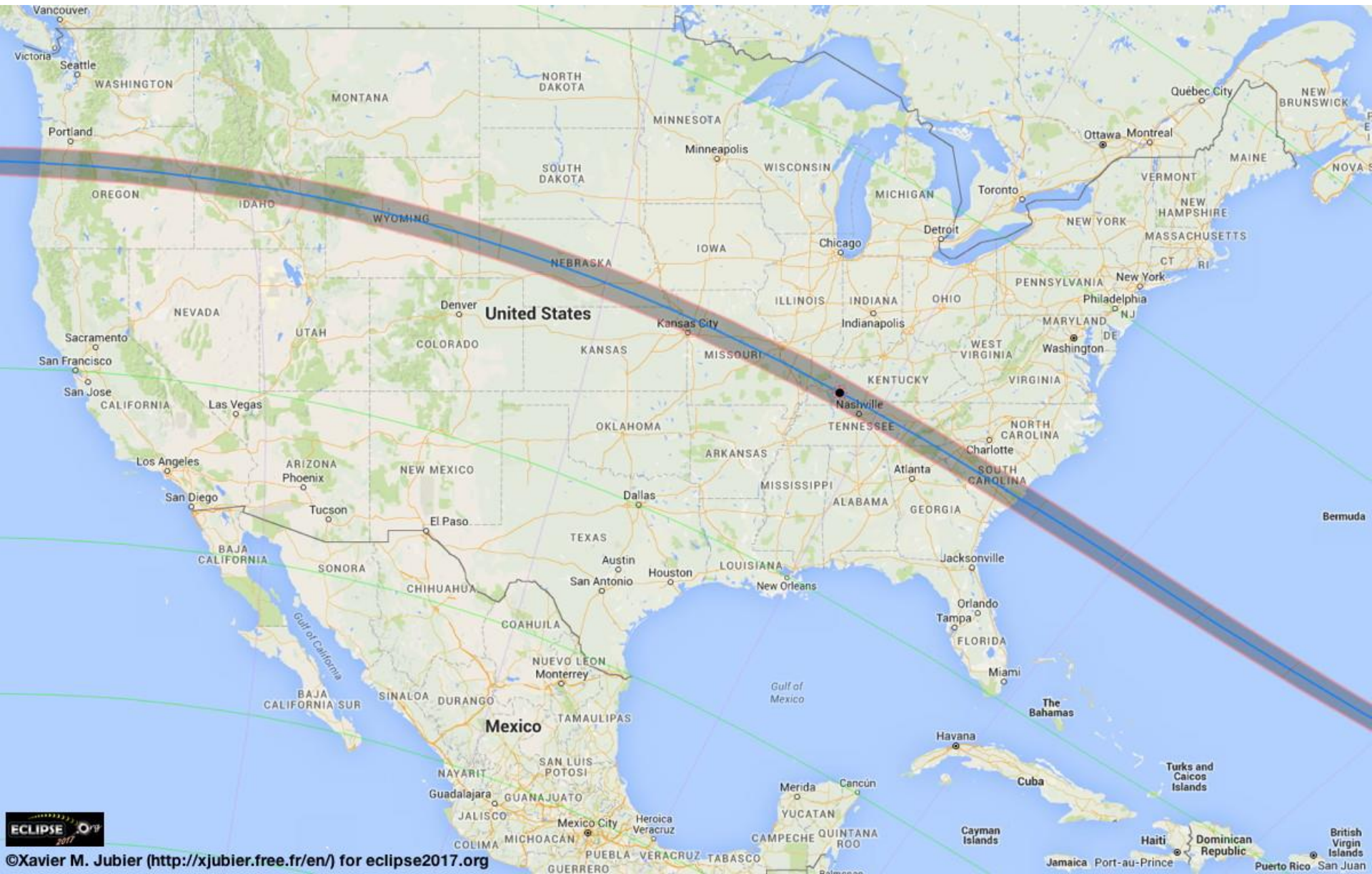


# Solar Eclipse QSO Party

Aug 21, 2017

By Mel KC0P

With help from Bruce & Janice



©Xavier M. Jubier (<http://xjubier.free.fr/en/>) for [eclipse2017.org](http://eclipse2017.org)

Graphic from: <http://www.eclipse2017.org/2017/maps/whole-us.jpg>

# The Expectation

- As the Eclipse travels across the country, the ionospheric D layer, produced by the sun's Xrays will diminish due to lack of excitation.
- The D layer, the Great Absorber of frequencies less than 10 MHz, will be less effective.
- HF propagation of frequencies  $< 10$  MHz "may" revert to night time conditions in the middle of the day.

# HamSci and ARRL Dream

- 30,000 Amateurs on the air, making contacts.
- All frequencies, Long Wave to VHF.
- Like Field Day, lots of contacts.
- From 10 AM to 3 PM.
- Turn in your QSO logs & station description.
- Somehow (Data Mining) the Professionals will discover what happened, maybe something new and unexpected.

# KCOP Plan A

- Travel with 10 GHz Rover Pack Sat & Sun.
- Operate 80 & 40 meters Monday near North Platte, NE before, during & after eclipse.
- Throw a rope over a light standard at Walmart to pull up a dual dipole.
- Two nagging questions, will anyone hear me and will I get any quantifiable signal reports so I can make graphs.

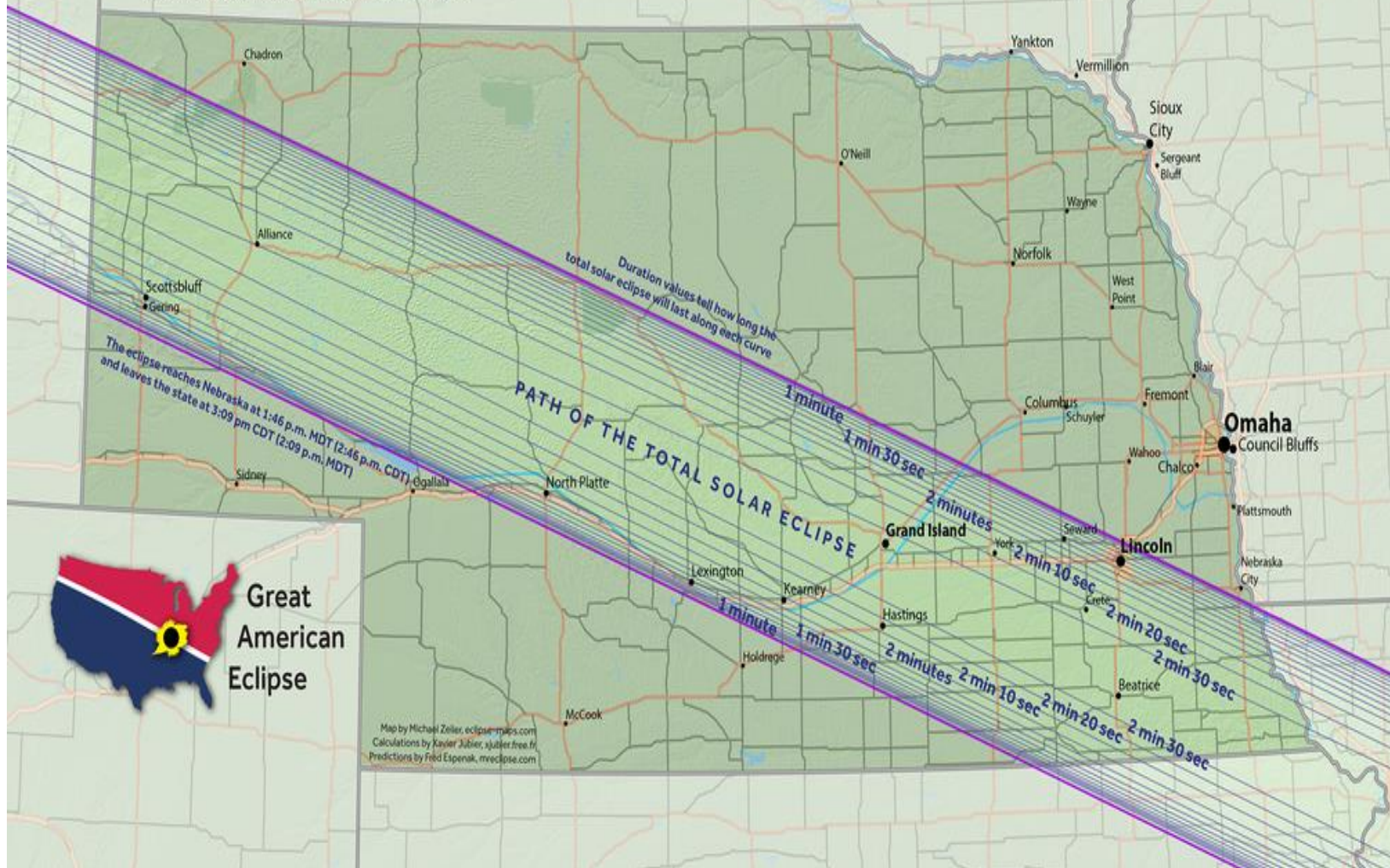


## Total solar eclipse over Nebraska

A total solar eclipse will cross the United States from Oregon to South Carolina on **August 21, 2017**.

This is the grandest spectacle in the sky and you should see this at least once in your life. To see day turn to night and the majesty of the Sun's corona, travel to a location inside the path of the eclipse.

Learn more at [GreatAmericanEclipse.com](http://GreatAmericanEclipse.com)







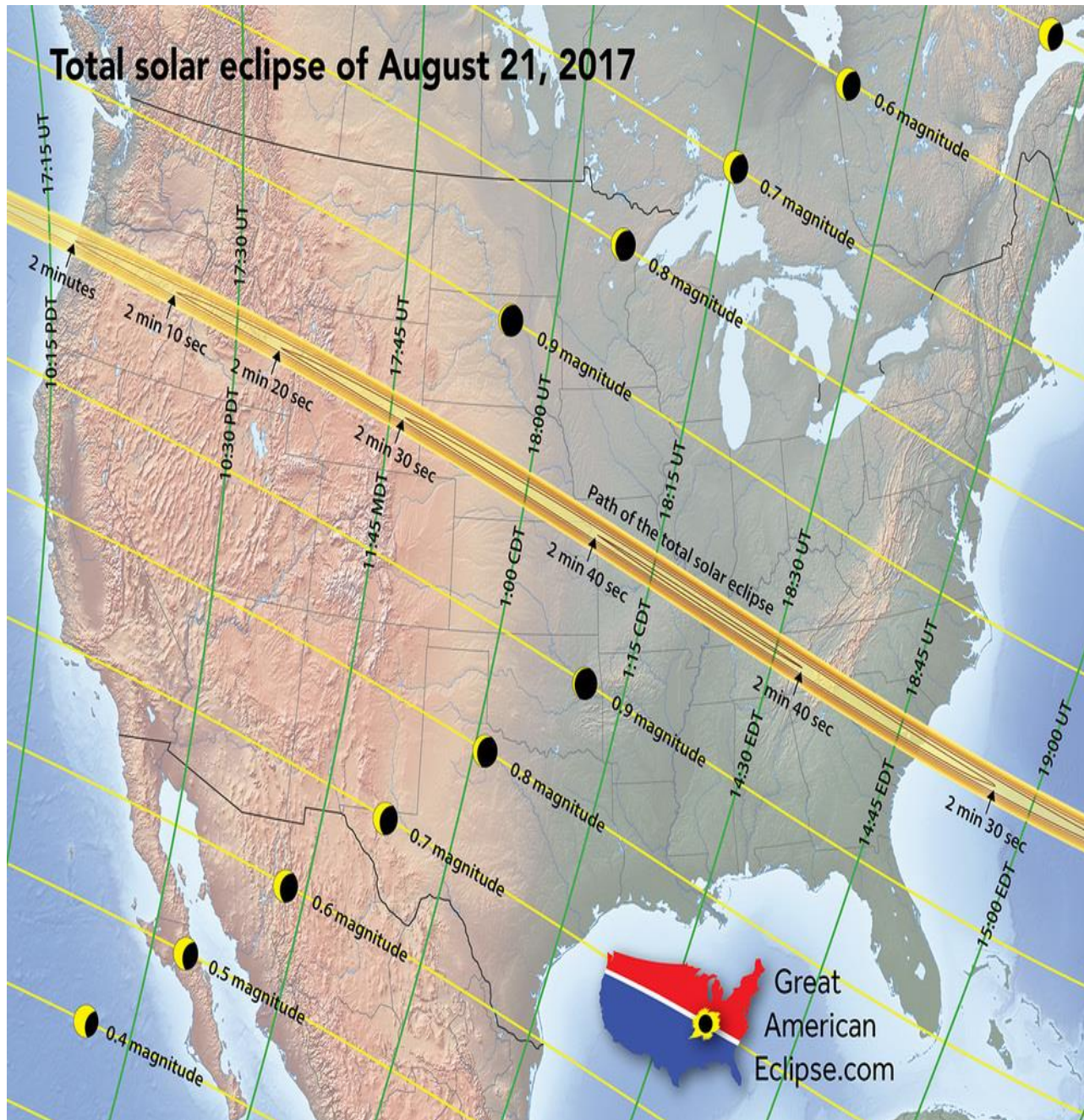




# KCOP Plan B

- Operate from home QTH in Rochester, MN
- 80 & 40 M Antennas and Transmitters already in operation.
- Use Reverse Beacon Network to generate numeric signal reports (two significant digits).
- Use memory keyer to send message.
- Practice ahead of time to check out the system and get a base line of what to expect.
- Try for RBN stations across Eclipse path.

# Total solar eclipse of August 21, 2017



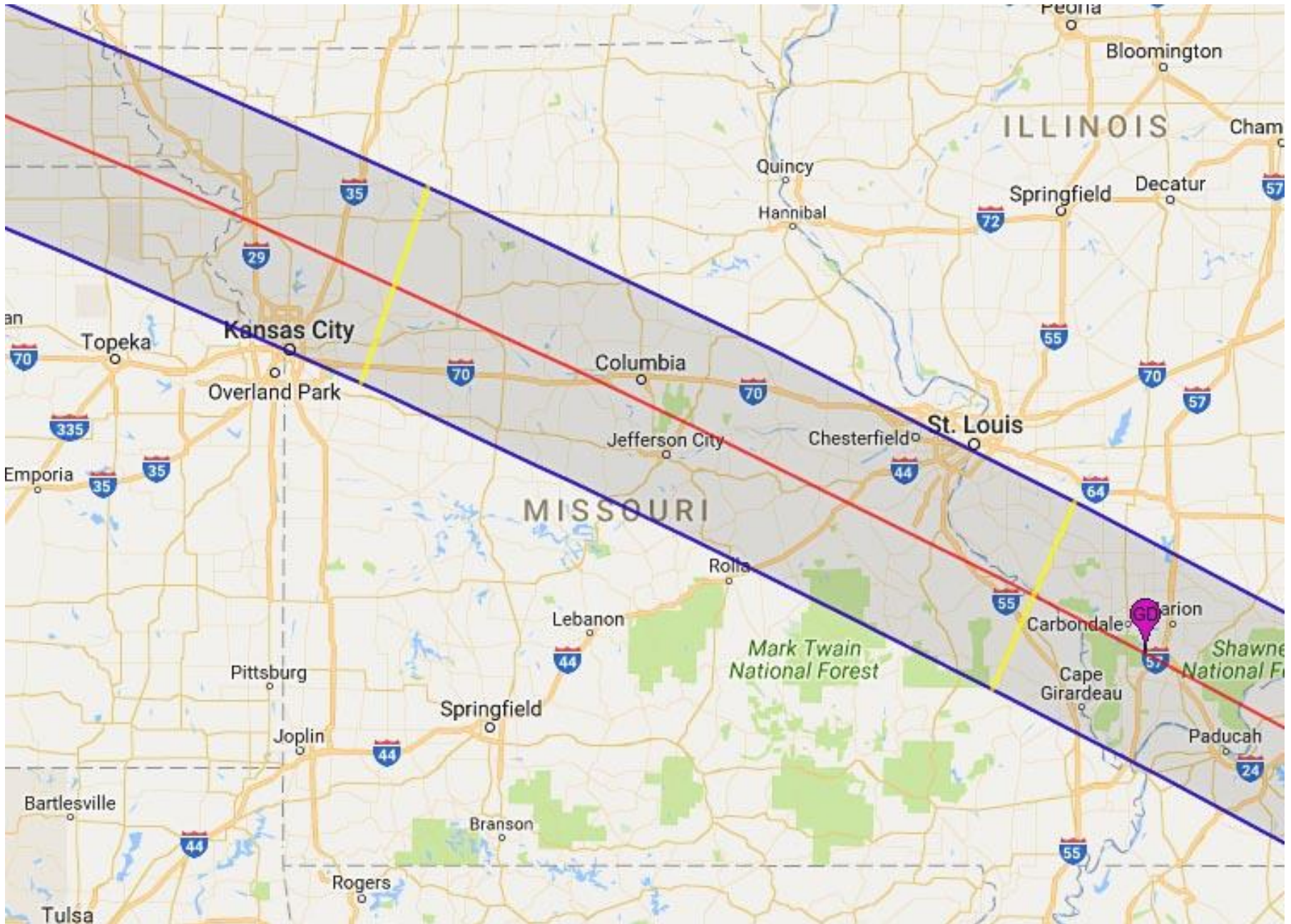
# Early Practice

- Load a memory keyer with the following burst: CQ CQ CQ de KC0P KC0P KC0P K K.
- Message takes 31 seconds at 15 WPM.
- Get many RBN spots and guys wanting to rag chew using clear frequencies from 7240 to 7250 kHz.
- So I can be heard and get quantifiable reports from the RBN.

# Preliminary Results

- Optimum path would seem to be Rochester to Dallas or Oklahoma City but nobody answers there.
- Most consistent reports come from ACOC just south of Kansas City, Kansas.
- He is south of the Eclipse path.
- In exchange of e-mails he commits to having his RBN running on Eclipse day.
- Have a plan for two people working together.



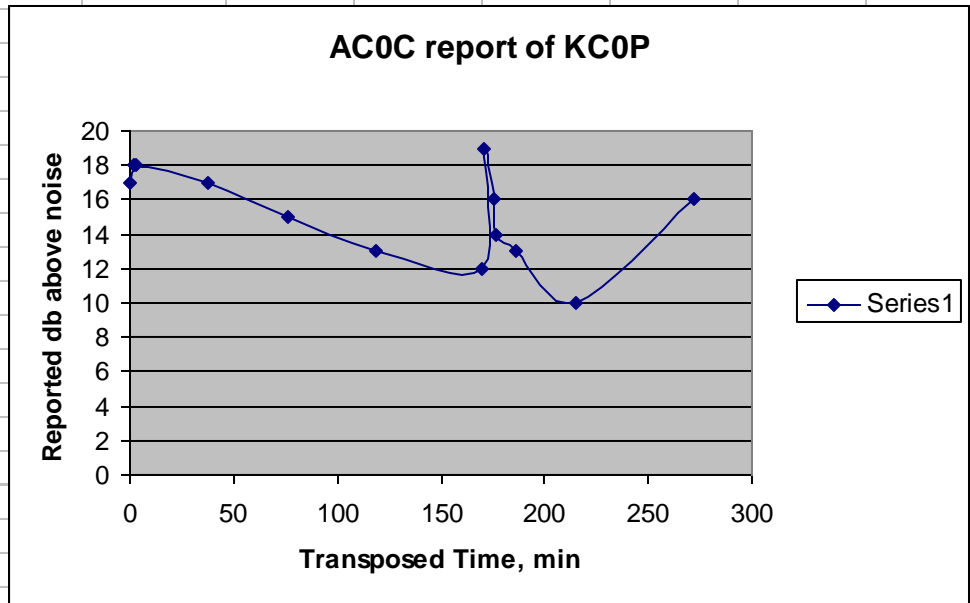


Graphic from: <https://www.eclipsewise.com/solar/SEnews/TSE2017/TSE2017states/TSE2017stateMO.html>

# SEQP Operation Day 21 Aug

- Started transmitting at 10 am and went to 2 pm.
- Every minute around 1802 Z, time of crossing.
- Got 22 spots including 13 from AC0C my partner.

AC0C reception of KC0P eclipse day 21 Aug 2017			Mel 25 Aug 2017		
Time, Z	Transposed Time	Strength db			
1524	0	17			
1526	2	18			
1527	3	18			
1602	38	17			
1640	76	15			
1723	119	13			
1814	170	12			
1815	171	19			
1820	176	16			
1821	177	14			
1830	186	13			
1859	215	10			
1956	272	16			



Eclipse crossed our transmission path at 1809 Z or 165 min transposed  
Peak at 1815 Z was 6 min after the crossing of our transmission path.

# Reporting

- Sent Cabrilo format log of 22 spots to SEQP HQ robot. Got a certificate suitable for framing.
- Sent a more detailed report to SEQP HQ e-mail site. Got a response from them, looks important, please submit to Zonodo database.
- Sent three files to Zonodo, running on a terabyte server in Cern, Switzerland which supports the Large Hadron Collider. So my stuff is holding hands with data from the Higgs Boson.



# Summary

- Plan B covered the planning and operation.
- Generated a total of 212 RBN spots, including 22 during SEQP.
- Must have transmitted my message 400 times spread across before, during, and after to establish a base line.
- I was heard and got useful signal reports.

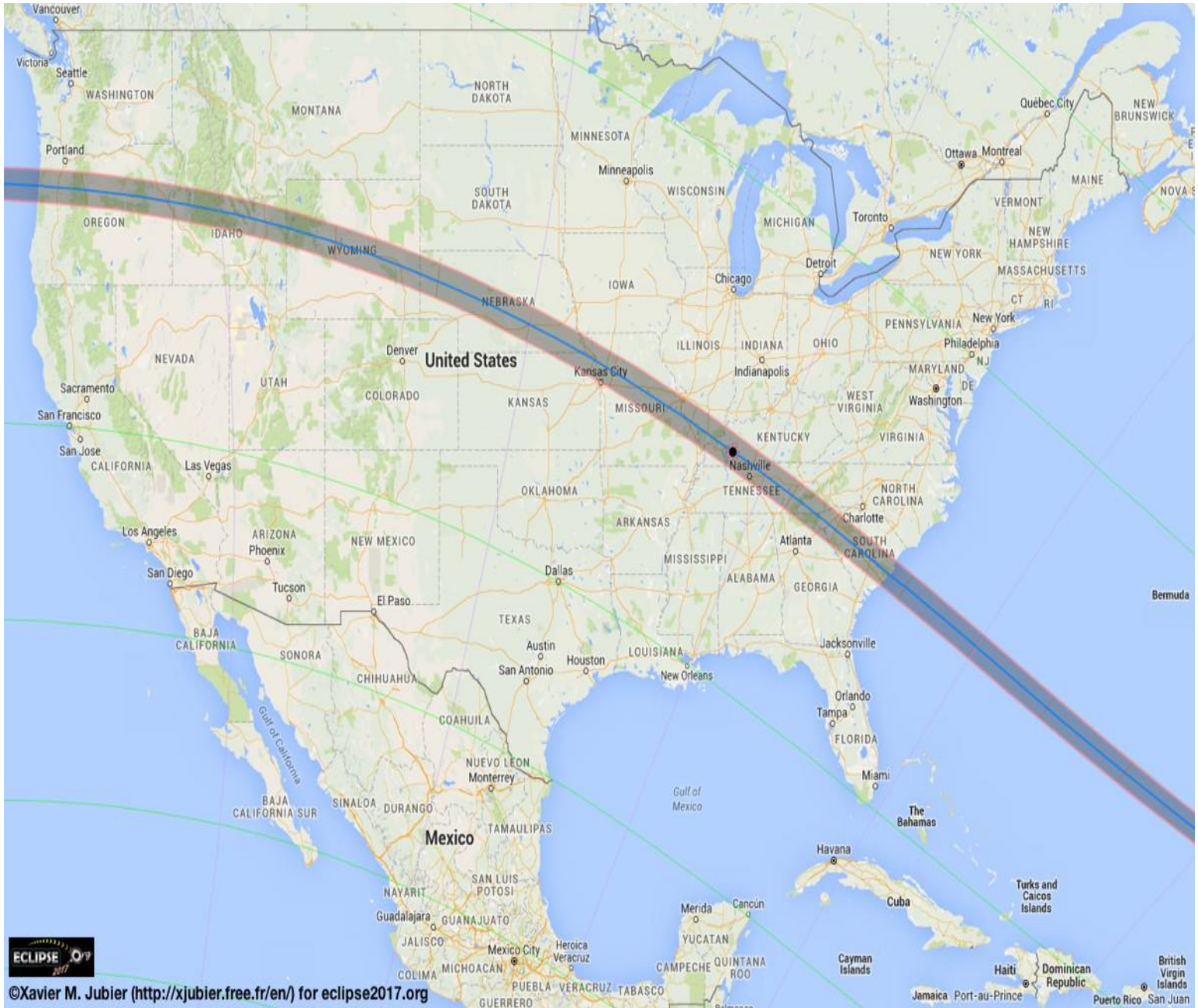


# Pairs Working Together

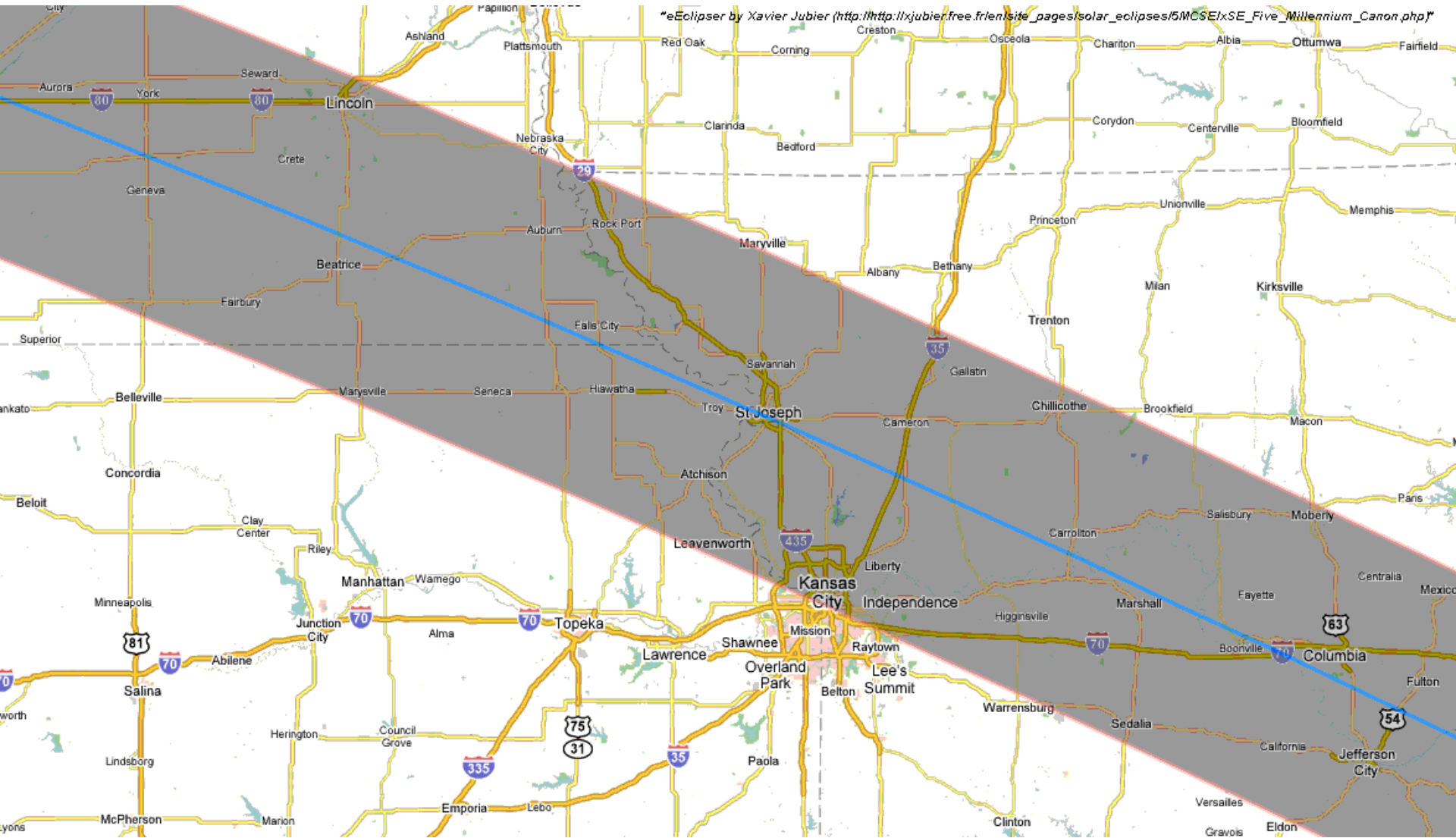
- Rovers & Fixed Stations on VHF, Jan, Jun, Aug, & Sep.
- Rovers & Fixed Stations on SHF.
- North Shore Rovers & Copper Harbor / Canada on SHF.
- Get on the air and turn in a log.

Questions ?





©Xavier M. Jubier (<http://xjubier.free.fr/en/>) for eclipse2017.org



Graphic from: <http://www.eclipse2017.org/2017/maps.htm>