

Technician License
Approved

VHF DXing 6 & 2 meters.

Jim @ K5ND

K5ND.RADIO

Overview



VHF Possibilities

Propagation

Equipment

Antennas

Software

Online Resources

Paper Chase

Contesting

K5ND

Writer — Heathkit, 73, CQ, QST, NCJ

Blogger — www.K5ND.net

Scouter — Radio Scouting Committee

VHF Contester

Grid Chaser

Jim Wilson





Magic Bands
with
Super Results
from
Average Stations

VHF Ops W5ZN

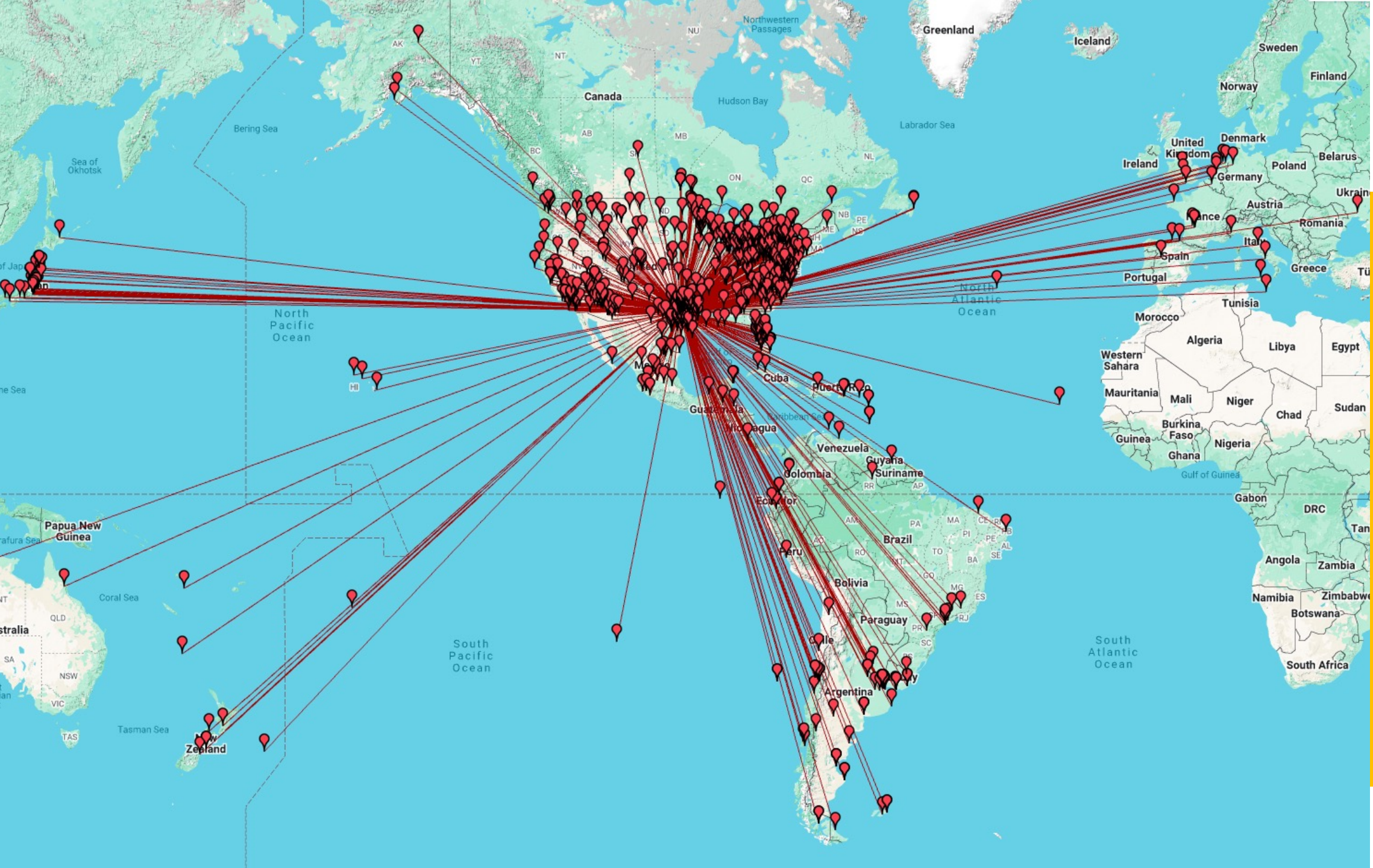


K5ND Ham Shack

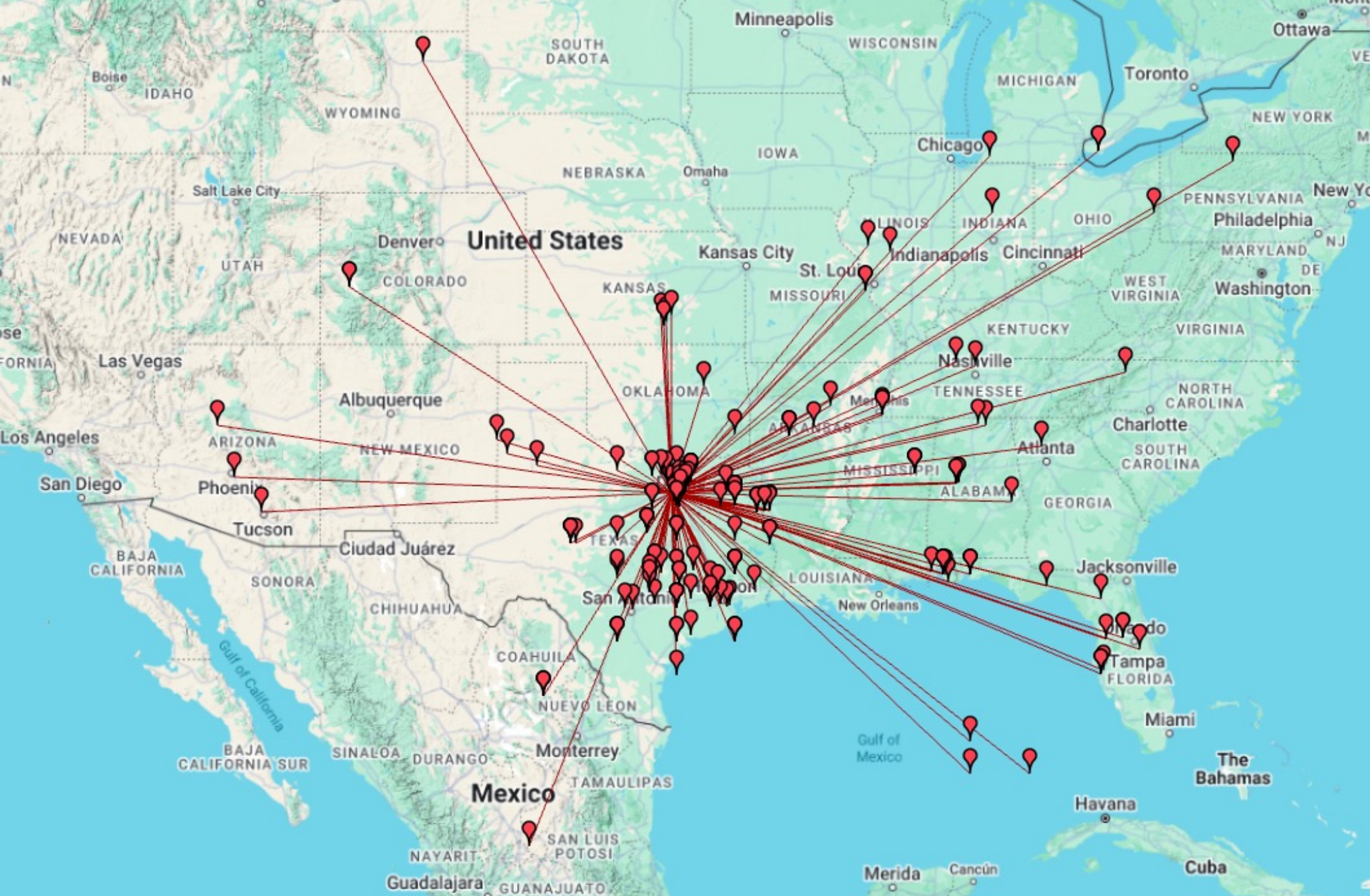


K5ND Backyard

25' Pushup Mast
2 m 9-element
6 m 5-element

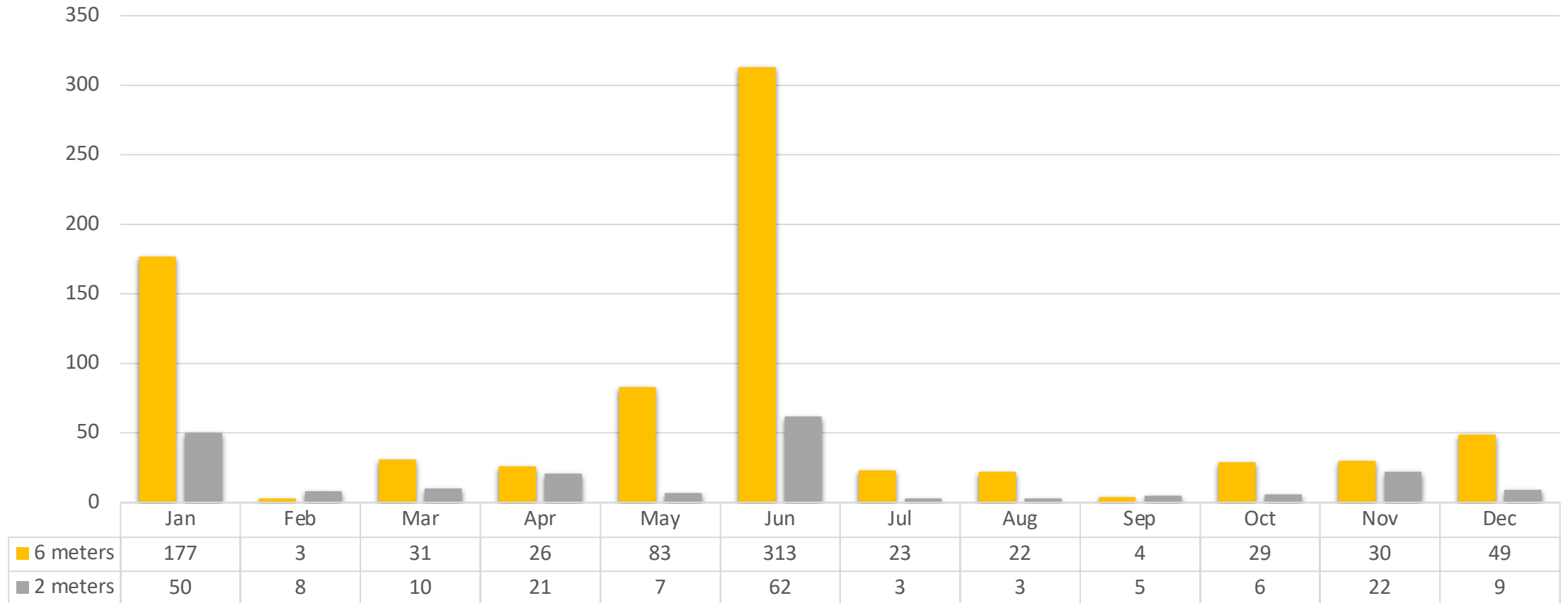


6 Meter QSOs in 2024



2 Meter QSOs 2024

QSO Count 2024



Propagation

6 Meters

Sporadic E

Meteor Scatter

Trans-Equatorial (TEP)

F2 Propagation

Aurora

2 Meters

Tropospheric Scatter

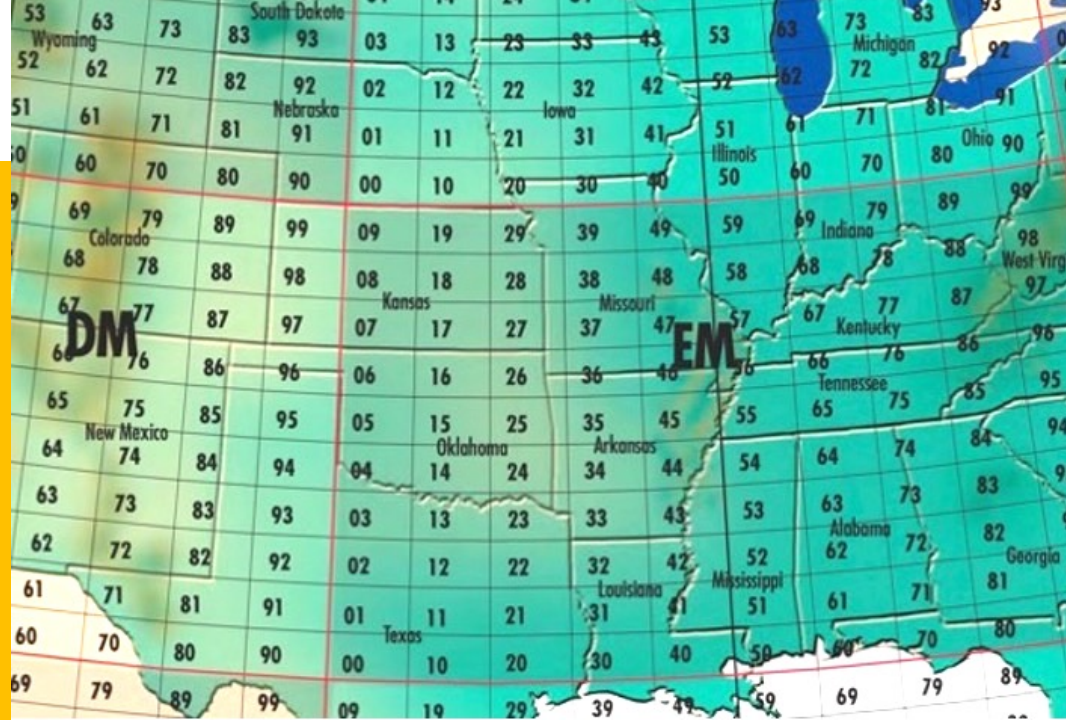
Meteor Scatter

Sporadic E

Aurora

M A G I C B a n d

M a i d e n h e a d



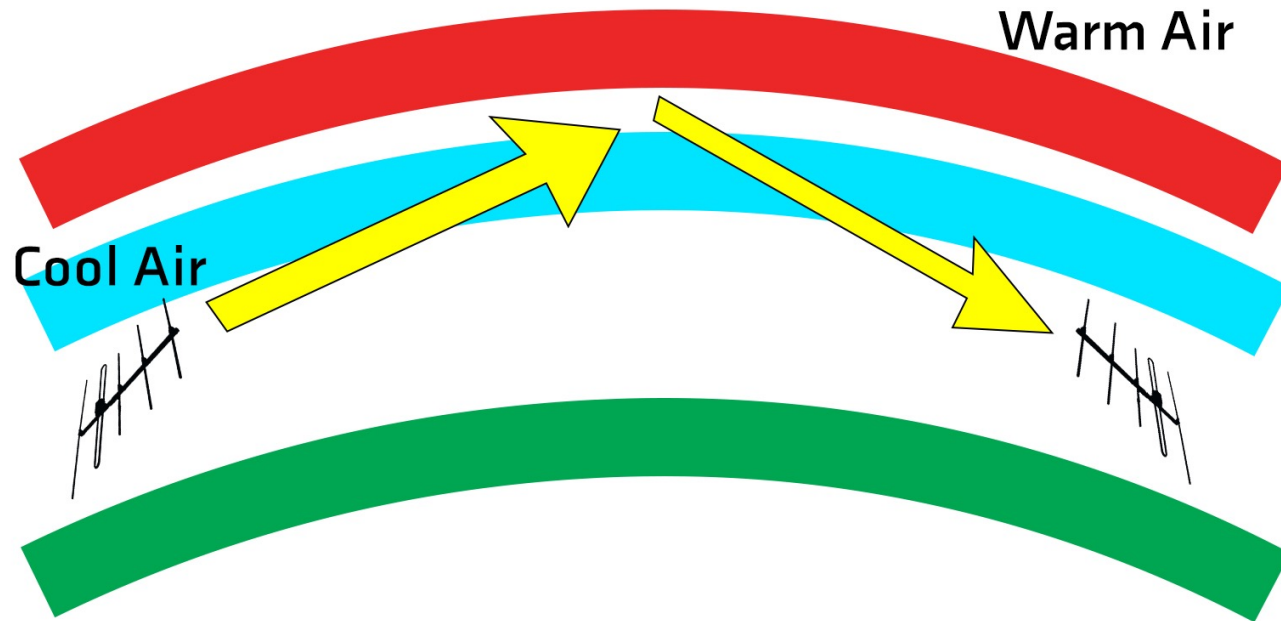
Chasing Grids

1 Degree Latitude x 2 Degrees Longitude

Roughly 70 miles x 100 miles in USA

Grid Fields = EM

Grid Squares = 12



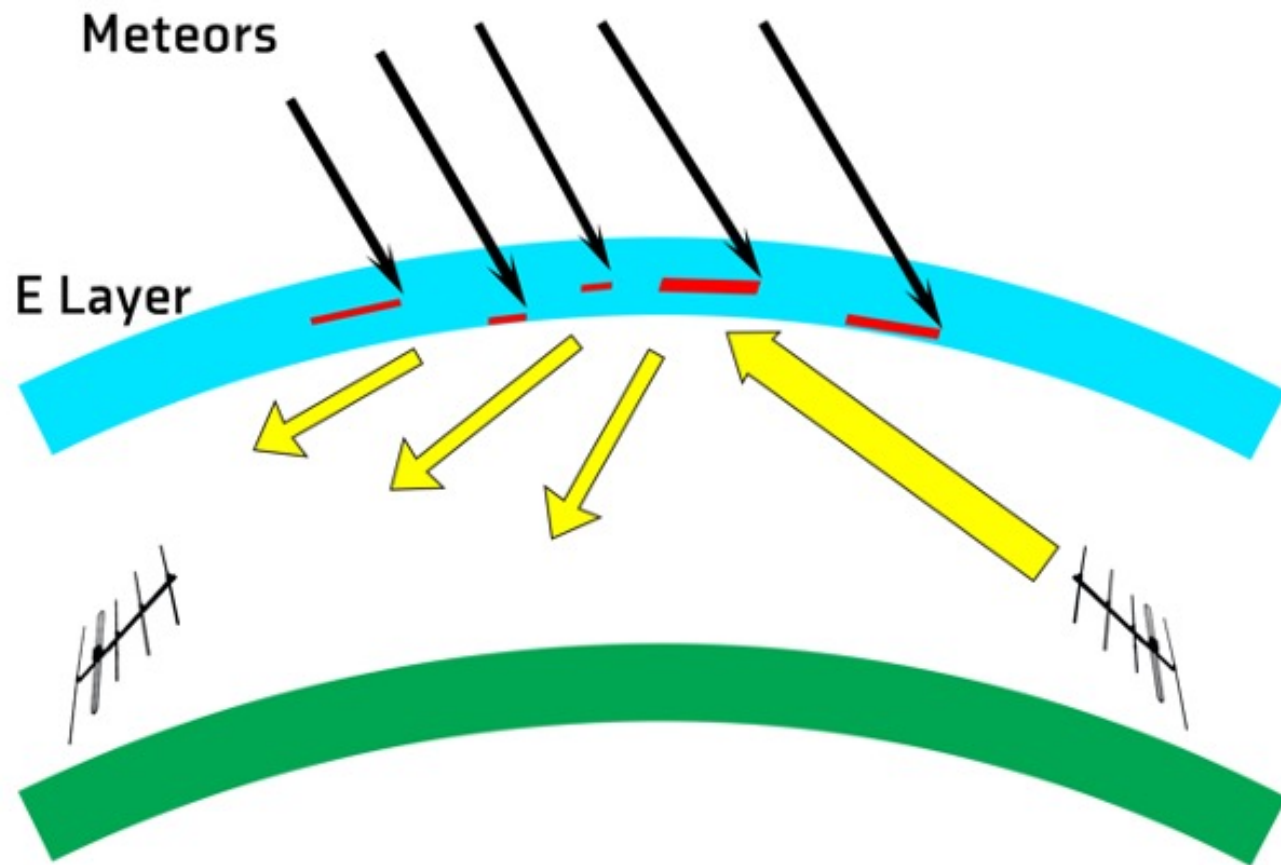
Tropospheric Scatter - Ducting

Thermal Inversions

Morning Often Best

Troposphere 14 to 18 km

Ionosphere 90 to 350 km



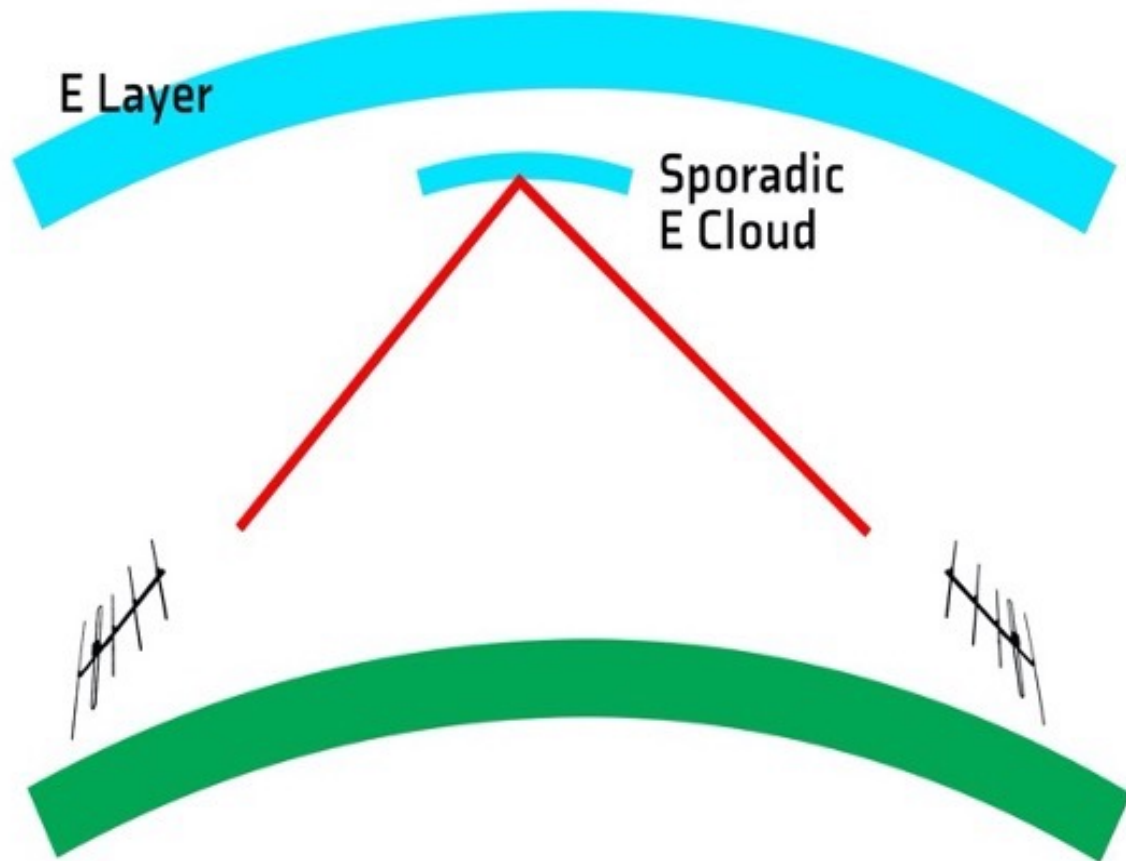
Meteor Scatter

Morning best time

Max distance 1300 miles

Meteor ionized trails

Showers are optimum



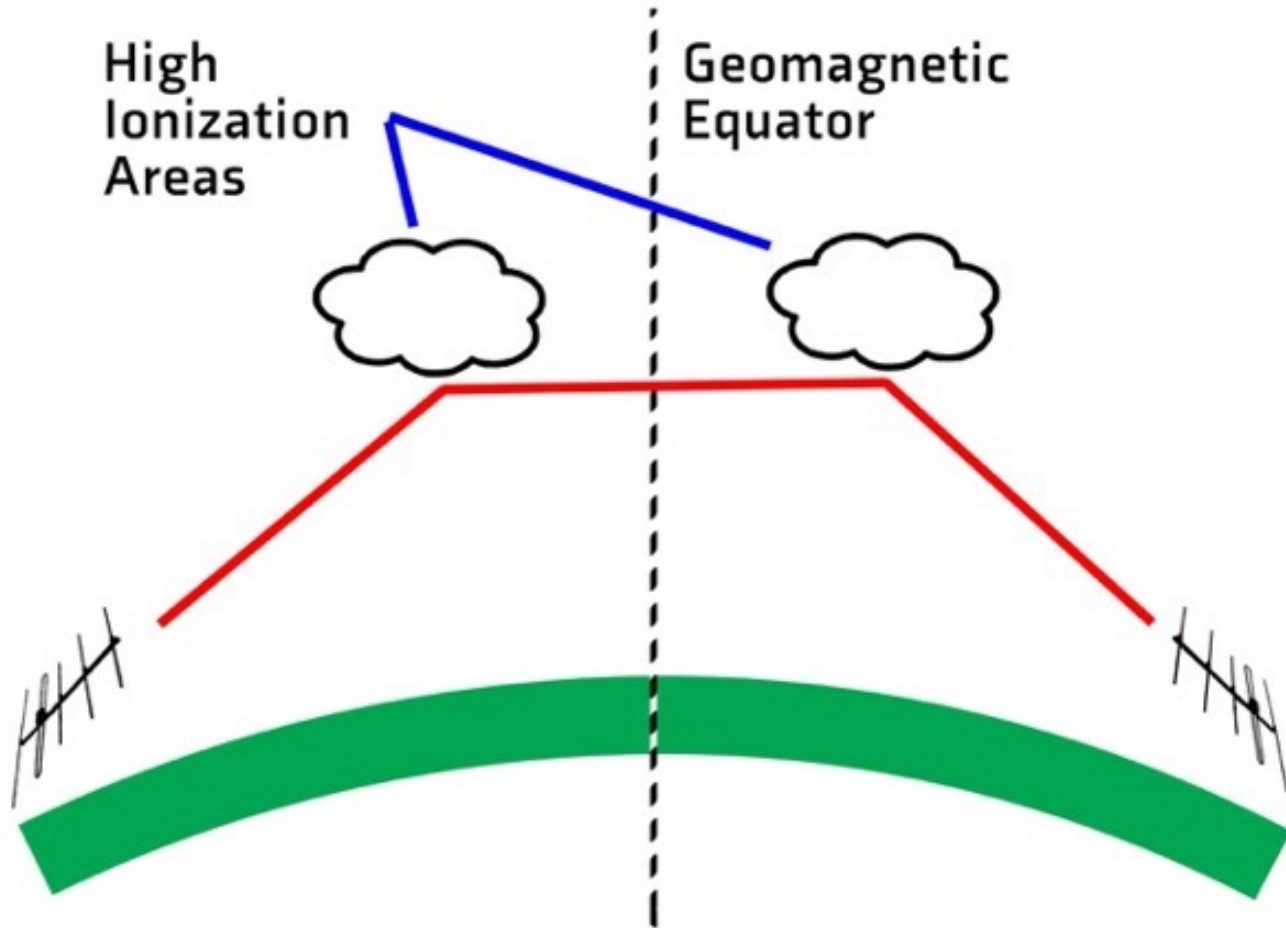
Sporadic E

Summer Months

First bounce max 1500 miles

Multiple bounces possible

Can't be predicted



Trans-equatorial

Along the Geomagnetic Equator

Uses the F2 Layer

USA to South America

USA to South Pacific

March-April and December-January



Trans-equatorial

Along the Geomagnetic Equator

Uses the F2 Layer

USA to South America

USA to South Pacific

March-April and December-January

6 meters

HF + 6 Meter Rig is Perfect

50 to 100 watts is fine

Good Coax, LMR400 or RG8

Try What You Have

M O S T H F R I G S



2 meters

HF and Up Rig

VHF-UHF Rigs

Transverters

50 to 100 watts is fine

Good Coax, LMR400 or RG8



6 Meters

Omni Angle

Stressed Moxon

3-Element M2-SS

5-Element Directive Systems



2 Meters

Omni Angle

Cheap Yagis

Diamond 10-Element Yagi

M2 9-Element Yagi



WSJT-X FT8

MSK144

Q65

WSJT-X

WSJT-X improved

JTDX

MSHV

The screenshot shows the WSJT-X software interface with the following components:

- Band Activity Table:**

UTC	dB	DT	Freq	Message
-----				2024-11-01 - 18:20:45 UTC - 6m - FT8 -----
182045	-10	0.2	1058	~ VA7XU N6AR EL98 [1007 mi
-----				2024-11-01 - 18:22:15 UTC - 6m - FT8 -----
182215	-16	-0.1	2298	~ CQ KG6PH EM13 U.S.A. [4
-----				2024-11-01 - 18:22:45 UTC - 6m - FT8 -----
182245	-18	-0.1	2305	~ CQ KG6PH EM13 U.S.A. [4
-----				2024-11-01 - 18:23:45 UTC - 6m - FT8 -----
182345	-17	-0.1	2302	~ CQ KG6PH EM13 U.S.A. [4
-----				2024-11-01 - 18:24:45 UTC - 6m - FT8 -----
182445	-18	0.1	2396	~ KC1BB KL2R RR73
-----				2024-11-01 - 18:25:45 UTC - 6m - FT8 -----
182545	-18	-0.2	2293	~ CQ KG6PH EM13 U.S.A. [4
-----				2024-11-01 - 18:26:15 UTC - 6m - FT8 -----
182615	-19	0.1	2394	~ K5ND KL2R -13 a3
-----				2024-11-01 - 18:26:45 UTC - 6m - FT8 -----
182645	-16	-0.2	2300	~ CQ KG6PH EM13 U.S.A. [4
182645	-18	0.1	2393	~ K5ND KL2R RR73
- Rx Frequency Table:**

UTC	dB	DT	Freq	Message
182445	-18	0.1	2396	~ KC1BB KL2R RR73
182504	Tx		576	~ KL2R K5ND EM12
182530	Tx		2188	~ KL2R K5ND EM12
182600	Tx		2188	~ KL2R K5ND EM12
182615	-19	0.1	2394	~ K5ND KL2R -13 a3
182630	Tx		2188	~ KL2R K5ND R-19
182645	-18	0.1	2393	~ K5ND KL2R RR73
182700	Tx		2188	~ KL2R K5ND 73
- Control Panel:**
 - Buttons: CQ only, BP, Log QSO, Stop, Monitor, Erase, Decode, Enable Tx, Halt Tx, Tune, Menus
 - Mode: 6m
 - Frequency: 50.313 500
 - TX Settings: Tx 2188 Hz, Hold Tx Freq
 - RX Settings: Rx 2393 Hz, Report -18
 - Auto Seq: checked
 - CQ: Max dB
 - DX Call: KL2R, DX Grid: BP64KU
 - Az: 332, 3035 mi
 - Lookup, Add, Ignore buttons
 - Auto Seq: checked
 - CQ: Max dB
- Message Queue:**
 - Generate Std Msgs
 - Next, Now
 - KL2R K5ND EM12 (Tx 1)
 - KL2R K5ND -18 (Tx 2)
 - KL2R K5ND R-18 (Tx 3)
 - KL2R K5ND RRR (Tx 4)
 - KL2R K5ND 73 (Tx 5)
 - CQ K5ND EM12 (Tx 6)
- Status Bar:** Tx: KL2R K5ND 73, FT8, 2, Last Tx: KL2R K5ND R-19

Logging Program

Connect with WSJT-X

Alert Program

Find new grids, DXCC, etc.

Time Sync

Check time.is or time.gov

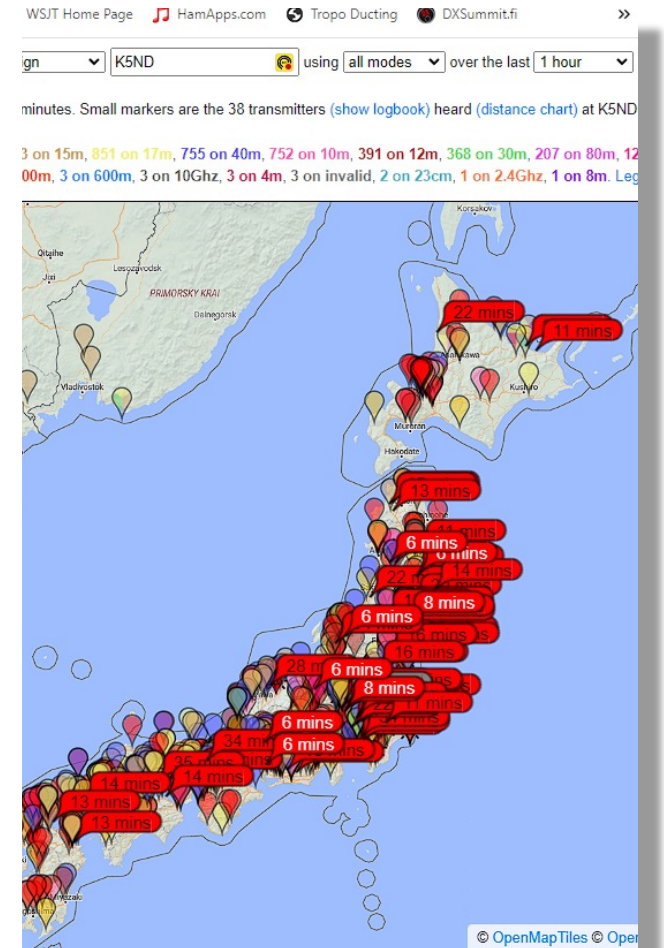
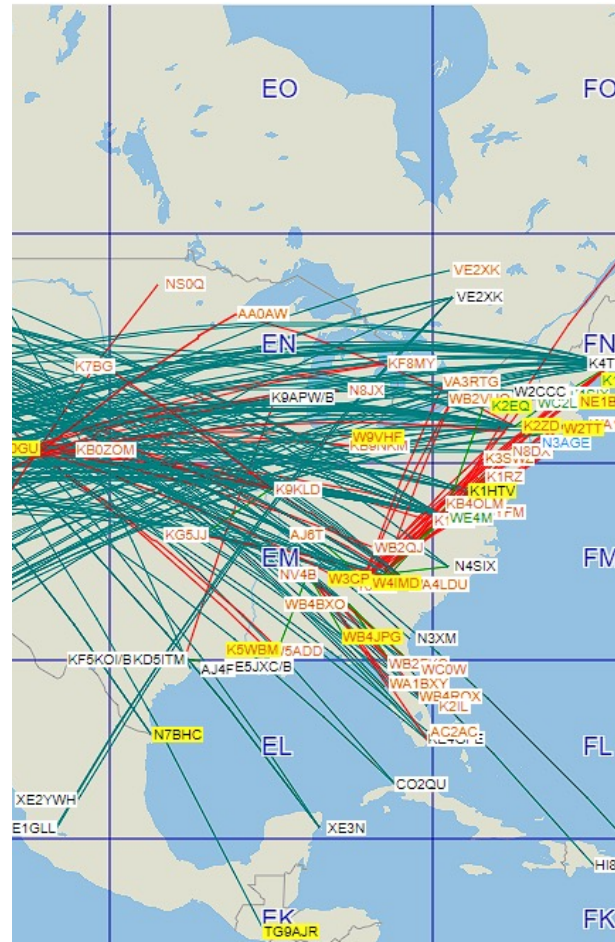
MeinbergNTP or JTsync

Supporting Software

Resources

DXmaps.com

PSKreporter



Realtime Chatrooms

[PingJockey.net](https://pingjockey.net)

[ON4KST.com](https://on4kst.com)

Slack VHF Chat

Propagation Insight

[VHF.dxview.org](https://vhf.dxview.org)

[Dxinfocentre.com/tropo.html](https://dxinfocentre.com/tropo.html)

[Prop.kc2g.com](https://prop.kc2g.com)

Virgo Meteor Scatter App

Online Assistance

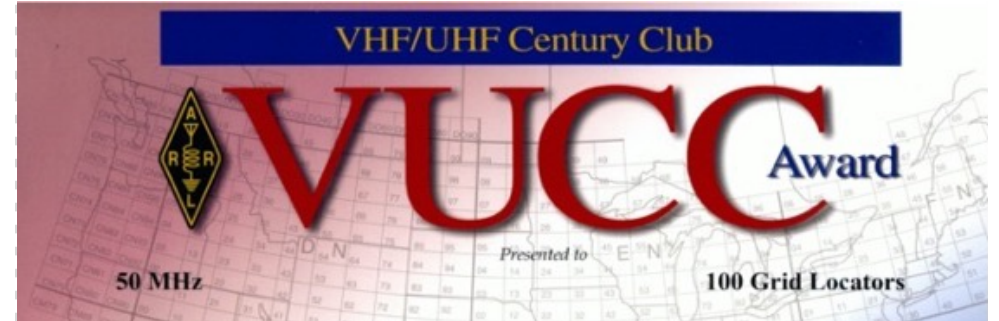
Awards

VUCC – 100 grids

Worked All States

DXCC – 100 countries

FFMA – 488 grids



High Activity New Grids Rovers

ARRL – January, June,
September

CQ WW VHF in July
SSB/CW weekend
Digital weekend

Spring/Fall Sprints



More Information

K5ND.net

The screenshot shows the K5ND.RADIO website with a blue header and navigation menu. The main content area is divided into three columns. The left column, 'Featured Posts', lists several articles with small thumbnail images and comment counts. The middle column, 'Most Popular Post', features a large image of a sunset with a radio antenna and a title 'Six Meter Antennas — I've Tried a Few'. The right column, 'Books and Guides', includes a blue button for 'Magic Band Revealed — Free eBook' and a 'Six Meter DX Guide' with a map thumbnail.

K5ND.RADIO f in X v

ABOUT K5ND ▾ AMATEUR RADIO ▾ FREELANCE WRITING ▾ CONTACT ▾

Featured Posts

Six Meter Dipole
Amateur Radio | Jim Wilson | 6-August-2014 | 3
I have been giving thought to setting up a six meter antenna with horizontal polarization. Plus, it would be nice if it were omnidirectional...

Stressed Moxon — Ingeniously Elegant
Antennas | Jim Wilson | 4-September-2014 | 6

M2 Eggbeater Sat Pack
Antennas | Jim Wilson | 29-December-2018 | 14

Meteor Scatter Propagation: How it Works & Getting on the Air
Meteor Scatter | Jim Wilson | 14-April-2023 | 2

WSJT-X and the Q65 mode for 6 meters and Up
VHF-UHF | Jim Wilson | 11-March-2023 | 1

New Rig in the Ham Shack — Icom IC-7100
Radio Contesting | Jim Wilson | 11-May-2023 | 1

Most Popular Post

Six Meter Antennas — I've Tried a Few
Antennas are always fascinating, with lots and lots of options from homebrew to buy it off the shelf. Then there's six meters, the Magic...
8-June-2020

Books and Guides

↓ **Magic Band Revealed — Free eBook**

Six Meter DX Guide
Guide to 6 Meter DXing — Getting Started on the Magic Band
Jim Wilson | 18-November-2020 | 14
Have you ever wondered about the "Magic" of Six Meters? After all, you've probably pressed the six meter button on your rig and failed to find any magic or even any other stations. If that's the case, you've identified the "tragic" of the band. But without tragic there would...



Magic Band Revealed -
eBook

Six Meter Antennas

Guide to VHF Contesting

Thanks.

Jim @ K5ND

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