

# AMATEUR RADIO CLUB OF COLUMBIA COUNTY, INC.



THE ARCCC, INC. WELCOMES YOU!

The meeting will begin at 7 PM

# AMATEUR RADIO CLUB OF COLUMBIA COUNTY, INC.



GENERAL MEETING  
MEETING #124  
Tuesday, June 6, 2023  
7 PM



**INVOCATION**



# MEETING AGENDA

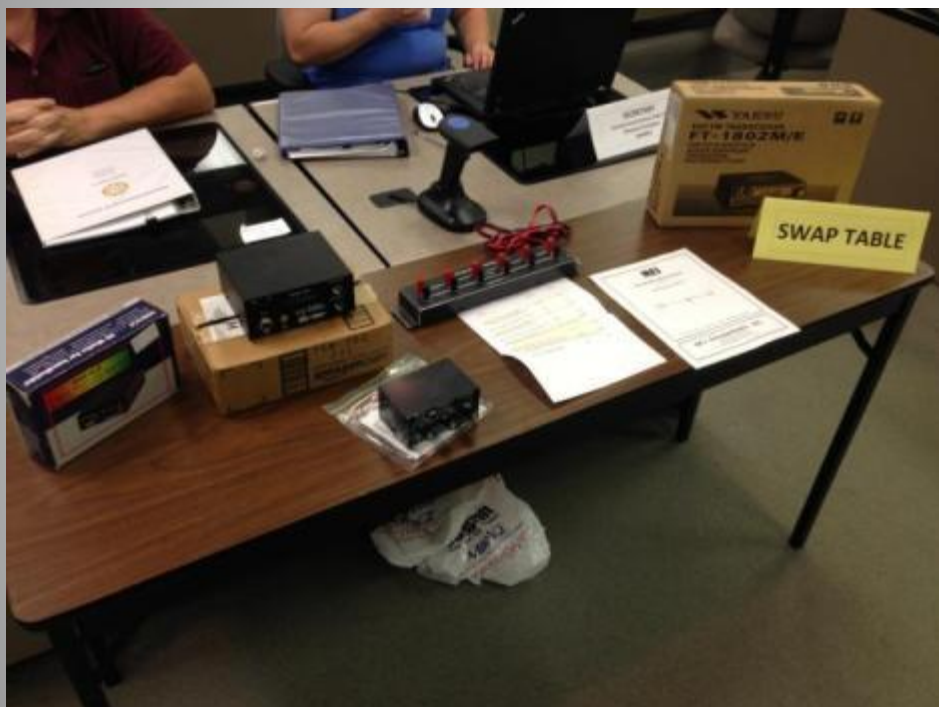
- Welcome & Introductions
- Presentation: Robert McManus (KN4KQJ)
- Membership Applications
- Monthly Reports
- Upcoming Events
- Business Items
- Committee Updates
- Amateur Radio Club of Augusta
- North Augusta Belvedere Radio Club
- East Central/Columbia County ARES
- AmRRON
- Review Motions and Assignments
- Adjourn



# SWAP TABLE

Now at

<https://arcccinc.groups.io/g/swapsellortrade/topics>





# Welcome and Introductions

- Please Sign In on the Attendance Log
  - Please PRINT Legibly
- Introductions
  - QUICKLY Go Around the Room and Provide Your Name and Call Sign





# Presentation

## NVIS Antennas



Robert McManus (KN4KQJ)

# Antenna Experiments

Or

How I Stay Out of the Bars

Robert McManus

Copyright Retained 2023

Any reuse or sharing of this information without the written permission of the author is prohibited.



## Background:

- There are many that encourage antennas at heights that are prohibitive for most hams.
  - $\frac{1}{2}$  Wavelength is the norm in publications.
  - $\frac{1}{2}$  80 meters is 131 feet.
  - $\frac{1}{2}$  20 meters is 33 feet.
- Much of my radio use is in the field, on the go, where these heights are unrealistic.



### Primary Objective:

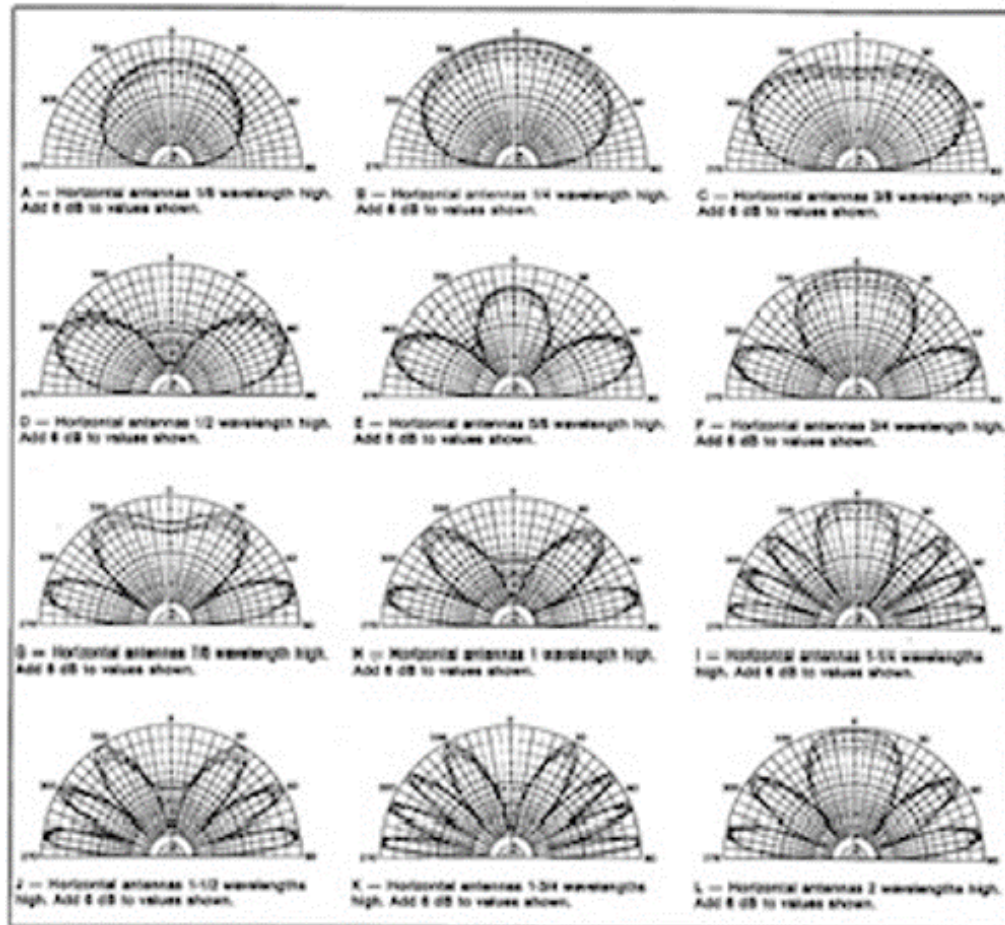
Test the effectiveness of antennas at heights less than  $\frac{1}{2}$  wavelength.

### Secondary objective:

Explore the ability of an antenna to exhibit NVIS properties

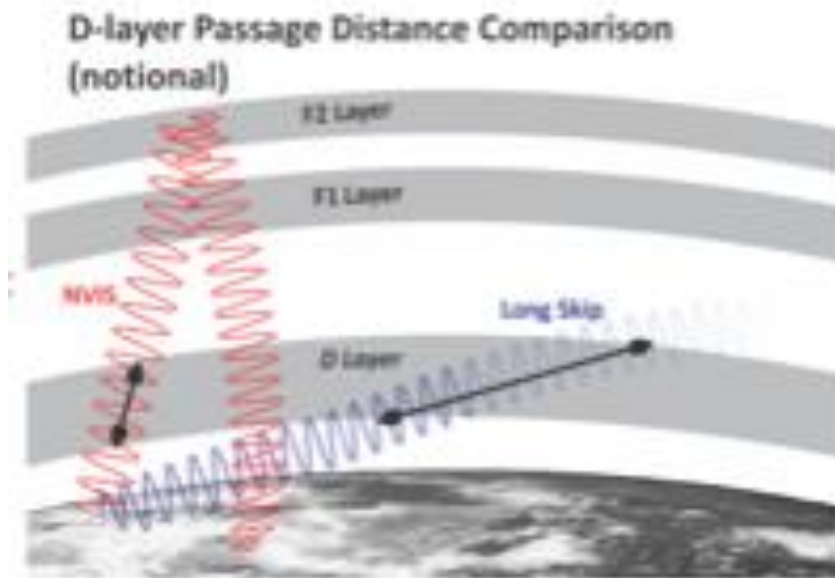
### Real Objective:

Stay out of the bars



Source: The Effects of Real Ground on Antennas, James C. Rautio, Figure 3.

## NVIS (Near Vertical Incident Skywave)



### Flattop Configuration



### Mildly Inverted V Configuration

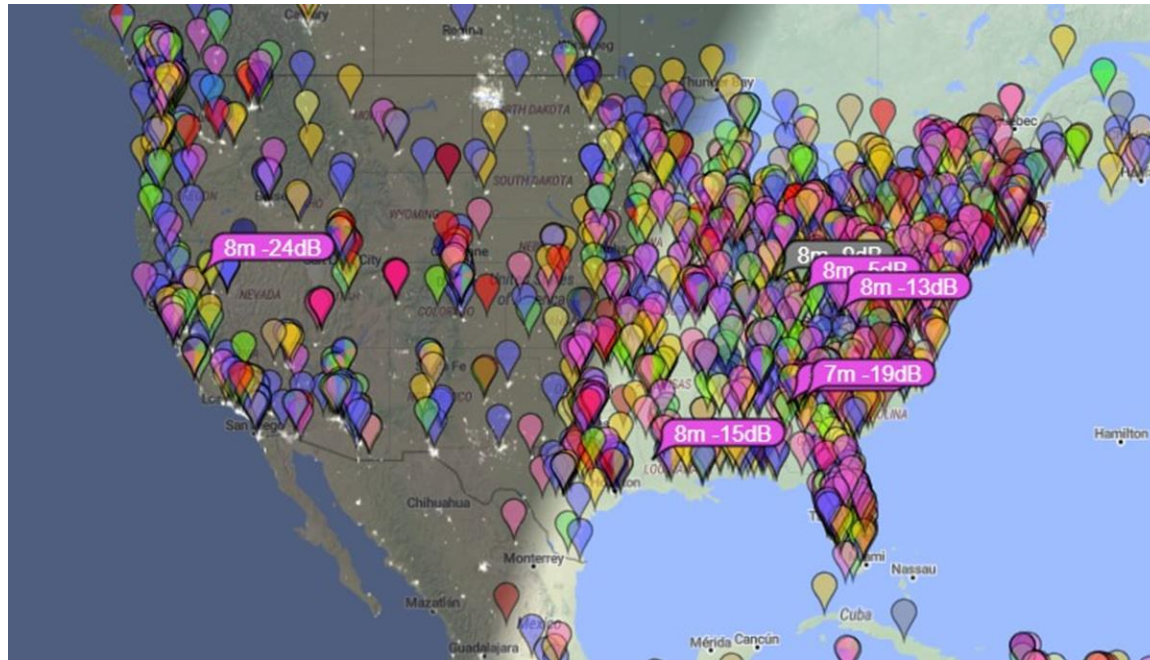


## Test Bands, Equipment, and Conditions:

- 80m, 40m, 30m, 20m, 15m, and 10m sampled
- Two identical EFHW antennas
  - 135', 49:1 Transformers, similar SWR on all bands, both E-W orientation
  - Reference antenna at 52 feet
  - Test antenna at 8 feet, 5 feet, and 42 inches
- All test at 20 watts, FT8, Three (3) transmit cycles
- PSK Reporter used to collect propagation information
  - Testing on each band on both antennas within 10 minutes
  - Used 10 minutes for collection window
- Testing contained more science than the mask mandate

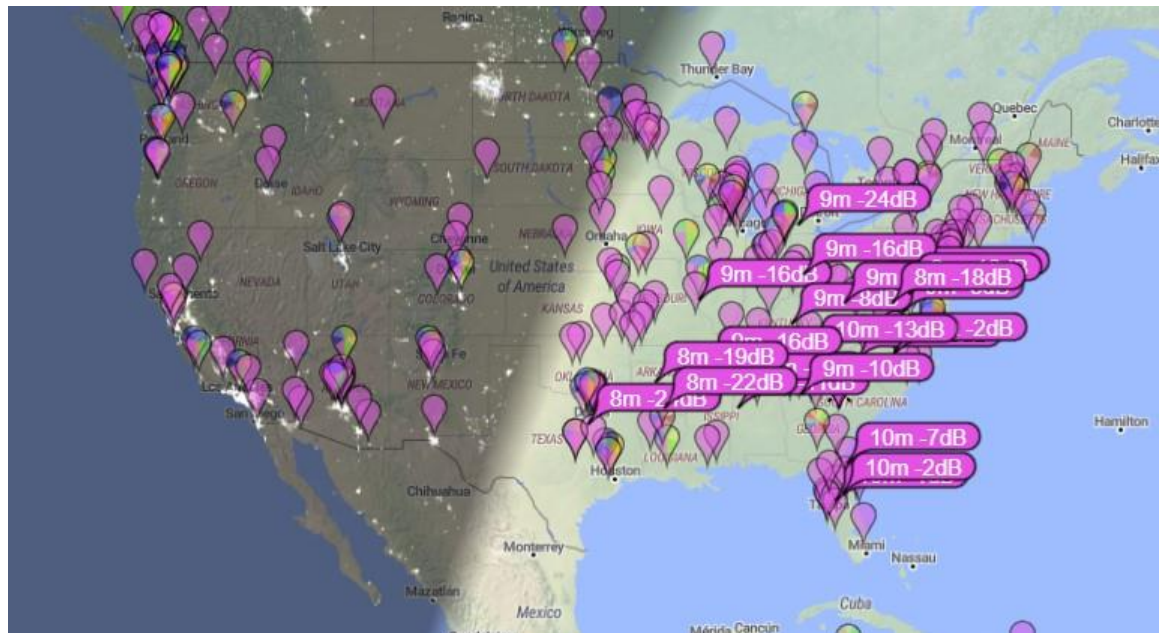


80 meters, 52 feet antenna height



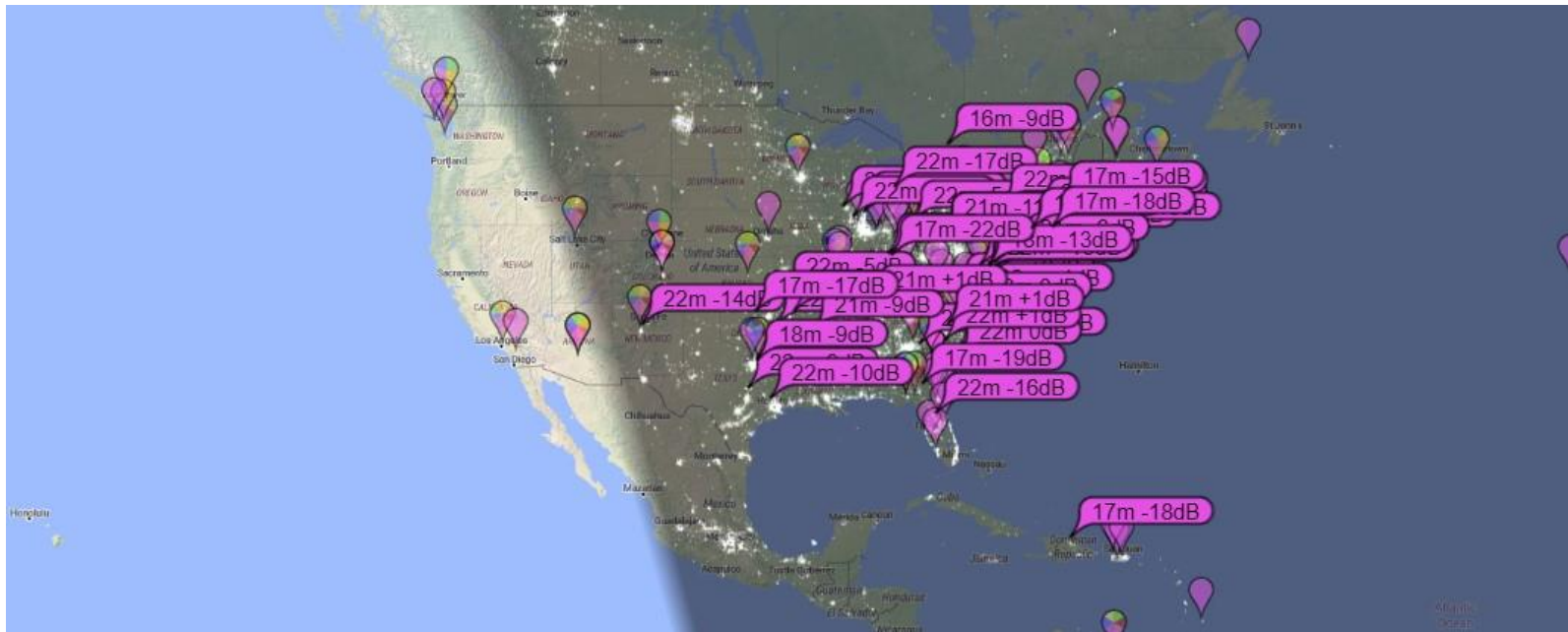
8 reports, 153 miles to 2177 miles  
-24dB

80 meters, 8 feet antenna height



29 Reports, 146 miles to 892 miles  
-24dB

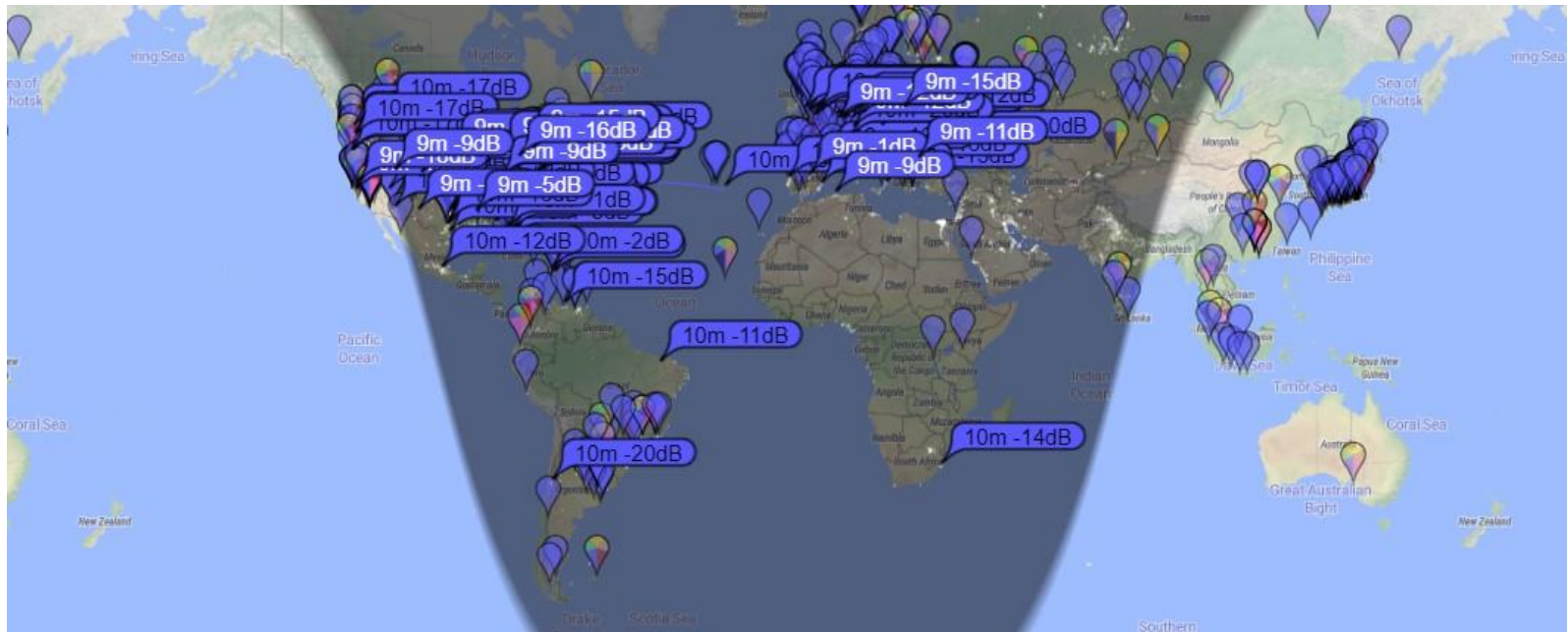
80 meters, 52 feet antenna height



65 Reports, 136 miles to 3979  
miles  
-18dB

46 Reports, 74 miles to 1015 miles  
-18dB

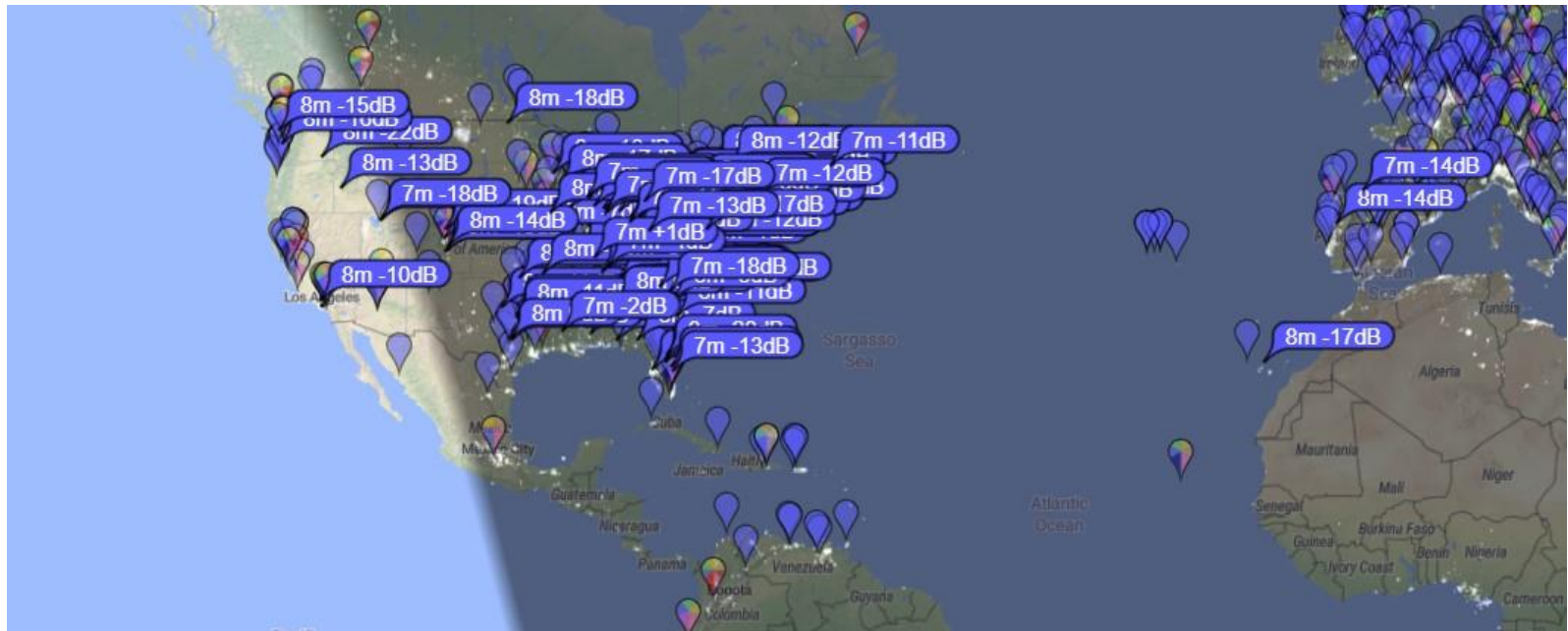
40 meters, 52 feet antenna height



114 reports, 156 miles to 8548 miles  
-14dB



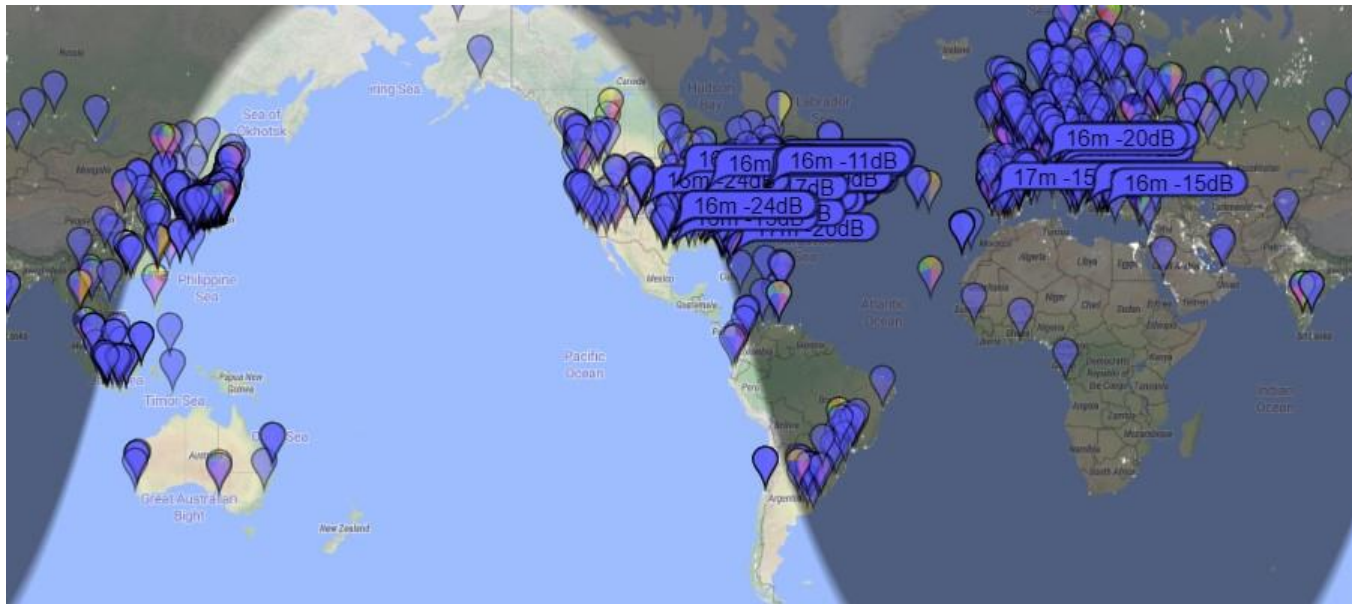
40 meters, 5 feet antenna height



129 Reports, 101 miles to 4058 miles  
-14dB

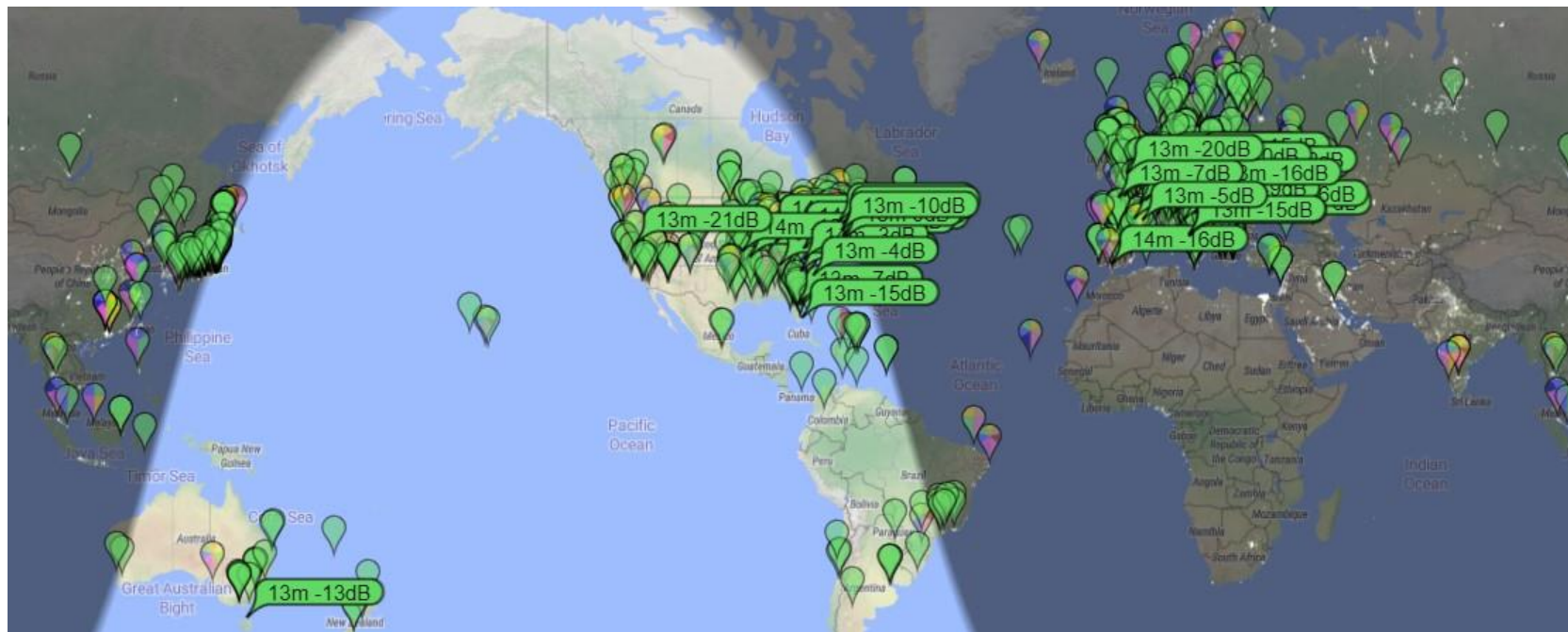


40 meters, 42 inch antenna height



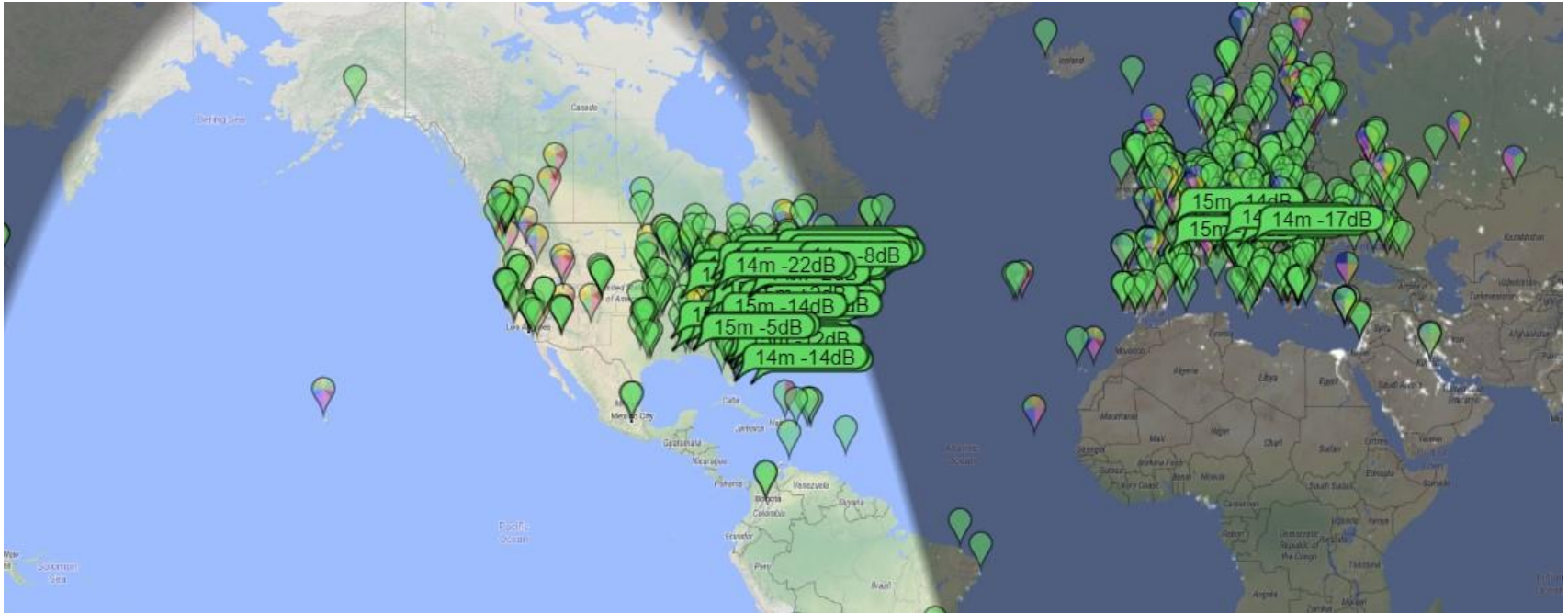
72 reports, 100 miles to 5480 miles  
-15dB

30 meters, 52 feet antenna height



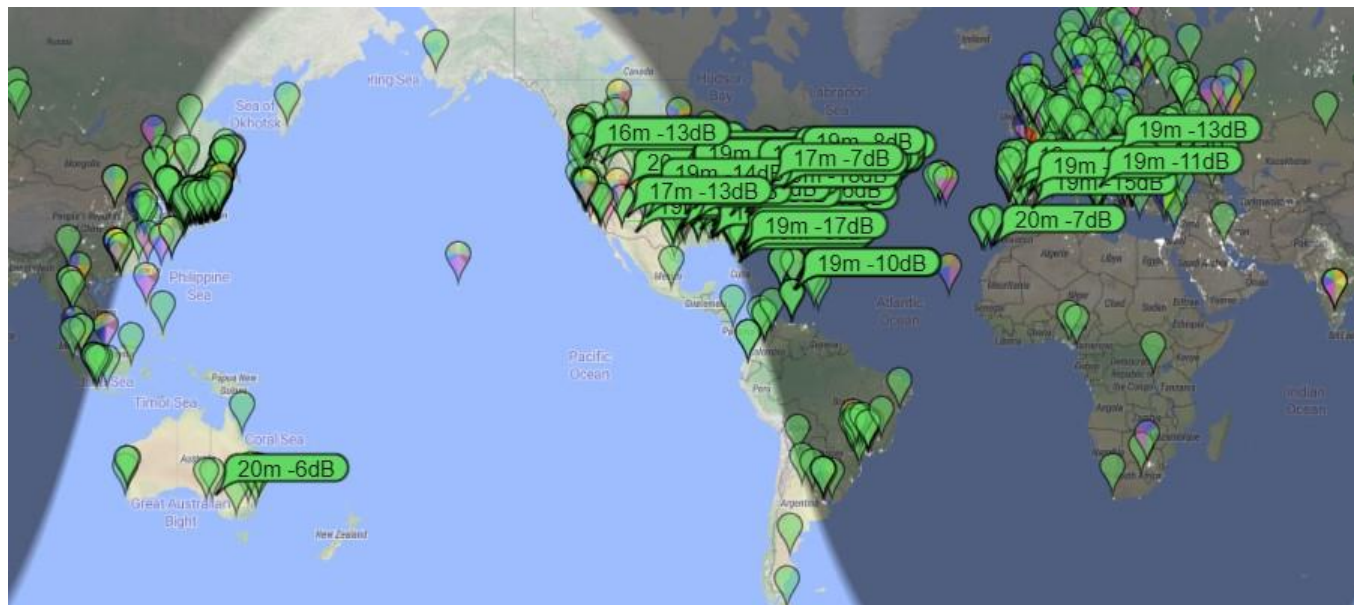
151 Reports, 106 miles to 9765 miles  
-13dB

30 meters, 5 feet antenna height



71 Reports, 27 miles to 4893 miles  
-17dB

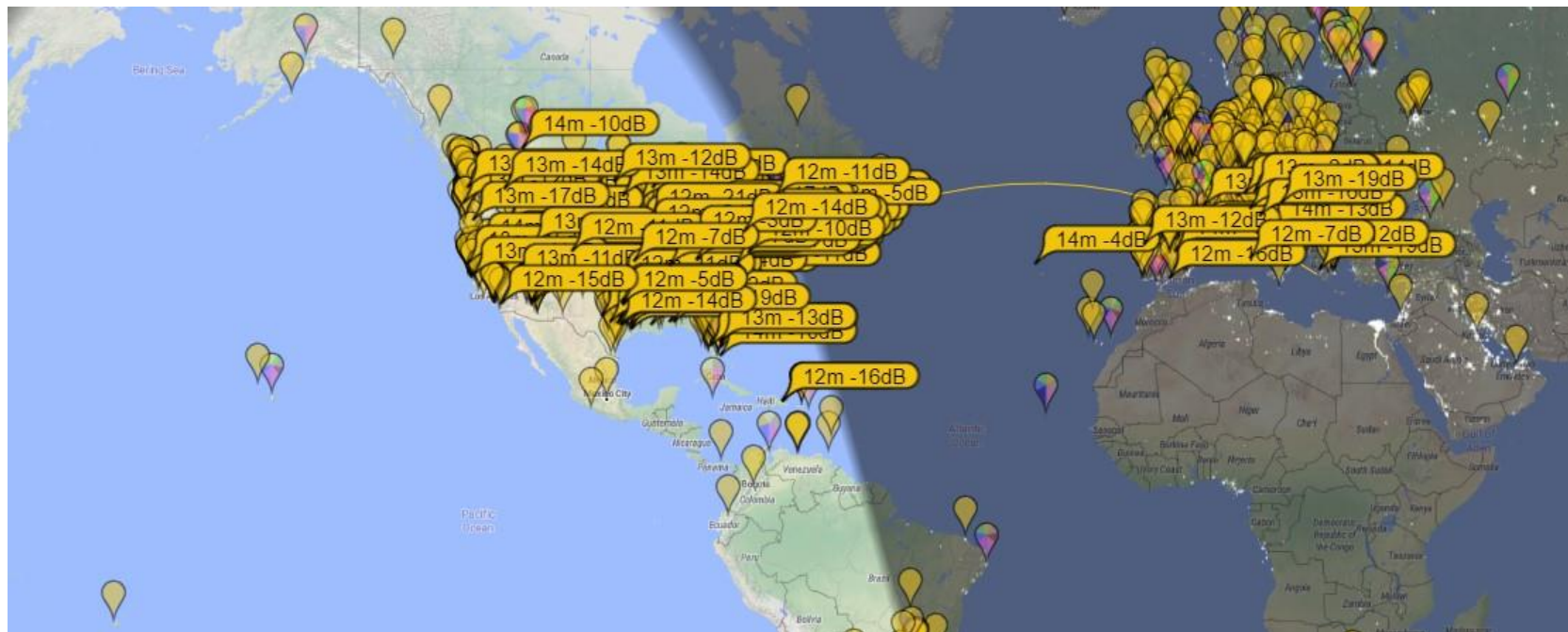
30 meters, 42 inch antenna height



119 Reports, 214 miles to 10,119 miles  
-6dB

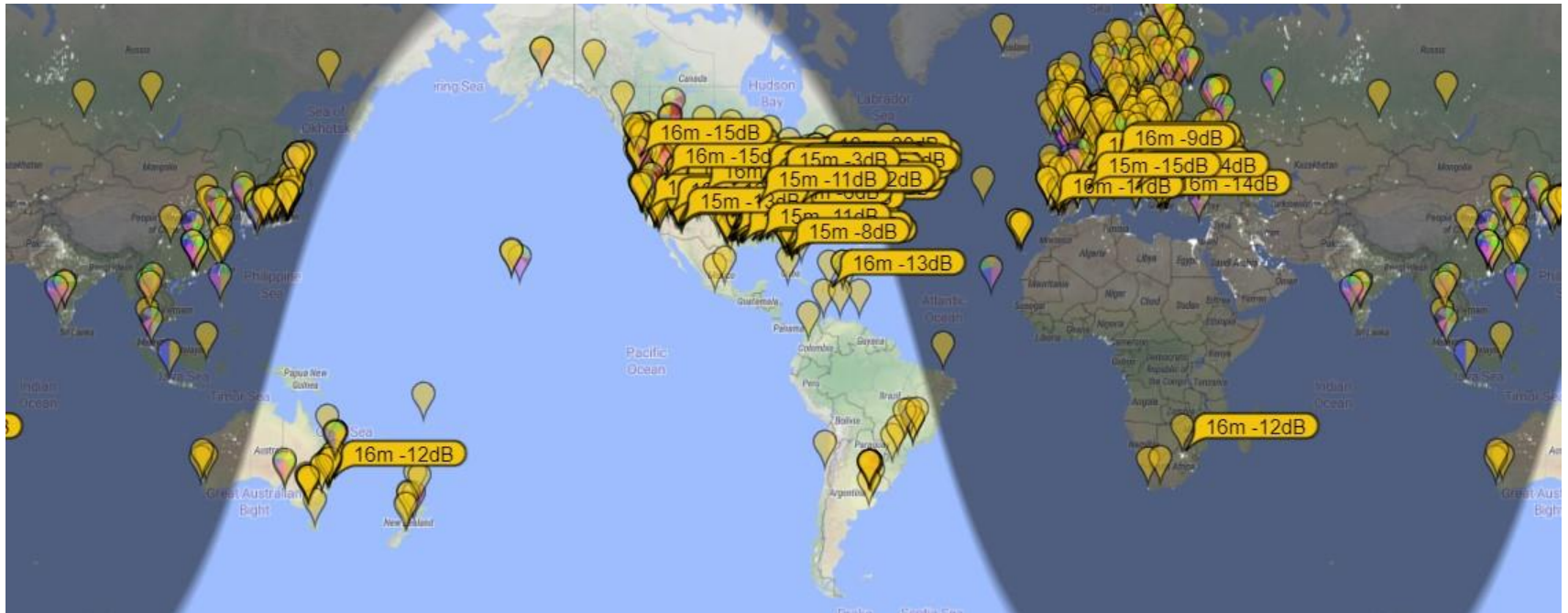


20 meters, 52 feet antenna height



213 Reports, 341 miles to 5467 miles  
-19dB

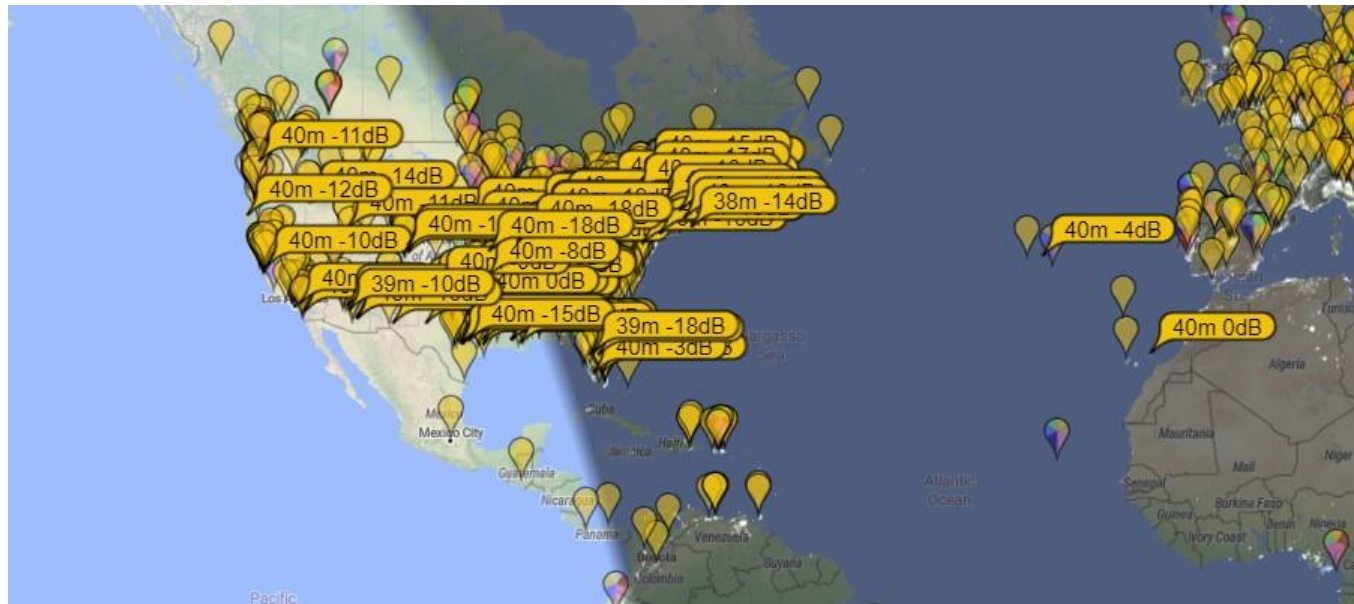
20 meters, 5 feet antenna height



122 Reports, 297 miles to 9373 miles  
-12dB



20 meters, 42 inch antenna height



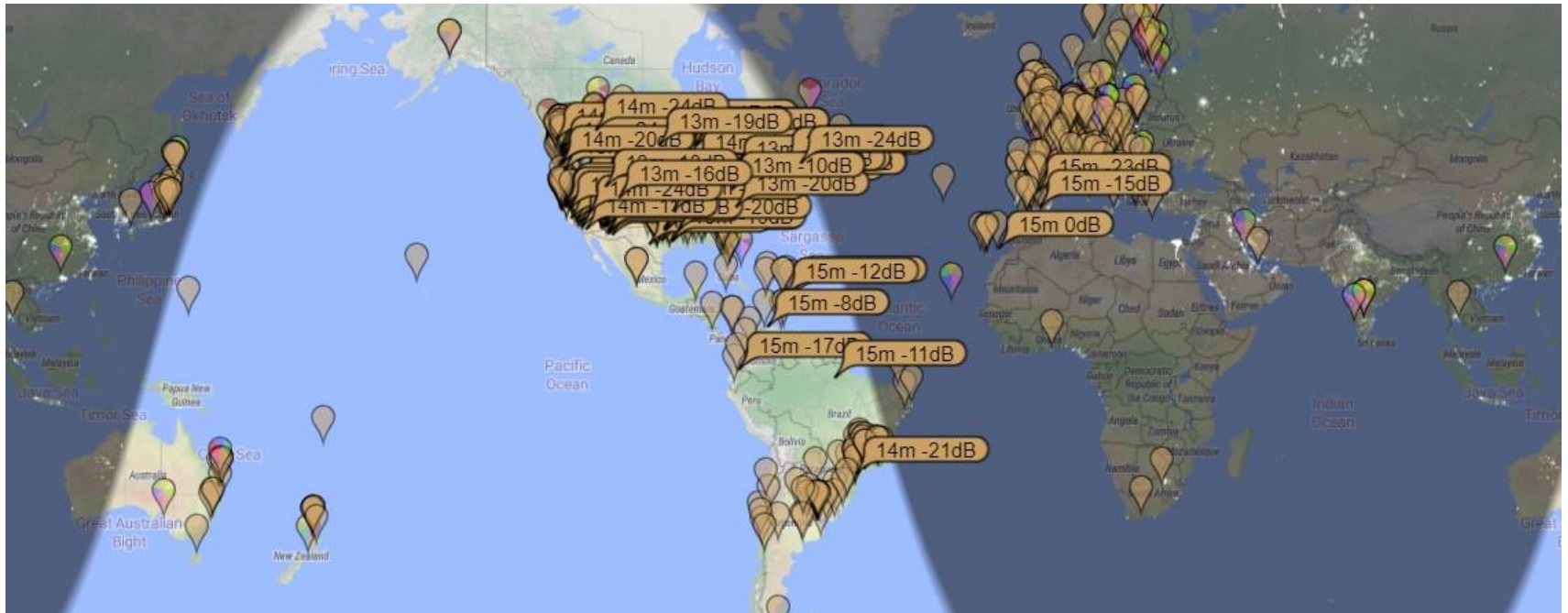
94 reports, 292 miles to 3973 miles  
0dB

15 meters, 52 feet antenna height



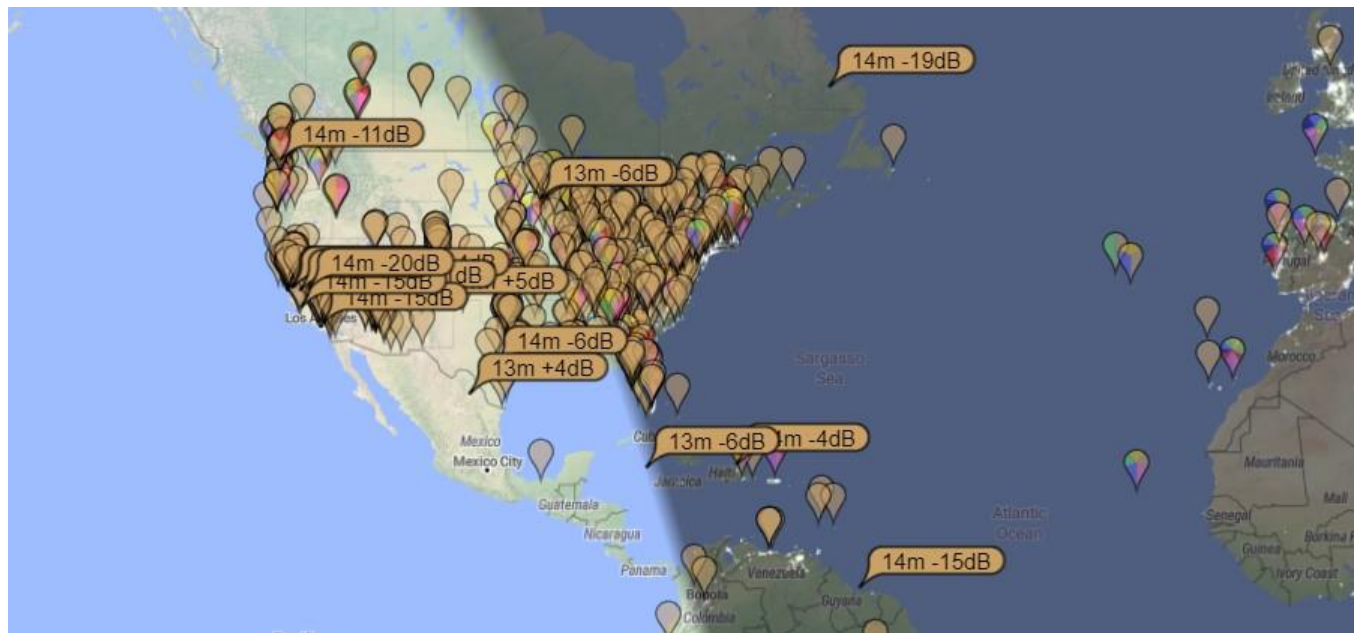
177 reports, 325 miles, to 4553 miles  
-8dB

15 meters, 5 feet antenna height



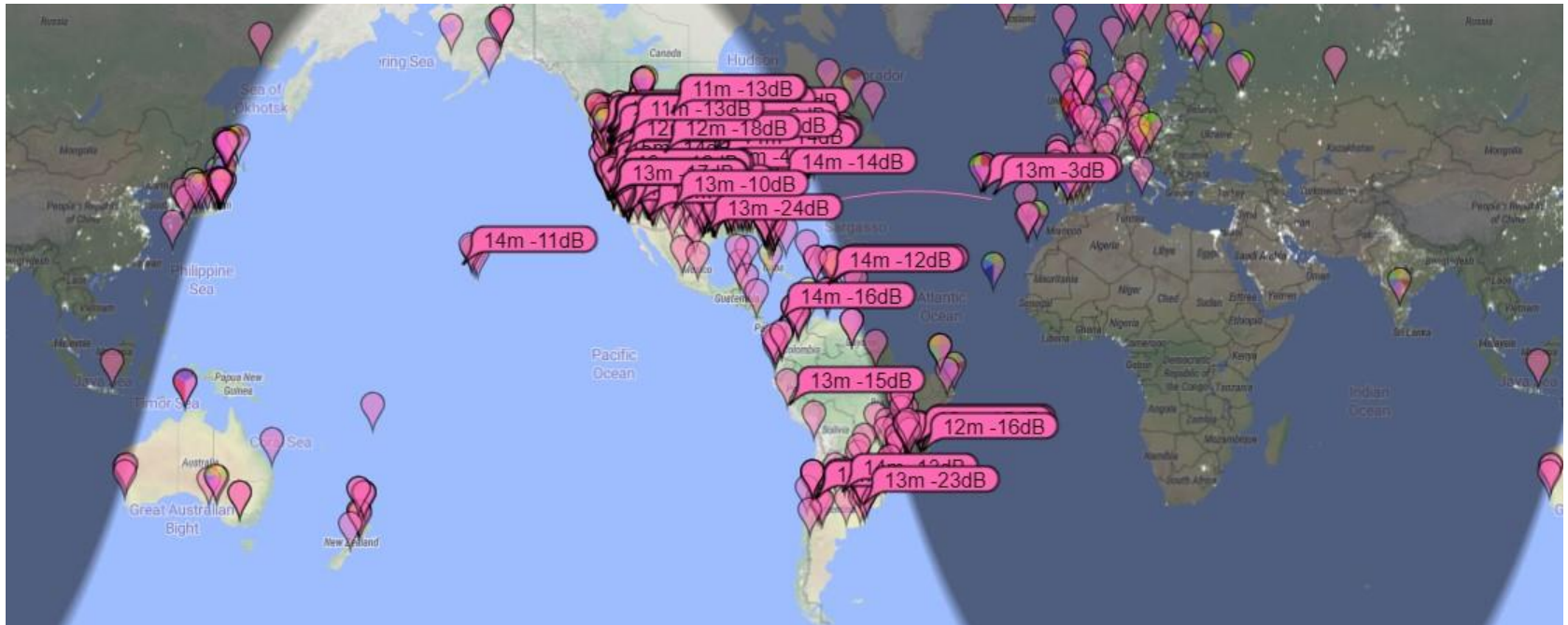
145 Reports, 325 miles to 4557 miles-  
21dB

15 meters, 42 inch antenna height



18 Reports, 959 miles to 2468 miles  
-19dB

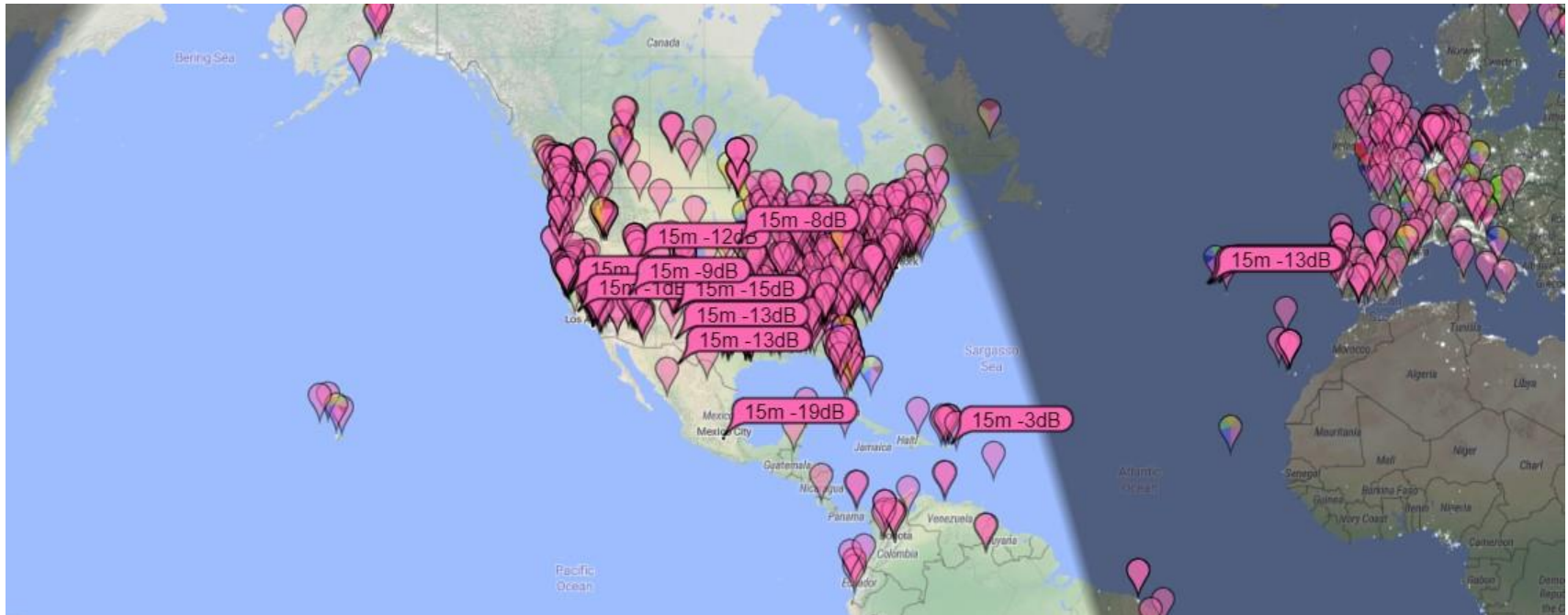
10 meters, 52 feet antenna height



64 Reports, 461 miles to 4934 miles  
-23dB



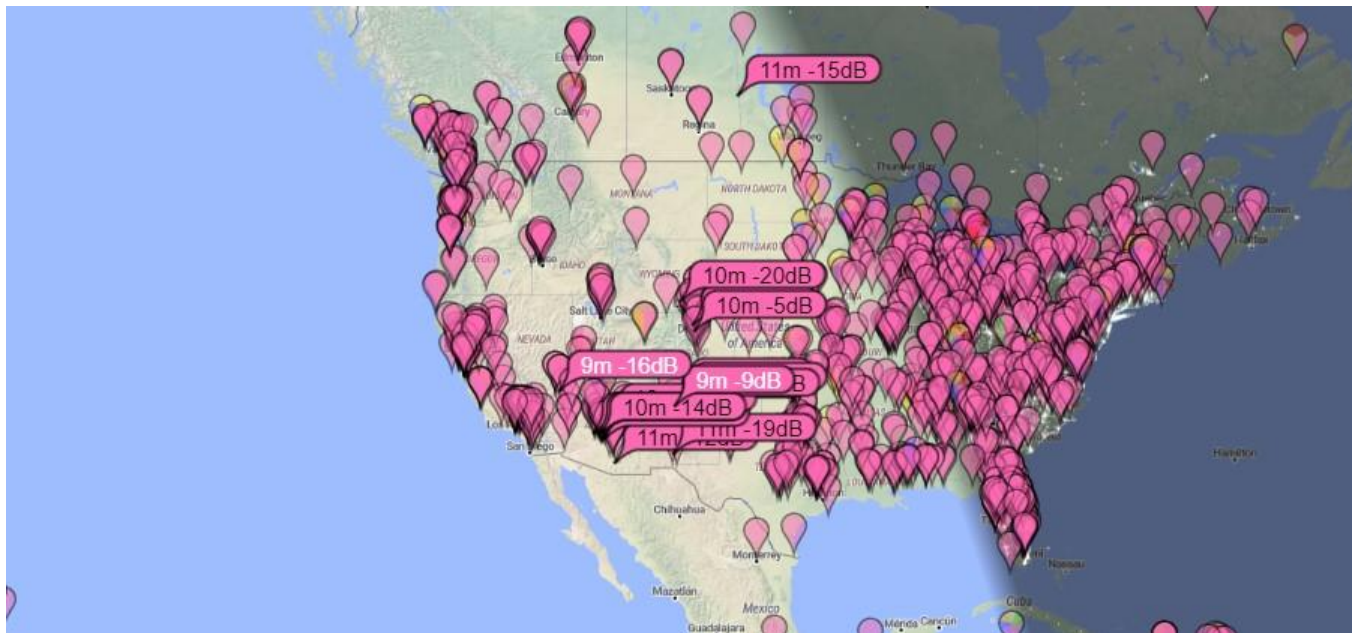
10 meters, 5 feet antenna height



14 Reports, 1076 miles to 3043 miles  
-13dB



10 meters, 42 inch antenna height



22 Reports, 1370 miles to 1896 miles  
-15dB

Conclusions:

The test was a Success:

- It **DID** Keep Me Out of The Bars
- It did demonstrate that international contacts can be made **without** a high antenna
- It did show that the “donut hole” can be reduced and/or eliminated 80 and 40 meters



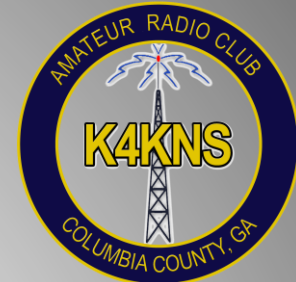
# UPCOMING EVENTS

- 06-17-2023 Knoxville Hamfest and Electronics Convention
- 06-12-2023 NABRC Meeting (Aiken Regional Hospital)
- 06-20-2023 ARCA General Meeting
- 06-24/25-2023 ARRL Field Day
- 07-08-2023 Columbia County Exam Session
- 07-10-2023 NABRC Meeting (NA Public Safety Station #2)
- 07-13-2023 NABRC Exam Testing
- 07-13-2023 ARCCC BOD Meeting
- 07-15-2023 CHIRP Programming Workshop
- 07-18-2023 ARCA General Meeting
- 08-01-2023 ARCCC General Meeting
- 08-12-2023 Columbia County Exam Session
- 08-14-2023 NABRC Meeting (Aiken Regional Hospital)
- 08-19/20-2023 Huntsville Hamfest



# MEMBERSHIP APPLICATIONS

Are there any ARCCC, Inc. Membership Applications for consideration?



# ARCCC, INC. MONTHLY REPORTS

Amateur Radio Club of Columbia County

Printed on 6/4/2023

Update 04 June 2023

## Treasurer's Report

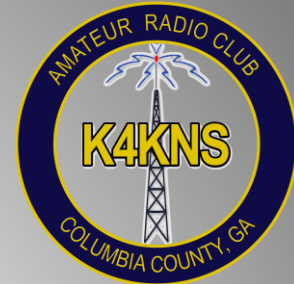
- Update from Treasurer

## Secretary's Report for May 2<sup>nd</sup>, 2023 meeting:

- [05-02-2023 Meeting Minutes](#)

### CHECKBOOK SUMMARY

VE ACCOUNT		AMOUNT
9695 - VE Account		\$1,436.61
ARCCC ACCOUNTS		AMOUNT
7513 - Main Account		\$ 5,128.37
4913 - Pay Pal Account		\$990.00
Pending Transfer from PayPal		\$ 3,021.25
Petty Cash - Treasurer		\$160.00
Petty Cash - Asset Committee		\$0.00
Pending Deposit - Checks		\$0.00
Pending Deposit - Cash		\$0.00
TOTAL AMOUNT		\$9,299.62
Less Commitments		
2023 Budget		(\$2,479.99)
Winter Field Day (\$300 - \$200 budget)		(\$100.00)
HT Radio Purchase		(\$200.00)
TOTAL AVAILABLE FUNDING		\$6,519.63



# Club Callsign Badges

**Amateur Radio Club of  
Columbia County, Ga  
Name Badge**



ARC of Columbia County, Ga  
Badge price \$12.50

**The SignMan** *of Baton Rouge*

Order at this link:

<https://thesignman.com/clubs/columbiacogacart.html>



# Business Items

- HamClubOnline.com
- Groups.io
  - <https://groups.io/g/arcccinc>

**Is there any other business to bring before the club?**





# COMMITTEE UPDATES

Directors provide QUICK UPDATES on their committees

- IT
- Repeater
- Net Control
- Volunteer Examiner
- Constitution and Bylaws
- Field Day
- Asset/Inventory
- Nomination
  
- Chaplain and Visitation
- Fundraising
- Mentoring
- Outreach

Appointed Positions:

- K4KNS Trustee
- Public Information Officer
- QSL Manager



# Amateur Radio Club of Augusta



## **ARCA June General Meeting**

June 20, 2023 7:00 PM - 9:00 PM

POB-1 (formerly H2U) Building

[W4DV.club](http://W4DV.club)

# Amateur Radio Club of Augusta



## **Win A Complete HF Amateur Radio Station!**

- 21 Years old or Younger
- Hold a General or Better License at Time of Drawing
- Register to Win – visit [W4DV.club](http://W4DV.club) and click on “Win Radio”
- Be Present for Drawing at ARCA Field Day Site
  - Saturday, June 24, 2023 at 3:30 PM

[W4DV.club](http://W4DV.club)

# North Augusta - Belvedere Radio Club



## **NABRC May 2023 General Meeting**

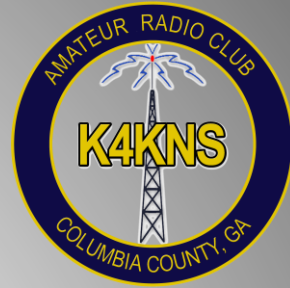
June 12, 2023 7:00 PM - 8:00 PM

Aiken Regional Medical Center

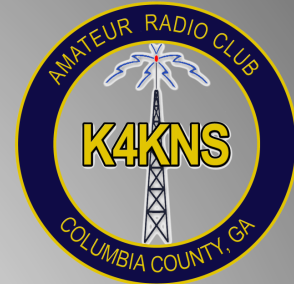
302 University Parkway, Aiken, SC 29801

[K4NAB.org](http://K4NAB.org)

# East Central/Columbia County ARES



Susan Messick, WA0B  
Columbia County GA ARES EC



# AmRRON



# AmRRON

---



**The American Redoubt Radio Operators Network  
and The American Preparedness Radio Network (TAPRN)**

Steven Kitchings, KN4RVU





# REVIEW

- Review motions and assignments
- We would welcome your presentations and ideas for presentations.
- Is there a motion to adjourn the meeting?



**THANK YOU!!!**