

# FIRST 144 MHz TEP EU-AF SINCE 33 YEARS!

By EA7/SMOKAK 2023-04-01

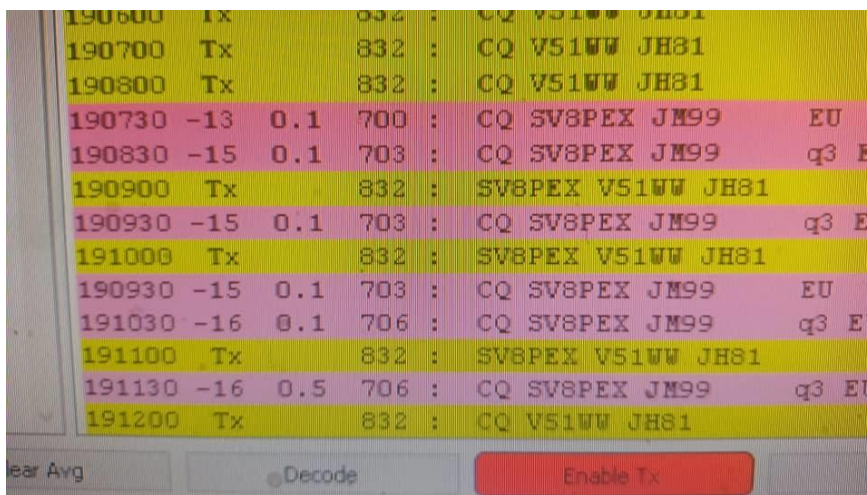
**On March 31 2024 signals on 144MHz from Thomas SV8PEX were decoded by V51WW. This is probably the first confirmed TEP opening on 144MHz between Europe and Africa since year 1991! Signals were detected both ways, but there was no complete QSO. Congratulations to Thomas and Wynand!!**

I recently joined a group that is using WhatsApp and Telegram to coordinate TEP skeds on 144 MHz, so I experienced this exciting breakthrough (almost) in real time.

At 18:53 UTC SV8PEX reported that he heard and saw a distorted FT8 signal. It did not decode.

We guessed that the signal came from V51WW so he was asked to move his DF, and SV8PEX confirmed that the signal moved as expected!

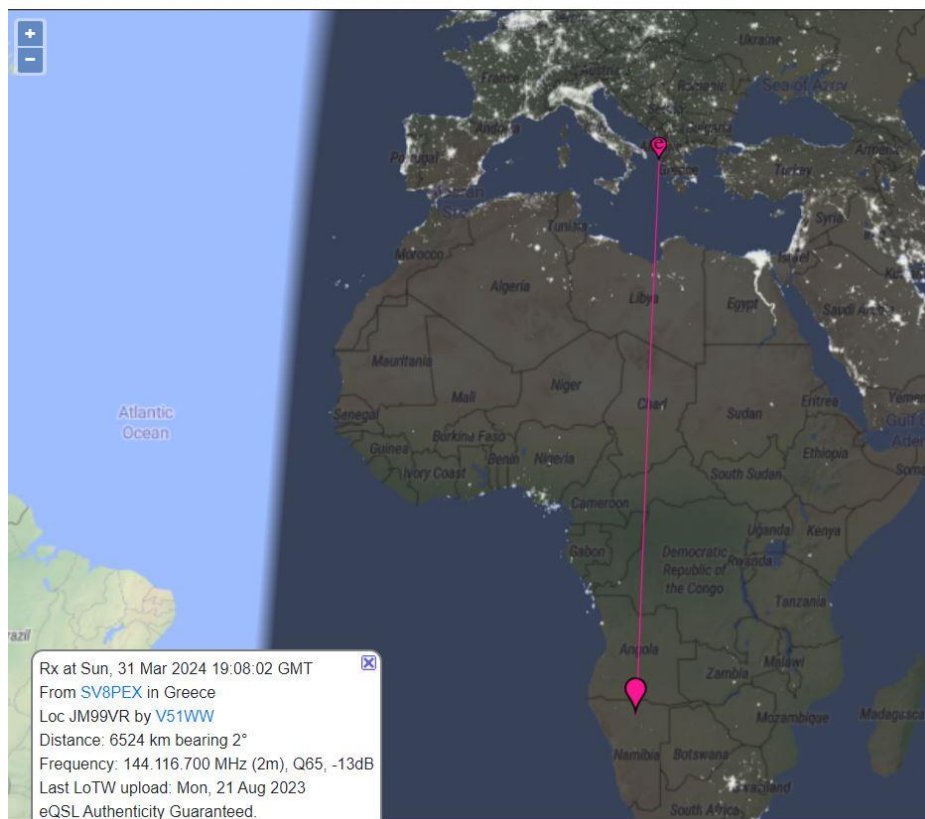
Mode was changed to Q65-30B which is better for distorted signals. The operators were not prepared for Q65 so this took a little time, but at 19:07 UTC V51WW decoded the CQ of SV8PEX at -13dB!



Screen at V51WW (running XSJT-X)

SV8PEX did not detect or decode any Q65-30B signal from V51WW. The reason is unknown. The opening lasted at least until 19:19 UTC when the signal at V51WW had dropped to -21dB. Hence the opening was at least 26 minutes long, probably longer.

On **2m**, show **signals**, sent/rcvd by **V51WW** using **all modes**  
 Monitoring V51WW (last heard 2 hrs ago). Automatic refresh in 3 minutes. Small markers are the 1 transmitters (show logbook) hee  
 There are 241 active monitors: 237 on 2m, 14 on 20m, 12 on 10m, 10 on 40m, 9 on 17m, 9 on 6m, 8 on 15m, 8 on 12m, 7 on 30



Screenshot from PSK reporter (<https://pskreporter.info/>)

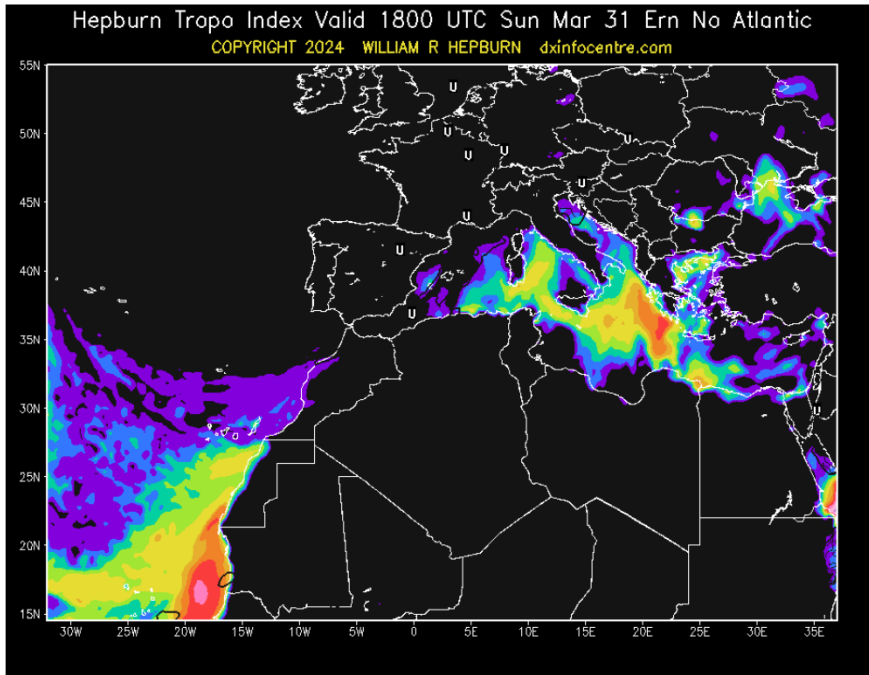
(Screenshot taken a bit after the QSO to the day/night line was further to East during the opening)

Operators	V51WW Wynand	SV8PEX (ex ZS3AT & V51AT) Thomas
QTH	Namibia, Etosha	Greece, Corfu Island
LOC	JH81OC44	JM99VR
TX power	100W	500W
Antenna	9el yagi, 12magl	11el yagi (YU7EF 3wl) 10magl
Polarization	Horizontal	Horizontal
Preamp	No	No

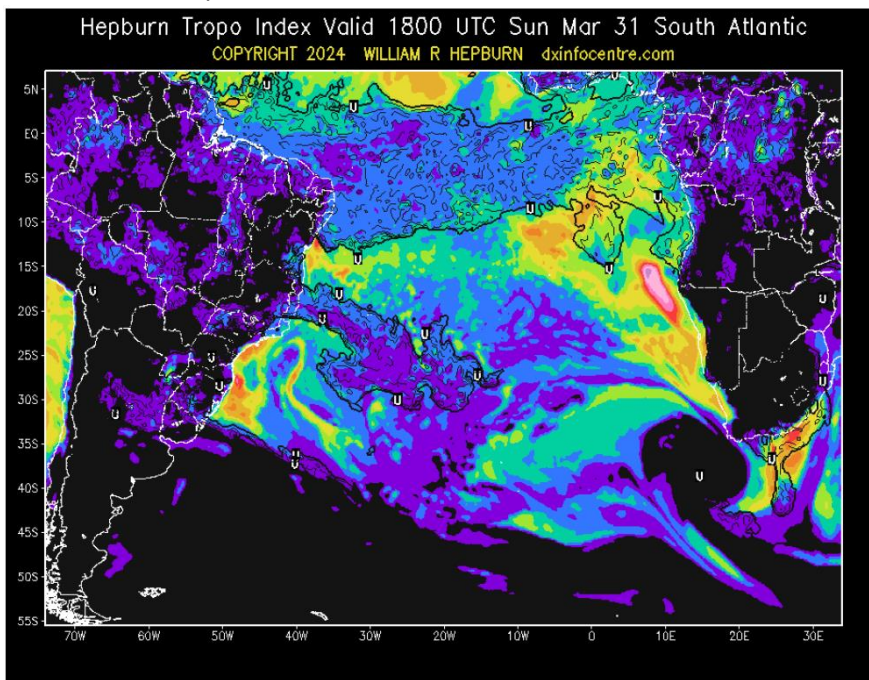
### CONDITIONS DURING THE OPENING

The 10.7 cm solar flux had been high during some days but had dropped to 140.

There was a tropo enhancement South of SV8PEX, he reported 23 degrees C and strong southerly winds, and lots of Sahara sand blocking the sun.



There was no tropo North of V51WW



## THE OPERATORS

Wynand V51WW is very active on 50MHz DX, but has made very few QSOs on any higher band. He joined the 144MHz TEP tests just two days before, so he got almost immediate success!! Wynand is very interested in starting on EME. He has a fine ICOM IC-9700 but no suitable antennas/rotators/PAs etc. He would very much appreciate any support, or donations, to help him getting QRV on EME.

Thomas SV8PEX knows 144MHz TEP since a very long time. He is the only person that I know that has experienced 144MHz TEP both at the South and North end! For example in 1989-10-10 at 19:19 UTC Thomas was ZS3AT in JG87MK and worked Pino IW0AKA (now IK0SMG) in JN61FS on CW 519/519 QRB 7280km. (ZS3 was the old prefix for Namibia. After the prefix changed Thomas became V51AT.) While living in Namibia he was QRV in more 144MHz TEP openings.

## MIXED NOTES FROM 50MHz

Strong backscatter was reported at 50MHz at least between EA/F/I/S5/SV at 16:30 UTC. I don't know if the backscatter continued until 144MHz opened.

At 19:30-20:40 UTC 50MHz opened from EA5 to ZL. QRB about 20 000km, not a common path. There were a few openings EA-ZL the days before, but much shorter.

## 144MHz TEP VK to JA

I think I remember reading that this path produced more than 1000 QSOs in the 1980's. But no QSOs were reported in the last 30 years. However, from 2023-09-12 there have been openings from VK8 to JA on about 70 days!!

From a quick scan of reported QSOs on that path I found:

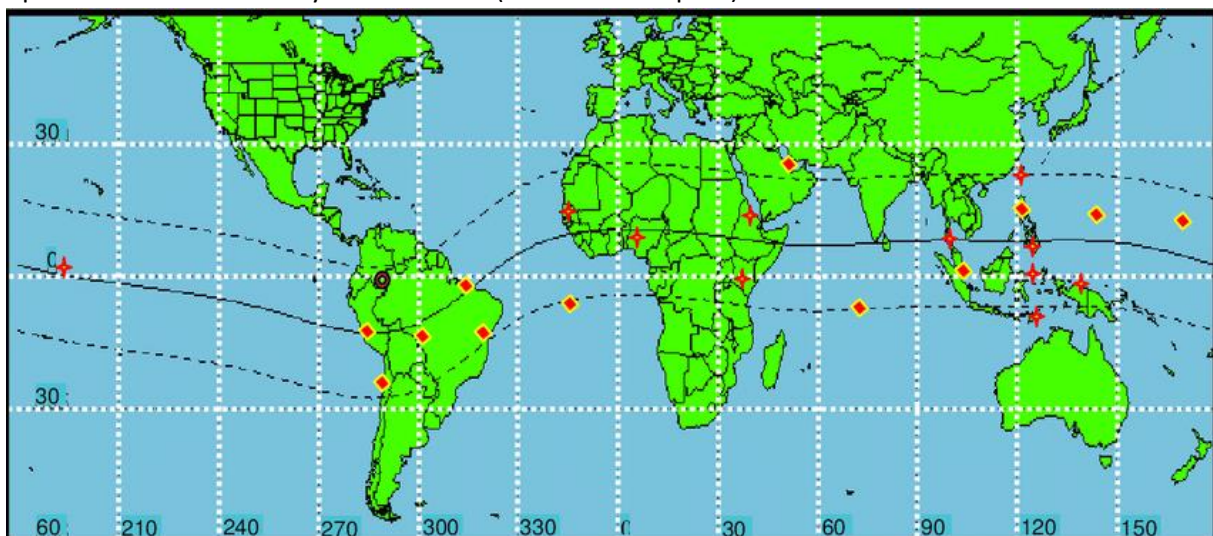
Shortest QRB JS6TWW VK8AW 4269km

Longest QRB VK8RR/P JJ3ELI 5495km

Please note that the QRB SV8PEX-V51WW is very much longer, 6525km !

## GENERAL ABOUT TEP ON 144MHz

144MHz TEP only supports very specific paths. The path shall be perpendicular to the magnetic equator, and the stations shall be located at the same distance from from the magnetic equator. The equinoxes produce most openings, and they occur a few hours after sunset, and might possibly last up to 3 hours in some very extreme case (on the VK8-JA path)



The solid line is the magnetic equator. (Please ignore all symbols.)

BIG THANKS TO

ZS4TX Bernie who is a 2m TEP enthusiast & role model, and administrator of the EU-AF 2m TEP group

EA6SX Gabriel for excellent information about 144MHz TEP on [www.dxmaps.com/tep.html](http://www.dxmaps.com/tep.html)

JR4ENY/1 Awa for excellent reporting of 144MHz TEP on the JA-VK8 path

All in the EU-AF 2m TEP group for excellent work and persistence

My own small contribution to this breakthrough was taking time to figure out where we needed a station at the South end, searching and finding Wynand V51WW. I contacted him and encouraged him to install his 144MHz antenna, provided some advice, and asked ZS4TX to add him to the EU-AF 2m TEP group.

73 de Lars "Lasse" EA7/SMOKAK