



Propagation Explained (?)

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Agenda

Introduction

Presentation by José Nunes CT1BOH (48:47)

View of the World

Useful Tools





Introduction

Propagation is a mystery especially when working HF

Is it predictable? May be more than you think and this presentation hopes to equip you with some knowledge and resources.



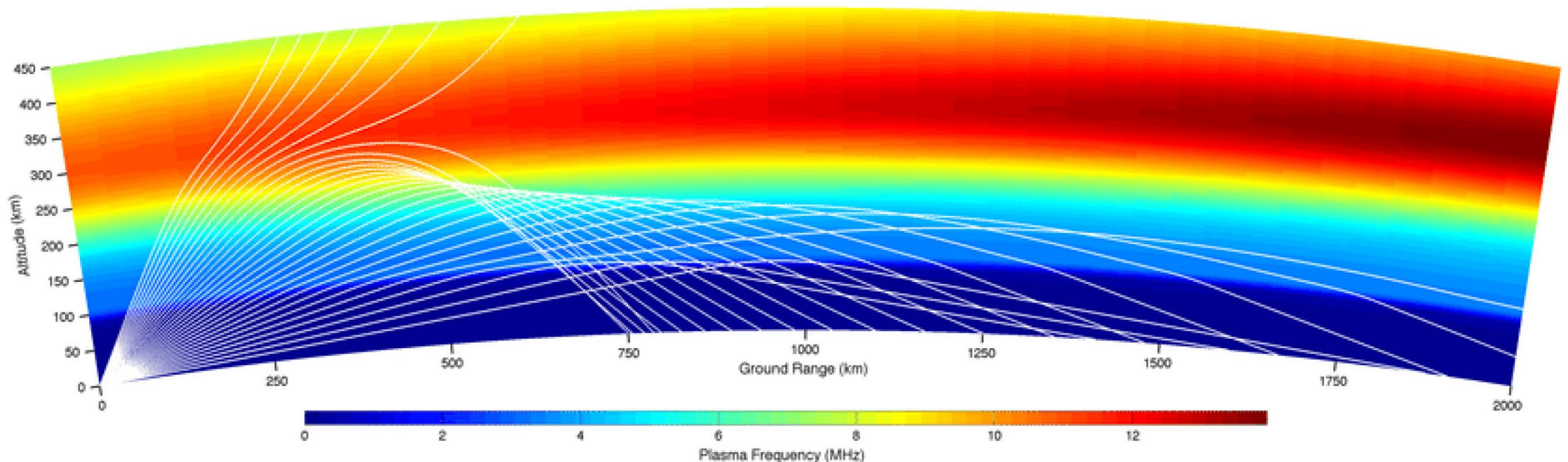
Opening Thoughts

- Realize just because you can hear them does not mean they can hear you and vice versa.
- The planet is not flat

There is nothing magic about propagation

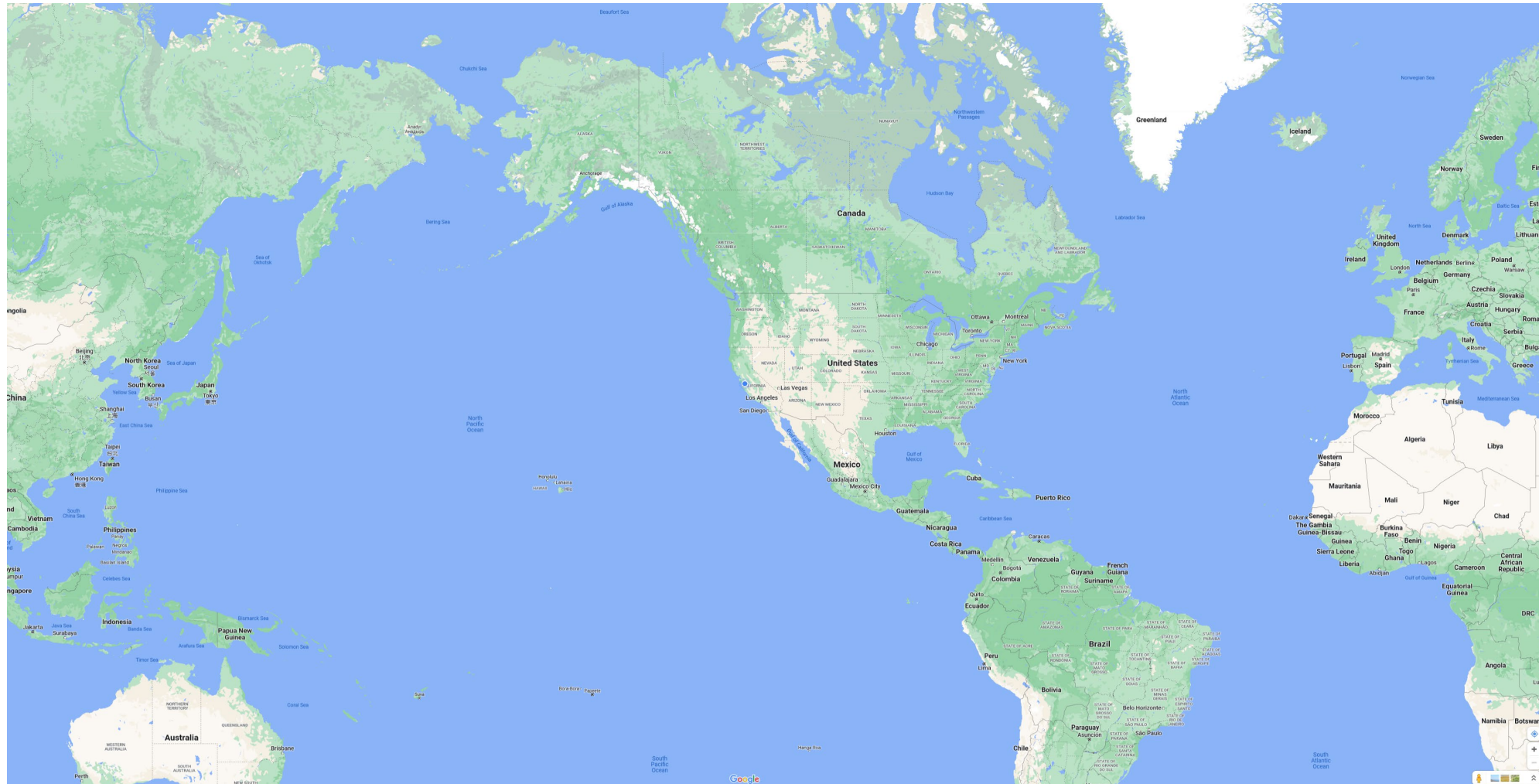
In search of MUF isolines

Contest University

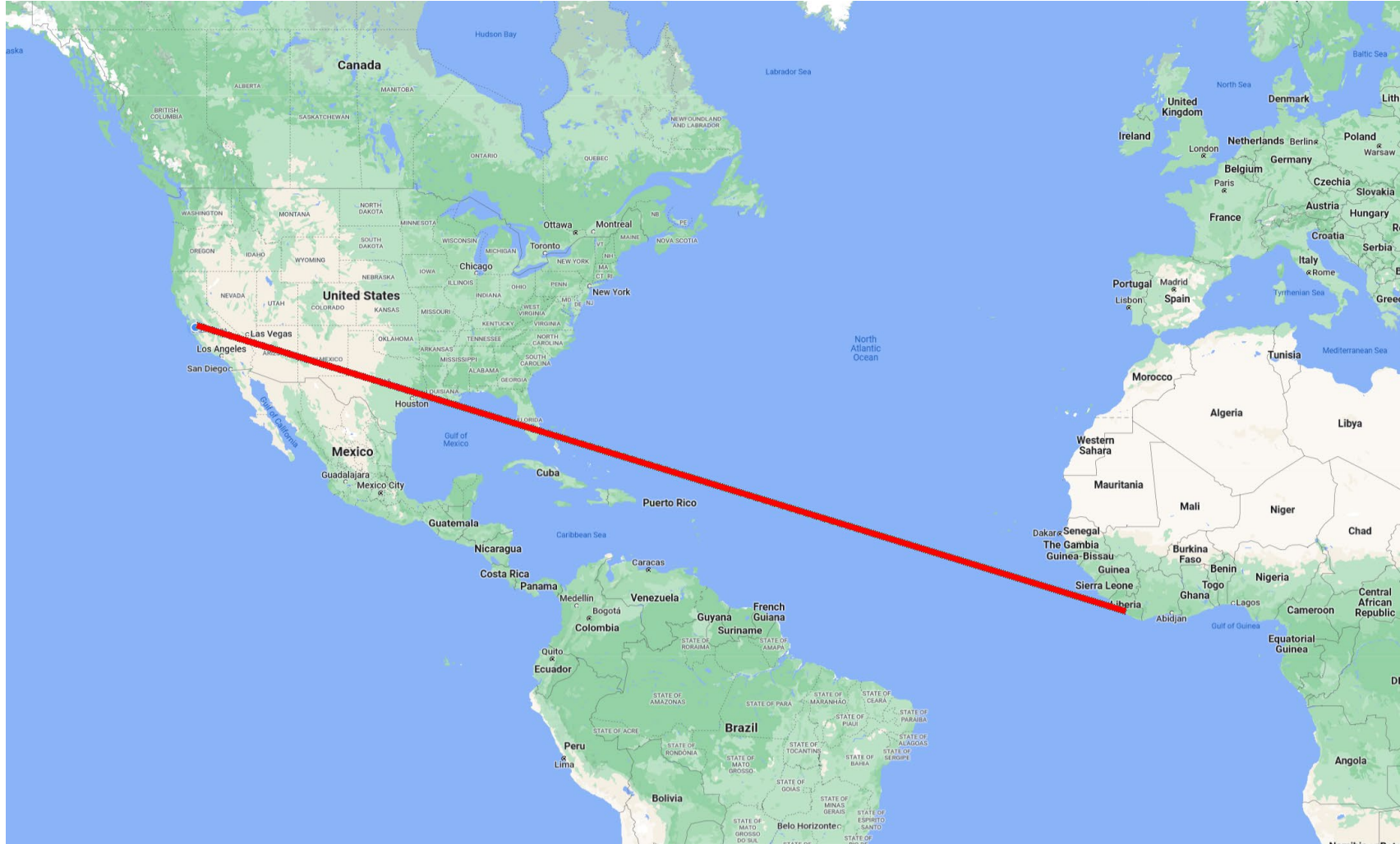


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How I Used to See The World for HF



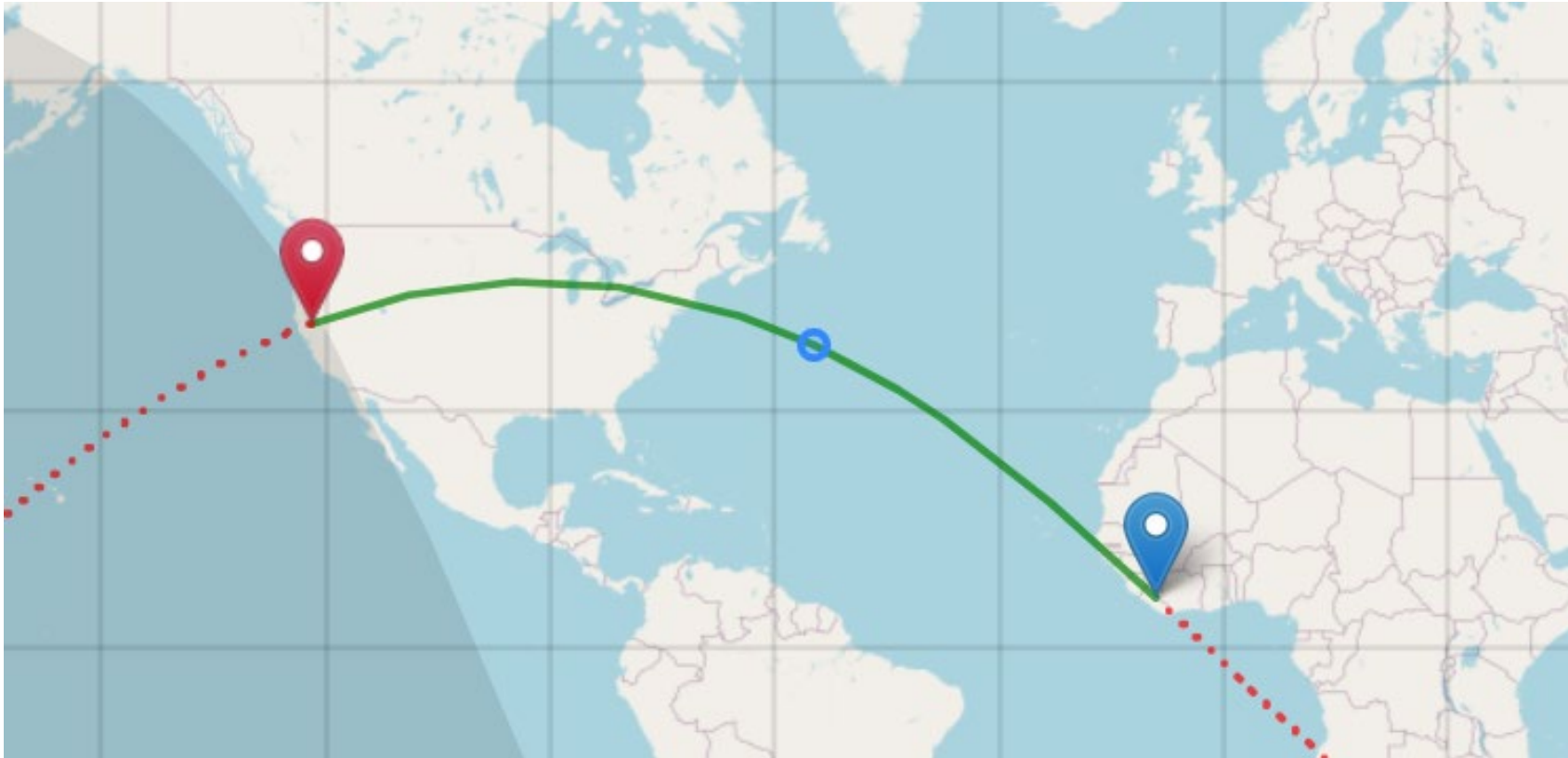
How I Used to See The World for HF



How to See The World for HF



How to See The World for HF

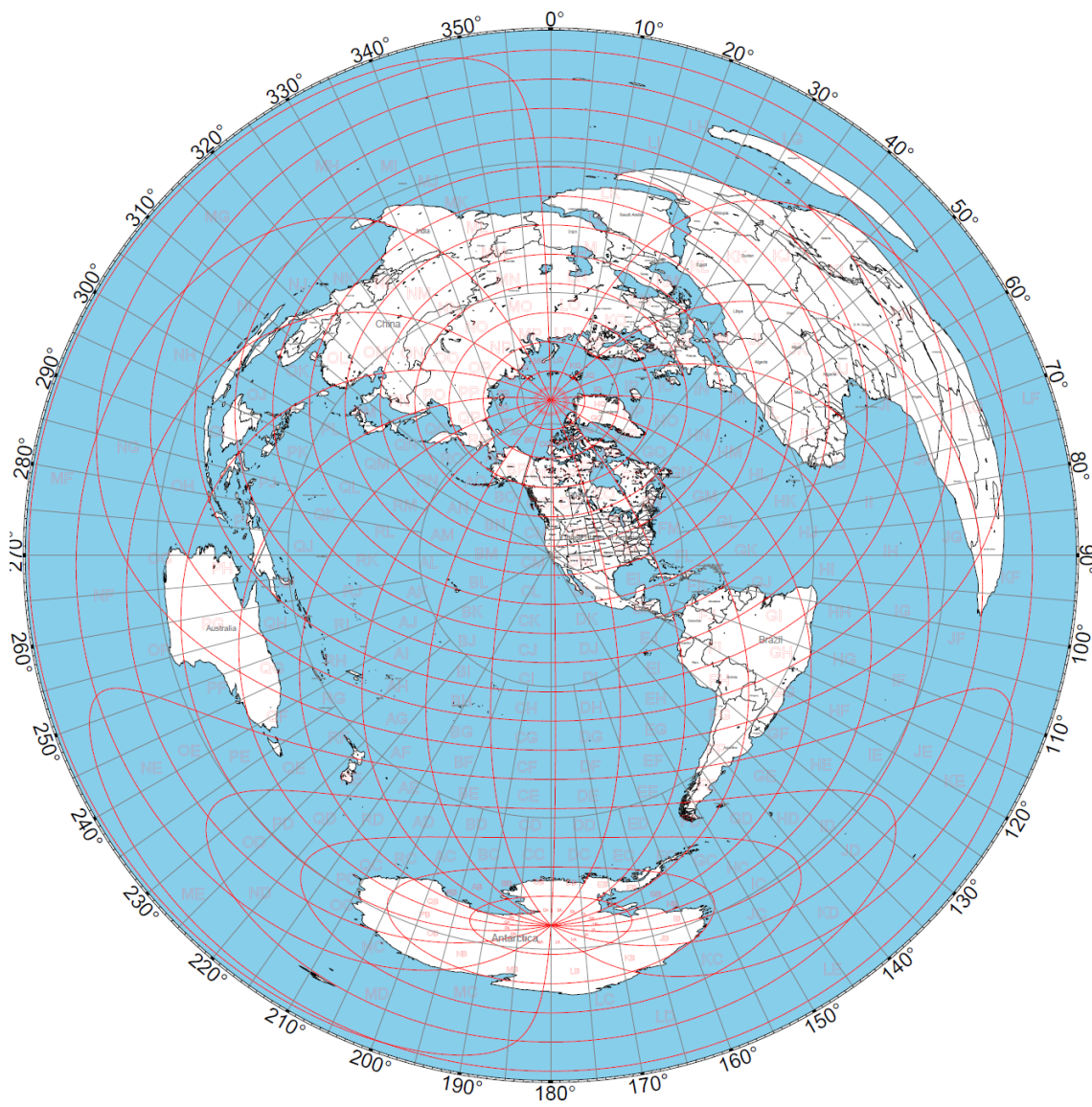


- <https://www.voacap.com/hf/>

Azimuthal Map

Center: $36^{\circ}49'59''\text{N}$ $121^{\circ}25'0''\text{W}$

Courtesy of Tom (NS6T)

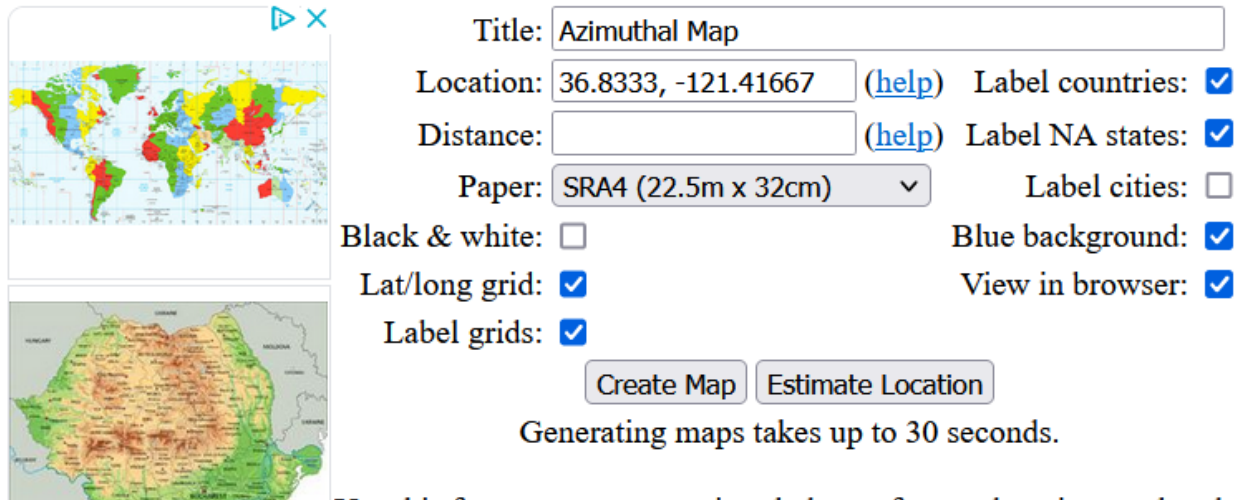


How to See The World for HF

Make an Azimuth Map

- Go to: <https://ns6t.net/azimuth/>

Request an Azimuthal Map



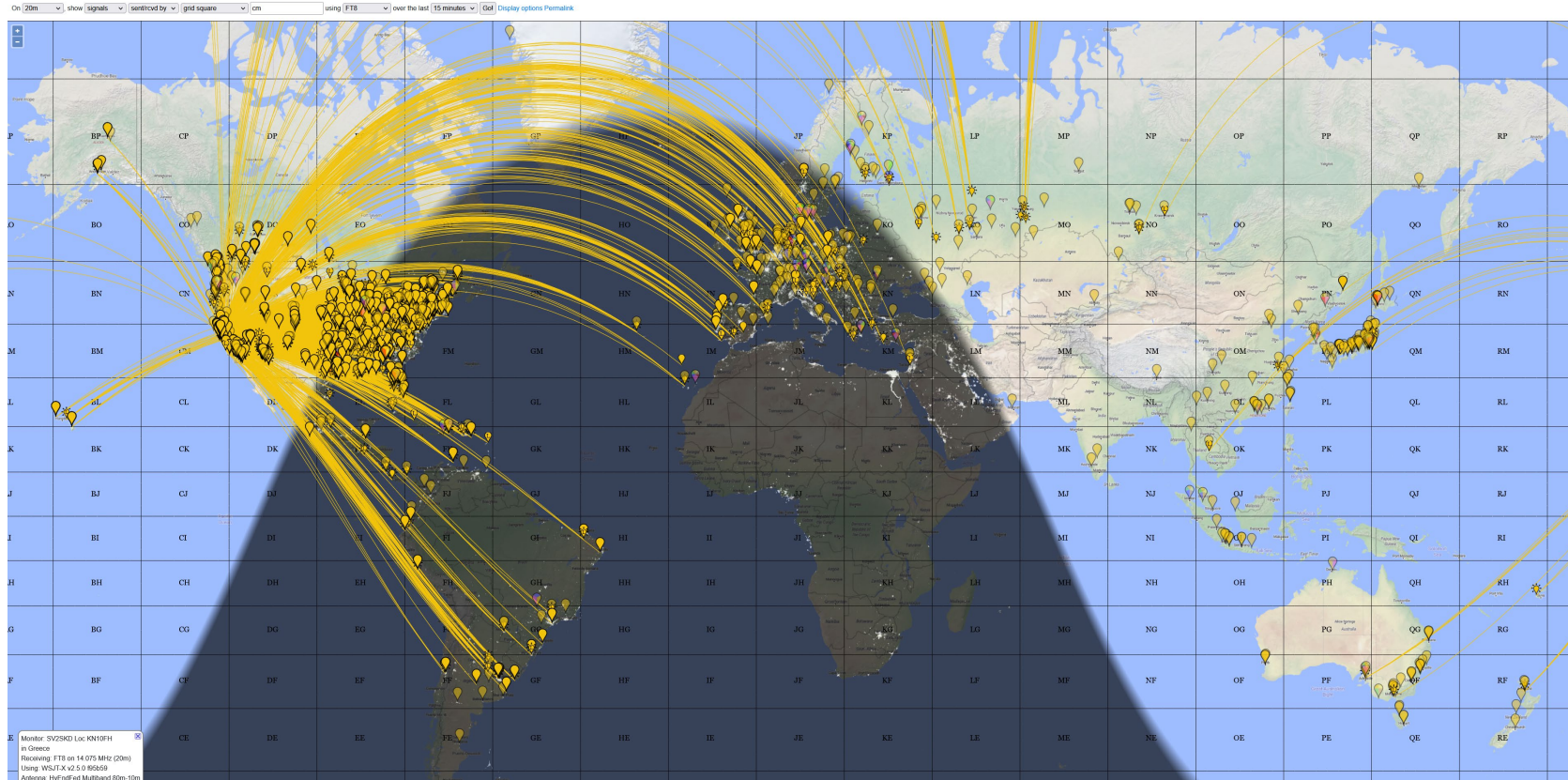
The screenshot displays the 'Request an Azimuthal Map' web interface. On the left, there are two map preview windows. The top window shows a world map with various regions highlighted in different colors (red, yellow, green, blue). The bottom window shows a detailed topographic map of a specific region, likely Africa, with labels for countries and cities. The main form on the right contains the following fields and options:

- Title:
- Location: [\(help\)](#)
- Distance: [\(help\)](#)
- Paper:
- Black & white: ☐
- Lat/long grid: ☒
- Label grids: ☒
- Label countries: ☒
- Label NA states: ☒
- Label cities: ☐
- Blue background: ☒
- View in browser: ☒

At the bottom of the form, there are two buttons: and . Below these buttons, a note states: "Generating maps takes up to 30 seconds."

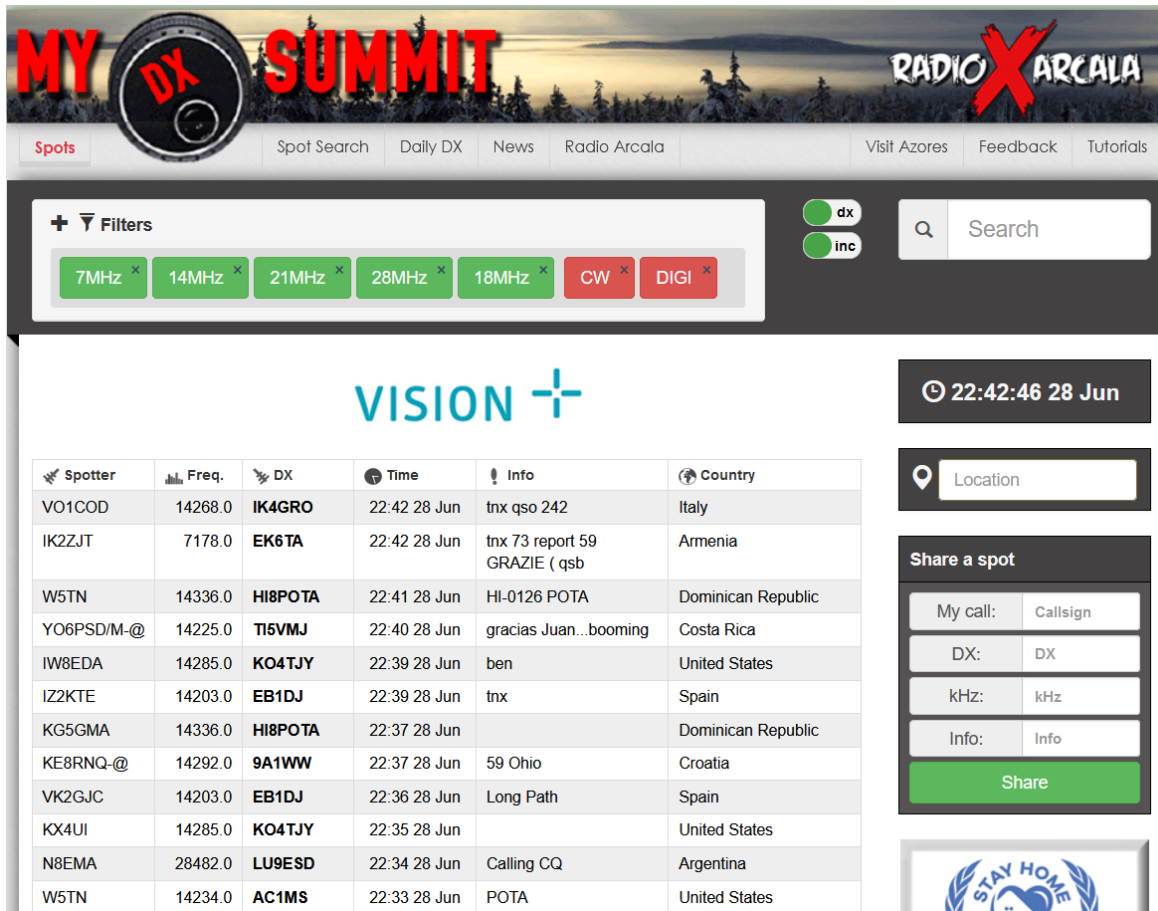
PSKReporter.info

- Go to: <https://pskreporter.info/pskmap.html>



DXSummit.fi

- Go to: http://dxsummit.fi/#/?include=7MHz,14MHz,21MHz,28MHz,18MHz&exclude_modes=CW,DIGI











The screenshot shows the DXSummit.fi website interface. At the top, there's a banner with "MY DX SUMMIT" and "RADIO X ARCALA". Below the banner is a navigation bar with links: Spots, Spot Search, Daily DX, News, Radio Arcala, Visit Azores, Feedback, and Tutorials. A filter section is visible with buttons for 7MHz, 14MHz, 21MHz, 28MHz, 18MHz, CW, and DIGI. A search bar is also present. The main content area displays a table of radio spots under the heading "VISION +". The table has columns for Spotter, Freq., DX, Time, Info, and Country. To the right of the table, there's a clock showing 22:42:46 28 Jun, a location input field, and a "Share a spot" section with fields for My call, Callsign, DX, kHz, Info, and a Share button. At the bottom right, there's a "STAY HOME" logo.

Spotter	Freq.	DX	Time	Info	Country
VO1COD	14268.0	IK4GRO	22:42 28 Jun	tnx qso 242	Italy
IK2ZJT	7178.0	EK6TA	22:42 28 Jun	tnx 73 report 59 GRAZIE (qsb	Armenia
W5TN	14336.0	HI8POTA	22:41 28 Jun	HI-0126 POTA	Dominican Republic
YO6PSD/M-@	14225.0	T15VMJ	22:40 28 Jun	gracias Juan...booming	Costa Rica
IW8EDA	14285.0	KO4TJY	22:39 28 Jun	ben	United States
I22KTE	14203.0	EB1DJ	22:39 28 Jun	tnx	Spain
KG5GMA	14336.0	HI8POTA	22:37 28 Jun		Dominican Republic
KE8RNQ-@	14292.0	9A1WWV	22:37 28 Jun	59 Ohio	Croatia
VK2GJC	14203.0	EB1DJ	22:36 28 Jun	Long Path	Spain
KX4UI	14285.0	KO4TJY	22:35 28 Jun		United States
N8EMA	28482.0	LU9ESD	22:34 28 Jun	Calling CQ	Argentina
W5TN	14234.0	AC1MS	22:33 28 Jun	POTA	United States

QSO/SWL real time maps and lists

- Go to: <https://www.dxmaps.com/spots/mapg.php?Lan=E&Frec=18&ML=L&Map=NA&HF=S&DXC=DCING2&GL=N>

DXMAPS Site Personal Radio Software DX maps DX news    Search...    Translate W6TST

DXMAPS 4.2 - QSO/SWL real time information  

Map **List** Graph Chat Europe Africa **N.America** S.America Asia Oceania World No layer ▾ Select options ▾ Modes

LF - HF VHF & up 2200 m 630 m 160 m 80 m 60 m 40 m 30 m 20 m 17 m **15 m** 12 m 10 m All bands Ticker

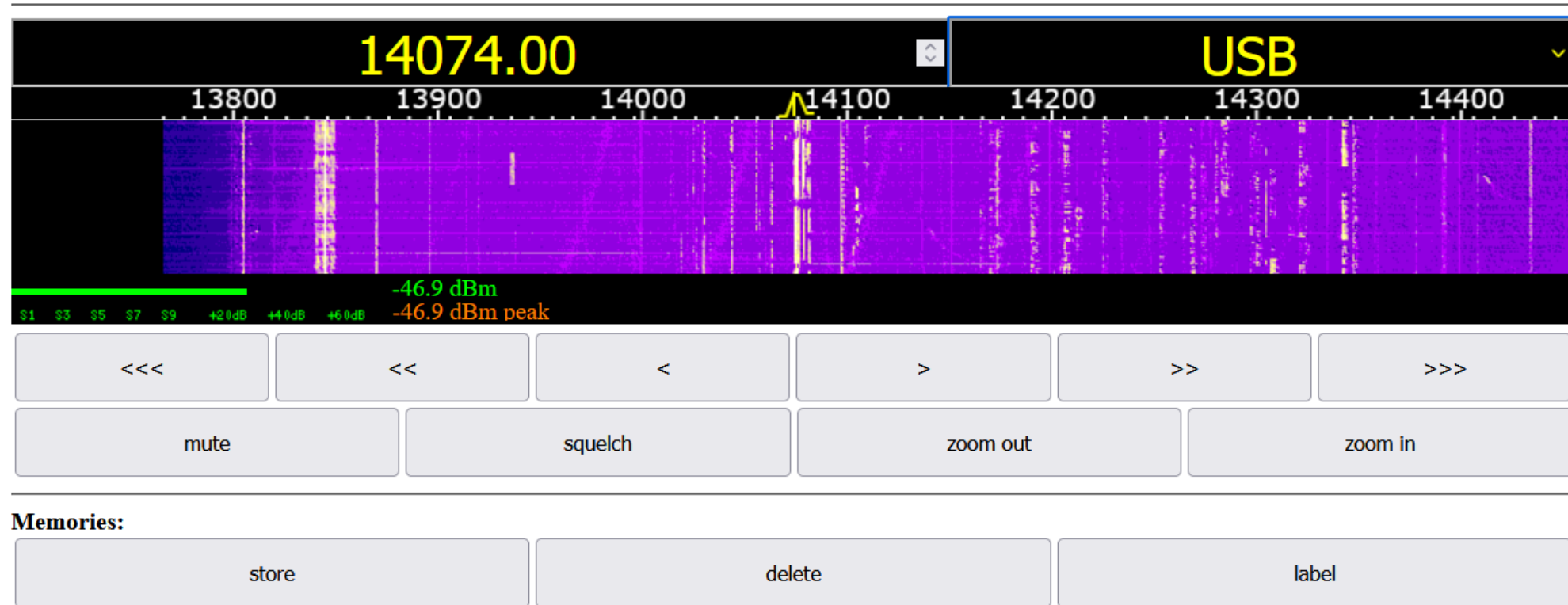
WWW.DXMAPS.COM 22:49z WWW info: SFI=96 SFI90=128 A=8 K=2-Unsettled SWX=Quiet AUR=31 GW

2022-06-28 22:43	LW2EDM (FF81VH)	21.074.7 FT8	N0GJW (EN41)	LoTW	5827 mi	FT8 Sent -05 Rcvd -11
2022-06-28 22:39	LW2EDM (FF81VH)	21.074.7 FT8	AA7EW (DM41VK)	LoTW eQSL	5741 mi	FT8 Sent -18 Rcvd -21
2022-06-28 22:36	LW2EDM (FF81VH)	21.074.7 FT8	NT9P (DM33SH)	LoTW	5923 mi	FT8 Sent -13 Rcvd -15
2022-06-28 22:26	LW2EDM (FF81VH)	21.074.7 FT8	KC4ONA (CN86)	eQSL	6977 mi	FT8 Sent -17 Rcvd -11

KFS WebSDR Mobile

- Go to: <http://websdr1.kfsdr.com:8901/m.html>

This is the mobile version of the [KFS WebSDR](#). It should work using Safari on iOS devices, and Firefox on Android devices. Tuning is different from the normal WebSDR: do not drag the yellow filter curve, but the waterfall. More information about this system can be found [here](#). **Be sure to zoom out as needed to see the entire band.**



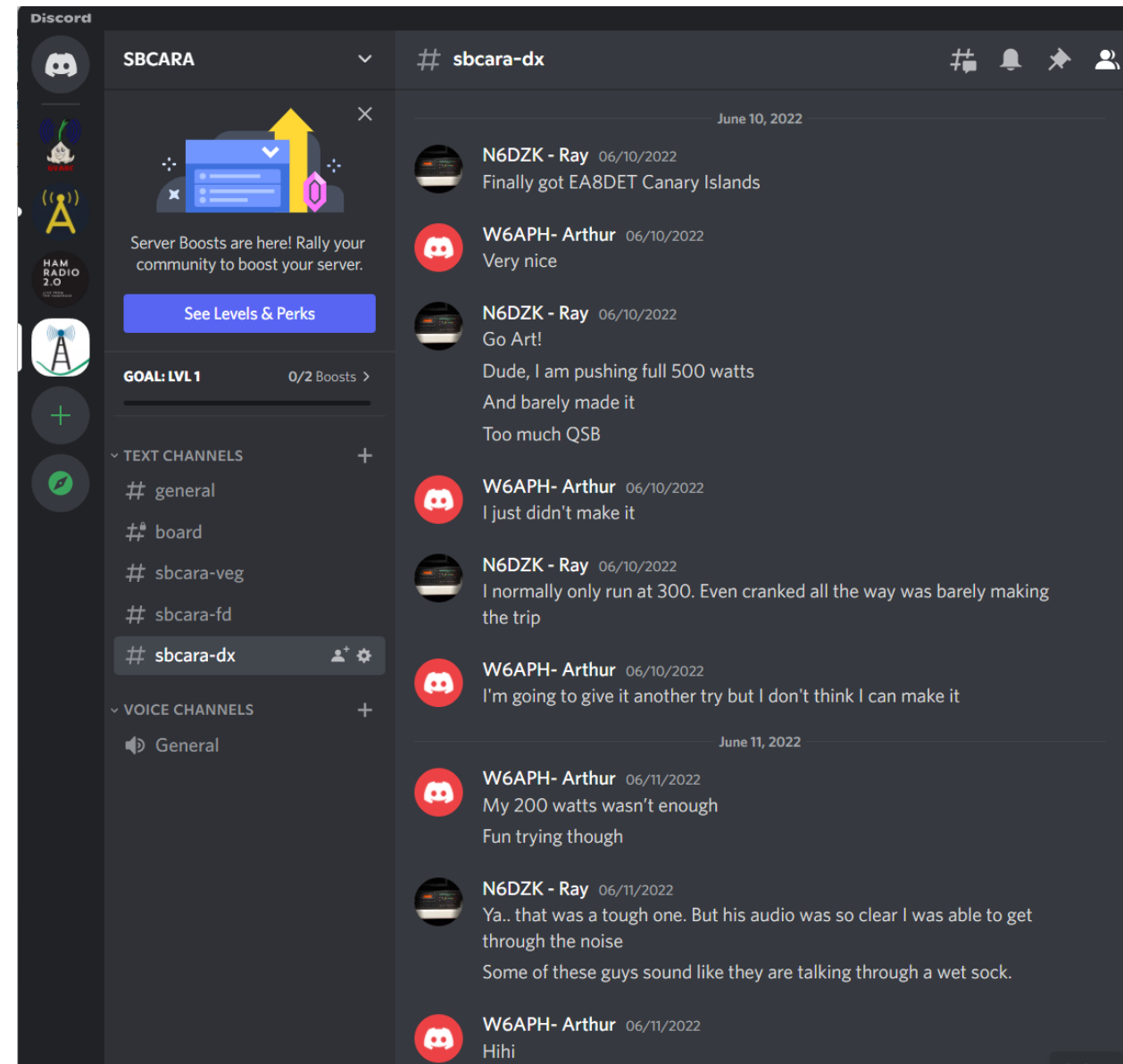
Space Weather Woman - Dr. Tamitha Skov

- Go to: <https://www.spaceweatherwoman.com>



Tips

- Coordinate and communicate
Join a communication channel if available.
 - Discord Channel SBCARA/DX for example
 - <https://discord.gg/qXPg7XfAWy>
- Use Websites and Apps



Summary

- Use tooling to help
- Plug into information
- Get on the Air!



A vibrant image of the Aurora Borealis (Northern Lights) in shades of green and blue, set against a dark, starry night sky. The aurora's light patterns are visible as flowing, ethereal curtains of light.

Thank You

<https://sbcara.org>