

The Solar Eclipse QSO Party — Are You Ready?

From 1400 – 2200 UTC on August 21, 2017, hams will have the Sun's shadow in their sights.

Ward Silver, NØAX

The objective of the Solar Eclipse QSO Party (SEQP) is to flood the airwaves with contacts, all measured by the automated receiver networks of the Reverse Beacon Network, PSKReporter, and WSPRNet. When those observations are combined with the logs from individual stations, the result will be one of the largest ionospheric experiments ever performed. Here's how hams can have a starring role.

Start by taking the day off on Monday, August 21. The SEQP starts well before the eclipse begins on the western coast of Oregon. Begin making contacts right away to establish what the bands are like before the shadow starts digging a trench through the ionization "up there." As the penumbra starts cutting into the solar disc, operate on lots of bands (multioperator, anyone?) or focus on a favorite. Even if the higher bands aren't too lively, be sure to cast some CQs there, because the network receivers will be looking for signals, and you can get bonus points for being spotted. That's certainly a first!

Be sure you have the latest version of



your logging software and that it can accept the signal report and grid locator. Hopefully, your software will support the SEQP — check before the big day. In a pinch,

you may be able to use software that supports the ARRL VHF+ contests.

Bonus Points

The SEQP features a long list of bonuses similar to Field Day.

- Operate during totality at your location: 100 points
- Operate outdoors: 100 points
- Operate in a public place: 100 points
- Provide detailed station information: 50 points each for antenna information, HFTA terrain profile, ground conductivity, and station ERP on each band
- Operate a wide-band automated receiver at your station: 50 points
- One point for being spotted in a grid outside your own during each hour, and on each band and mode — CQ SEQP!

What Happens Next

After we finish creating data, be sure to submit your log as described in the SEQP rules at www.hamsci.org/seqp. A group of researchers at Virginia Tech will process the data from each log and from all of the automated receiving networks. This will create the largest set of measurements from any amateur event ever.

The work begins in earnest once the data is in. The research community will go to work to validate their existing propagation models while looking for unexplained behaviors. As Isaac Asimov is reputed to have said, "The most exciting phrase to hear in science, the one that heralds new discoveries, is not 'Eureka' but 'That's funny...'"

Hams have been supporting scientific efforts since the earliest days of radio by doing things like keeping in touch with expeditions and making on-the-air measurements. The coming solar eclipse is the latest opportunity to participate in advancing our understanding of the world in which we live, and make a few contacts, too.

Eclipse Mob

The eclipse won't just affect the MF and HF bands, but the VLF bands, too. The Eclipse Mob group (www.hamsci.org/article/eclipsemob-low-frequency-effort) has a low-cost, easy-to-build receiver and smartphone app, so anyone can participate. No license is required, and observing can take place all year long.

How to Participate

The Solar Eclipse QSO Party runs from 1400 – 2200 UTC on August 21. Exchange a signal report and your six-character grid locator on 160 – 6 meters (not on 60, 30, 17, and 12 meters, please). You can work stations again after 10 minutes to make as many "observations" (contacts) as possible. CW, RTTY, and PSK31 are preferred because automated receiving networks will record the contacts, but contacts on any digital mode and phone are fine too. See www.hamsci.org/seqp for scoring information, bonus points, operating guidelines, and complete rules.

"You'll Put Your Eye Out!"

Sure, it's amazing, but don't look at the Sun directly, or through any kind of magnifying device — whether during an eclipse or not. You can find out how to watch safely at www.skyandtelescope.com/astronomy-news/observing-news/view-the-sun-safely. Solar observing is great at any time — why not try to spot a sunspot?

Learn more!

www.arrl.org/what-is-ham-radio