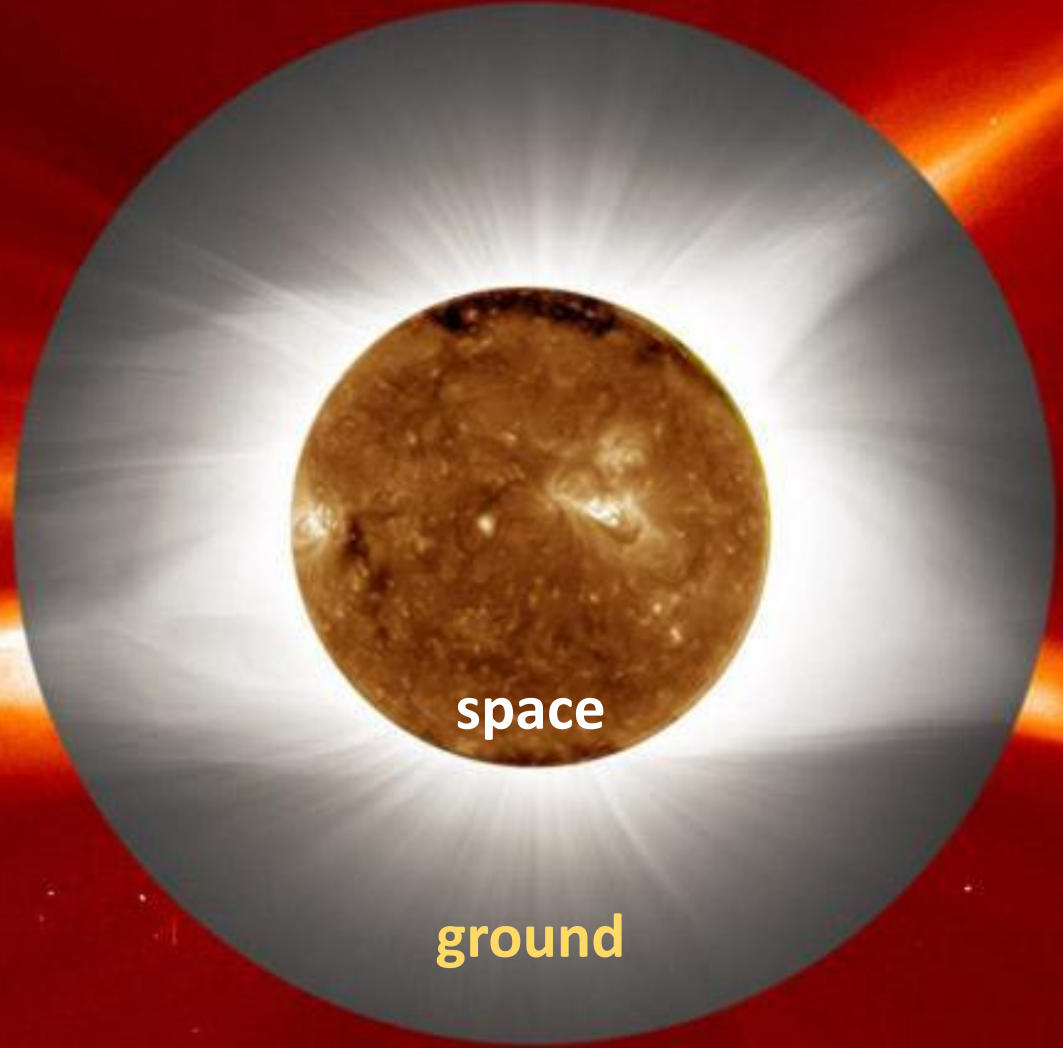
On April 8, 2024, a total solar eclipse will cross the United States.



### **Parker Solar Probe's Closest Approach**

On Dec. 24, 2024, a record-breaking NASA mission will make its closest approach of the Sun.

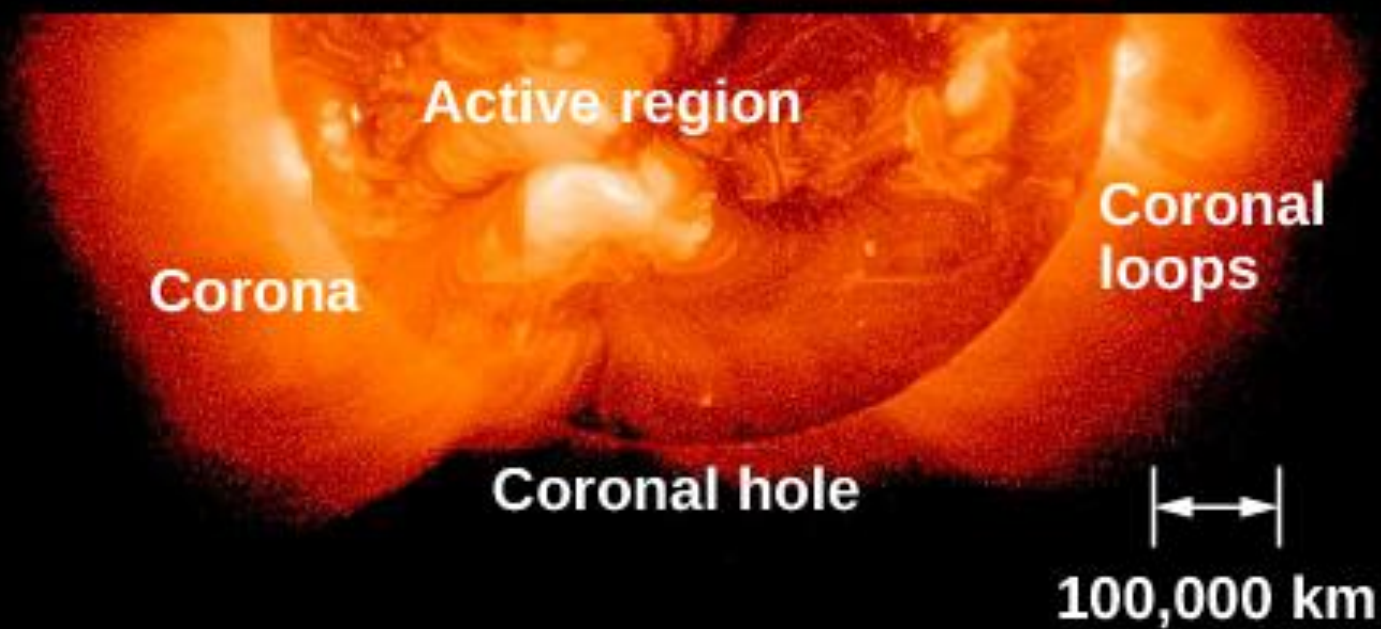
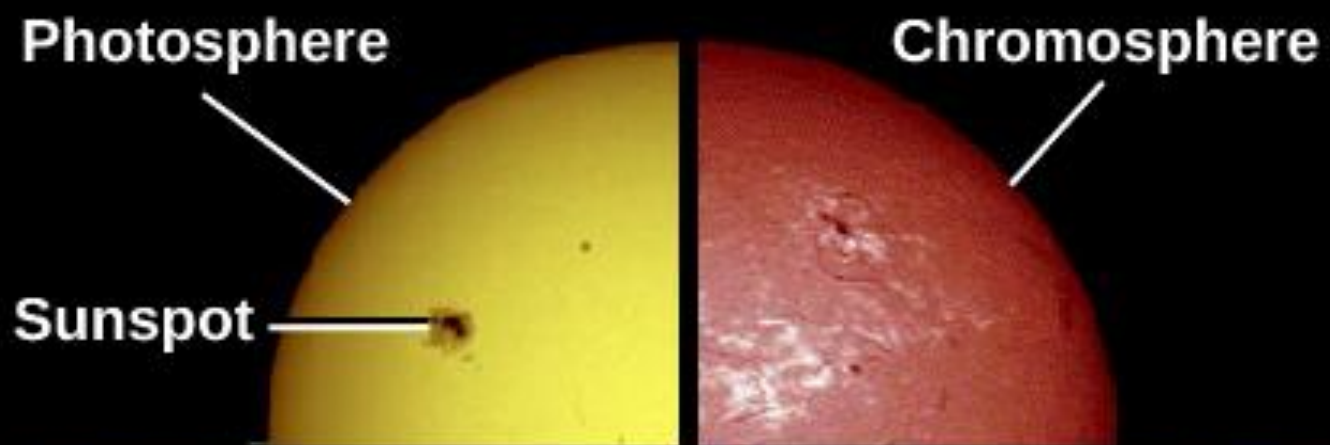




space

ground

space

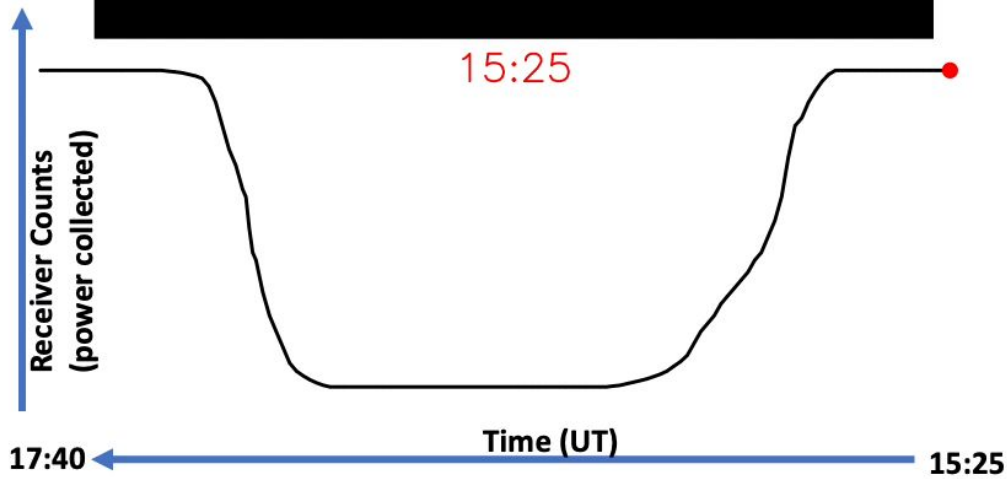
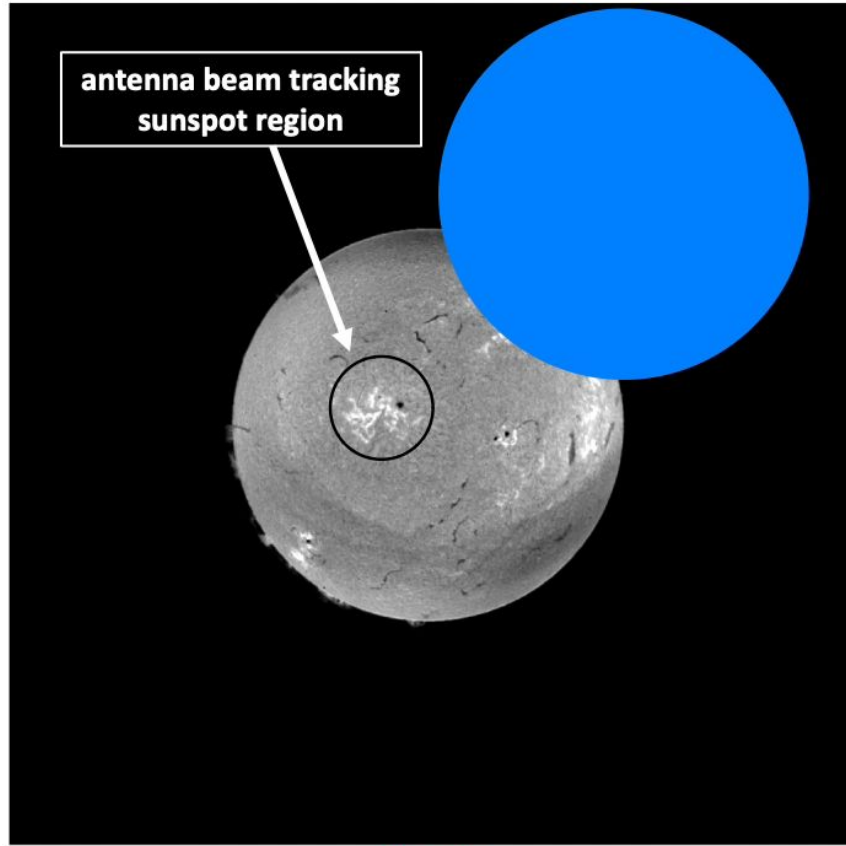




*Solar active regions*



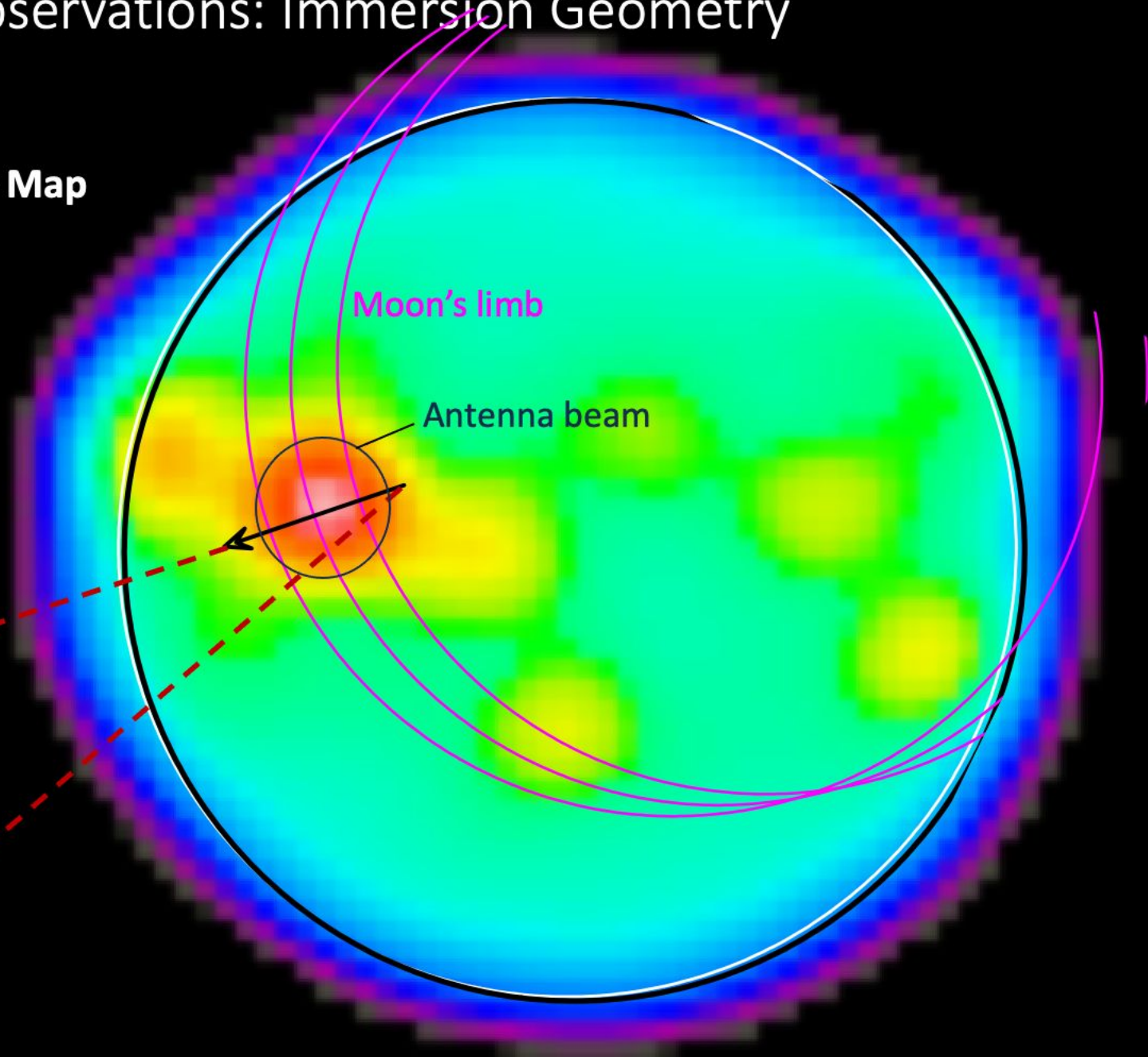
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# GAVRT Eclipse Observations: Immersion Geometry

**GAVRT**  
**8.45 GHz Solar Map**

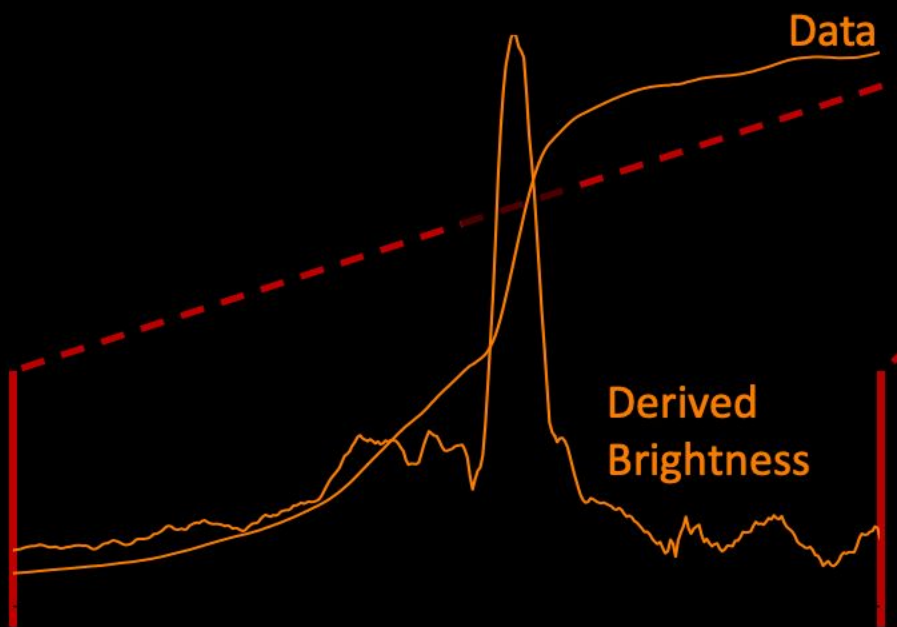


Moon's limb

Antenna beam

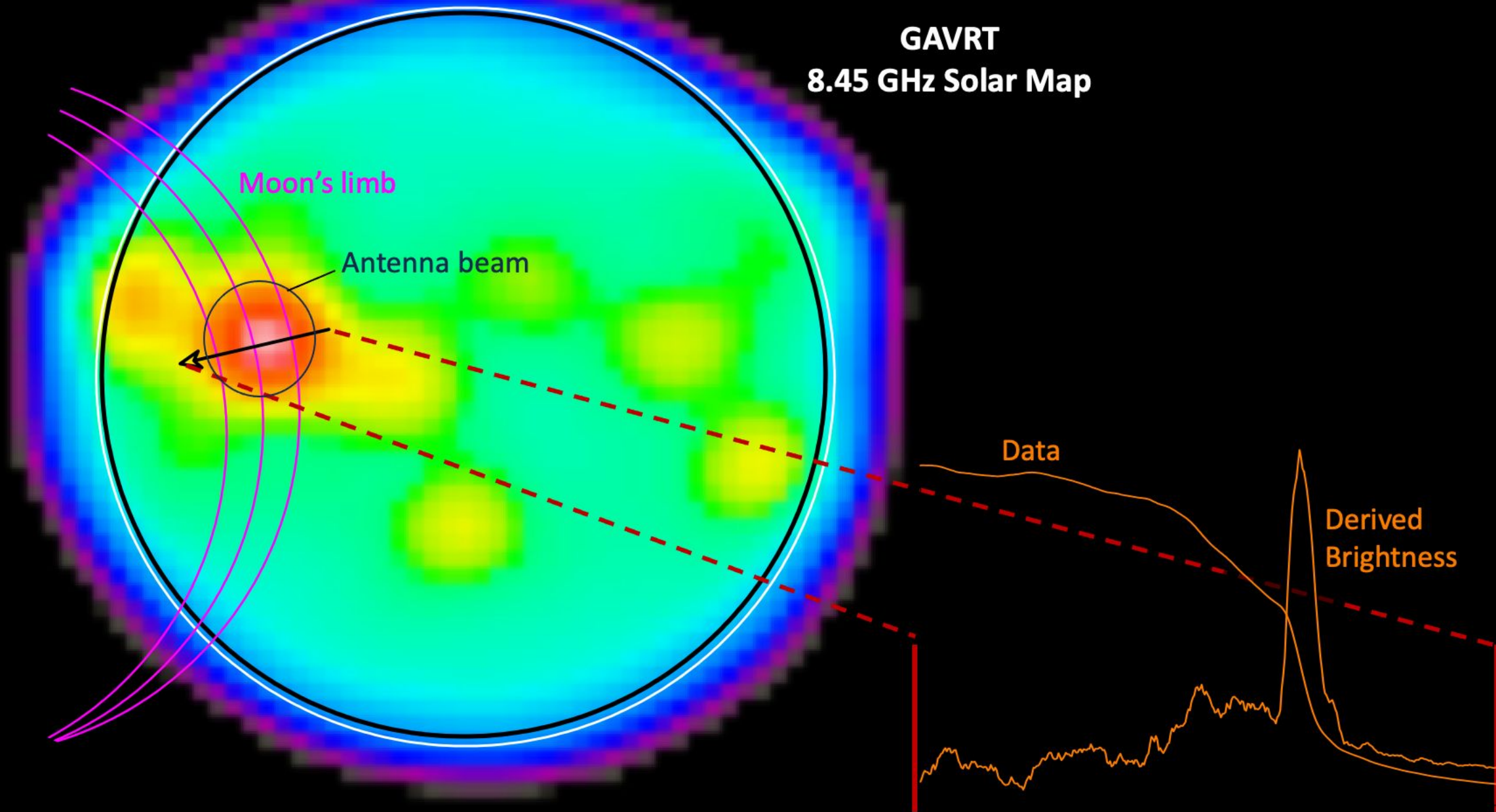
Data

Derived  
Brightness

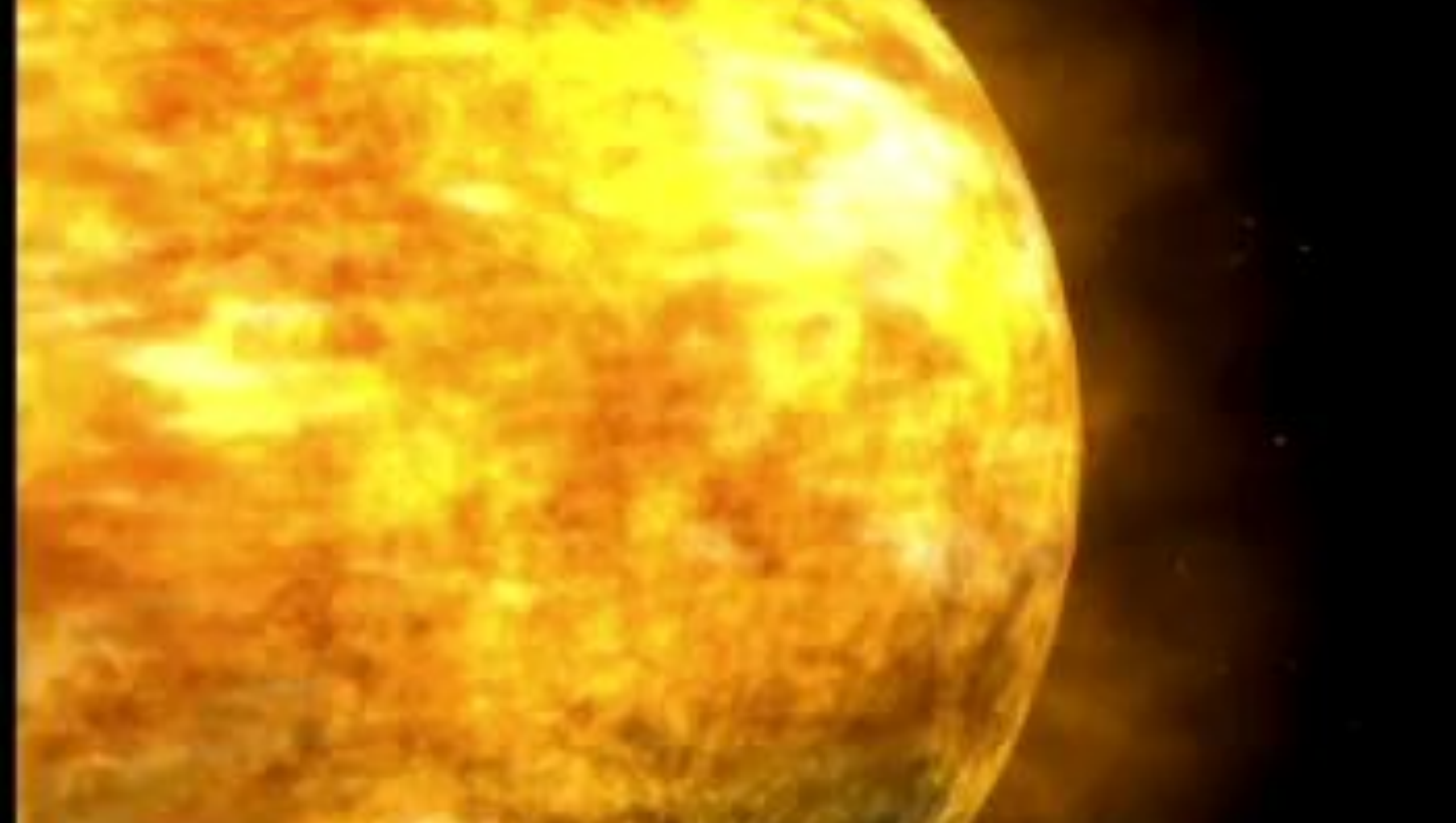


# GAVRT Eclipse Observations: Emergence Geometry

**GAVRT  
8.45 GHz Solar Map**







# Resolving active region emission at **arcsecond** angular scales

