

FoEIS Events: Results for the 2023 SEQP and GSSC

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HamSCI Community

HamSCI Workshop

March 22, 2024

HamSCI Festivals of Eclipse Ionospheric Science



Graphic by Vikki Lawhon

FoEIS is the umbrella event used to promote all of HamSCI's eclipse related activities

- Solar Eclipse QSO Party (SEQP)
- Gladstone Signal Spotting Challenge (GSSC)



Graphic by Spencer Gunning

Ham Jargon: QSO Party

- **QSO** : A two-way information exchange between ham radio operators
- **QSO Party**: Hundreds of hams having QSOs simultaneously, honoring a person, place or event
- From HamSCI's perspective, QSOs —> Data
- Each QSO's metadata contains valuable information: Transmitter and receiver location, time and frequency
- QSO records can be compared to other datasets for research purposes, such as station locations vs eclipse path
- 14 October, 2023: Many thousands of data points - a resounding success!



Angel Vasquez, WP3R, NRAO, HamSCI member, well-known contester

SEQP by the Numbers - October 14, 2023

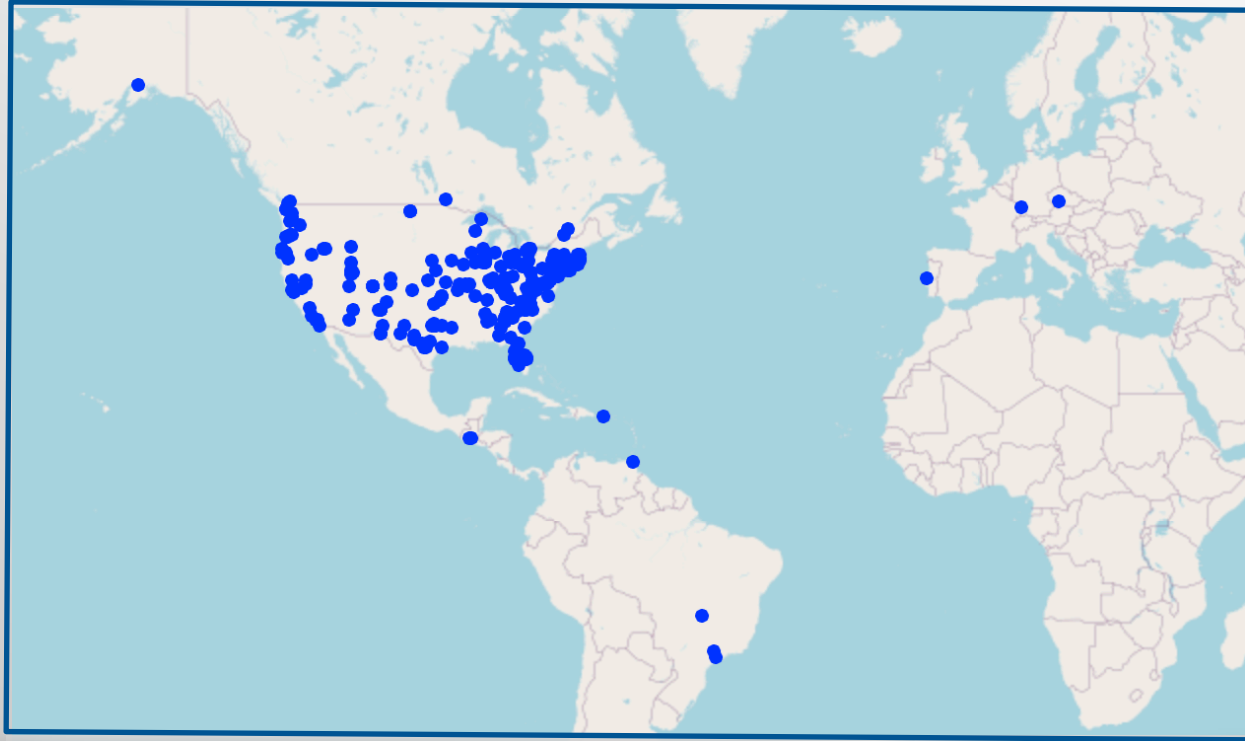
Participant's Log Data

Submitted Logs	220
Logged QSOs	10,960
Logged Unique Calls	4,617
Logged 4-Character Grid Squares*	937

Each participant is encouraged to maintain a computer log of all QSOs - and to submit their log to HamSCI after the event

*Maidenhead Grid Square = Geographic positional indicator.
The Earth's surface is divided into 32,400 'squares',

SEQP Logs Received from NA, SA and EU



Oct 2023 SEQP: Top Single Operators

Single-Operator	QSOs	Multipliers	Prelim Score
W0DTM (Travis)	209	166	69,388

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Oct 2023 SEQP: Top Single Operators

Single-Operator	QSOs	Multipliers	Prelim Score
WP3R (Angel)	742	220	163,240
N7RCS (Jim)	505	97	97,970
W0DTM (Travis)	209	166	69,388

Oct 2023 SEQP: Top Multi-Operator Groups

Multi-Operator	QSOs	Multipliers	Prelim Score
K0PZH (Univ of Iowa ARC)	384	185	74,185
W2NPT (Fairlawn ARC)	189	138	34,876
W2OW (Binghamton ARA)	78	65	6,665

GSSC

2023



GLADSTONE SIGNAL SPOTTING CHALLENGE

Gladstone Signal Spotting Challenge

- Employs digital modes called WSPR and FST4W - computer to computer communication protocols which may or may not involve a 'live' operator
- Each contact is recordable to a database - ideal for research purposes

Average search time over 1 searches = 0.3 sec
[498 spots] 1,056,658km 131,540 avgQ 24 Feb 2023 @ 1400 local

Table options... find duplicates callsign find call

wtf? stats charts map table home

1 | show search | saved | status -> [498] Round trip in 0.25 sec

Click: Date for utc/local • column label to sort • callsign for country info • mode number for mode name • right click callsign to view that spot on the map

Local (y-m-d)	TX	txGrid	RX	rxGrid	MHz	W	SNR	drift	km	Az°	mode	km/W	spotQ	version
2023-02-24 13:58	G4LCM	IO81xv	DL9GCW	JN48vc	10.140248	0.2	-26	-1	944	112	2	4720	1311	2.5.4
2023-02-24 13:58	G4ZFC	IO90ir	G4SDL	IO83tk	5.288792	1	-8	0	310	347	2	310	241	2.2.159
2023-02-24 13:58	W8AC	EN91jm	VE7AFZ	CN89mg	28.126044	5	-29	0	3326	299	2	665	129	2.6.1
2023-02-24 13:58	W9VW	EM79	WB6JHI	CM97af	28.125997	0.2	-25	3	3206	277	2	16030	4898	2.2.0-rc15
2023-02-24 13:58	WA9WTK	FN42fk	WB6JHI	CM97af	28.126047	10	-12	3	4280	280	2	428	285	2.2.0-rc15
2023-02-24 13:58	N9NIC	EN55fx	VE7AFZ	CN89mg	28.126013	0.2	-32	0	2510	291	2	12550	1394	2.6.1
2023-02-24 13:58	W0VI	EN35	WB6JHI	CM97af	28.126062	0.2	-27	3	2565	259	2	12825	3206	2.2.0-rc15
2023-02-24 13:56	W8RBW	EN72qr	NI0L	DM79mo	24.926061	0.2	-5	0	1733	265	2	8665	7462	2.5.0
2023-02-24 13:56	DK3BI	JN49gu	HA3MG	JN96db	7.040102	0.2	-11	0	839	116	2	4195	2913	2.1.2
2023-02-24 13:56	G4USI/W	IO81ia	DL4RU	JN69cr	3.570115	0.2	-17	0	1106	91	2	5530	2919	1.4A Kiwi
2023-02-24 13:56	N9UTG	EN90jd	NI0L	DM79mo	24.926062	0.2	-5	0	1733	265	2	8665	7462	2.5.0

<http://wspr.rocks>

Global Databases

14 Oct 2023, 1200-2200UTC

Database/Site	Raw Record Count
Wspr.live	~3,000,000
reversebeacon.net	~417,000
PSKreporter.info	>100,000,000

Many thanks to the creators and maintainers of these databases and extraction tools!

GSSC Entrants: 68

Countries: 12

Canada
Japan
USA
Costa Rica



Norway
Scotland
Switzerland
Portugal
Reunion Island

Paraguay

Brazil

Australia

Oct 2023 GSSC: Submitted Entries

Receiving Totals	
FT4/8*	238,539
WSPR	112,110
CW (Morse code)	3,929
Transmitting Totals	
WSPR	342,908
FST4W	18,135

*FT4/8 was part of the 2023 GSSC. For 2024, FT4/8 data will only be recognized in the SEQP.

Oct 2023 GSSC: Top Scorers*

Top Receiving Stations	Reports
HB9TMC (Stefan)	245,885
W1WRA (Bill)	20,406
Top Transmitting Stations	
KG5JEN (Richard)	67,089
K6XX (Bob)	39,695

*For simplicity's sake, these are *mixed results*, combining WSPR, FST4W and FT4/8 scores. Multipliers not included. Visit hamsci.org/foeis-results for detailed breakdowns.

Credits

Events like the SEQP and GSSC don't happen without significant volunteer efforts

Ed Efchak, WX2R: HamSCI's Public Information Officer

McKenzie Denton, KO4GLN: Publicity, Social Media

Adarsh Pashikanti, KN6VIS: SEQP log scoring analysis and graphics

Weekly SEQP Telcon attendees, many of whom authored articles or took the HamSCI FoEIS message 'on the road', speaking to clubs and organizations around the US and Canada.

'Thank You' to our partners:



8 April 2024 - Transmit, Listen, Contribute



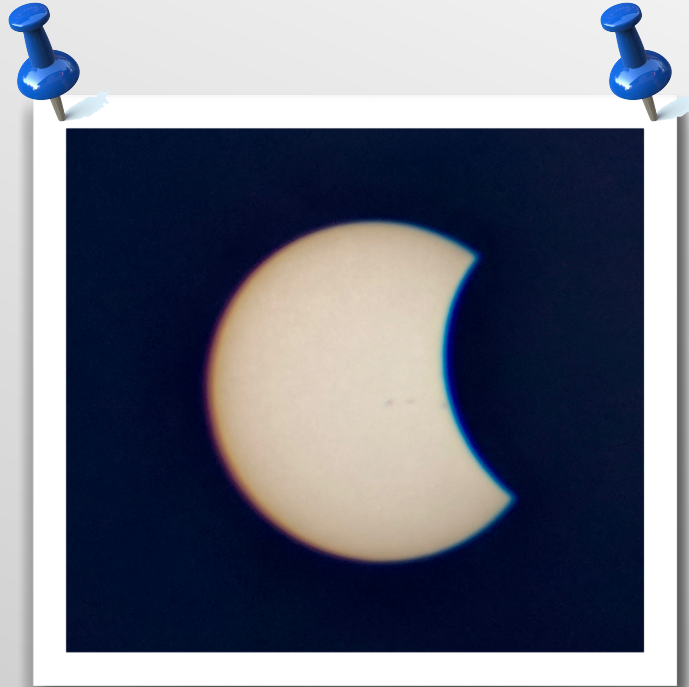
hamsci.org/eclipse

73!

(Ham radio jargon for 'Best Wishes')



Questions?



August, 2017 solar eclipse photo: Cleveland, OH