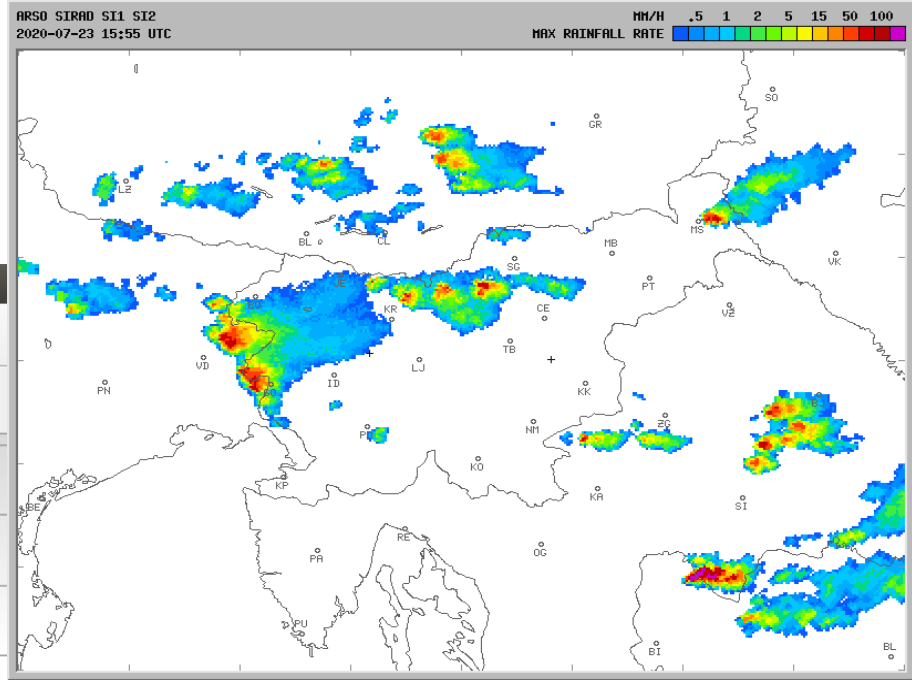


Obdelava

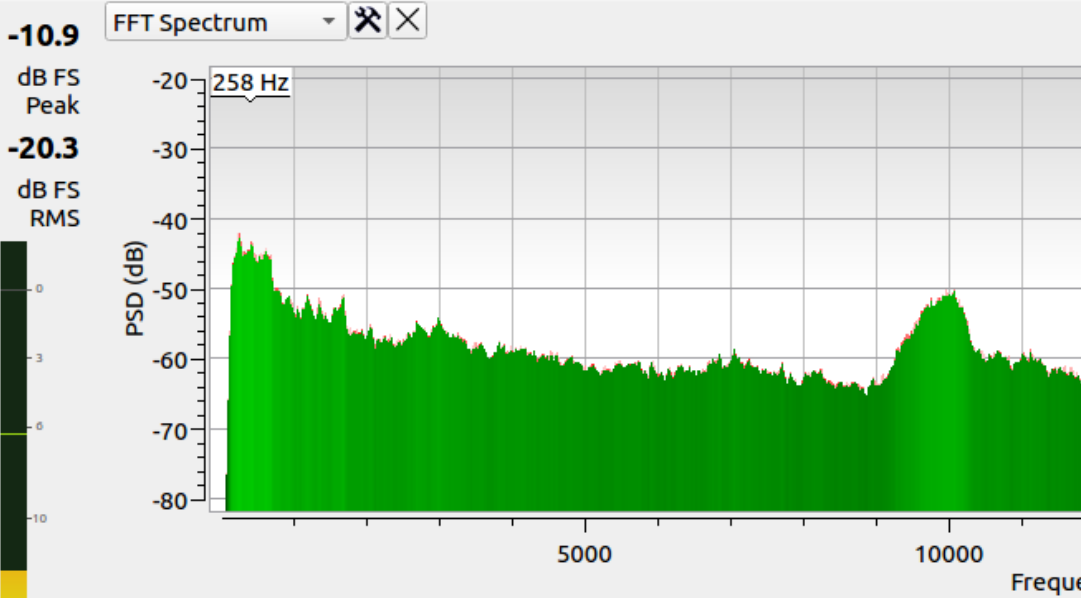
Razvoj nevihte 23.7.2020

Program Friture – vzorčenje 48kHz
Frekvenčni pas omejen na 20kHz

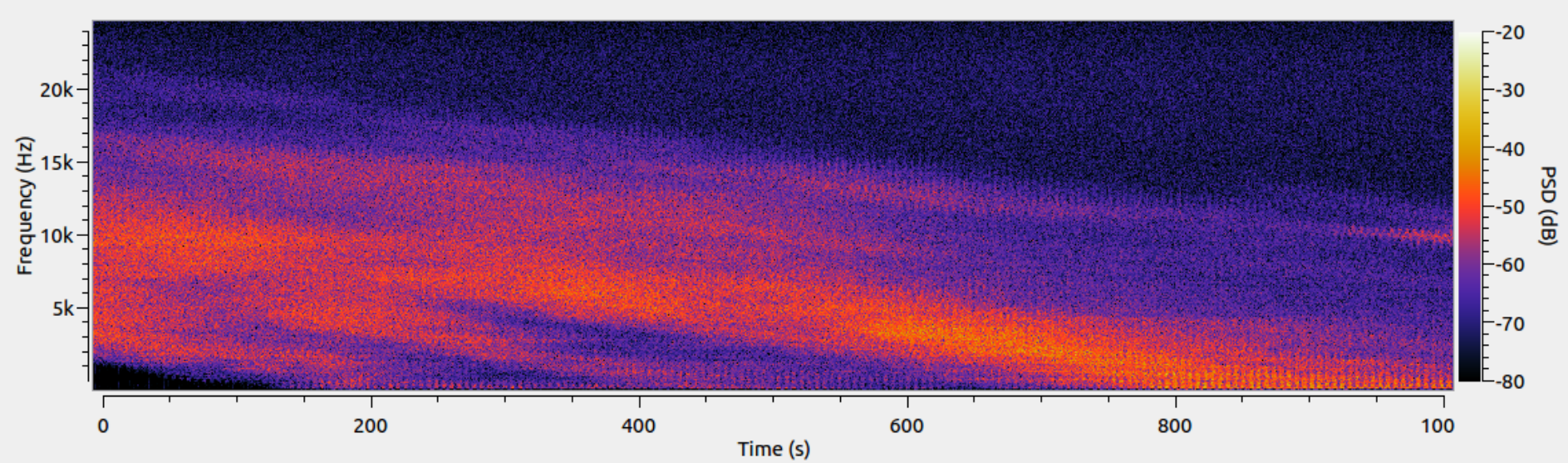


Friture

Stop New dock Settings About Friture

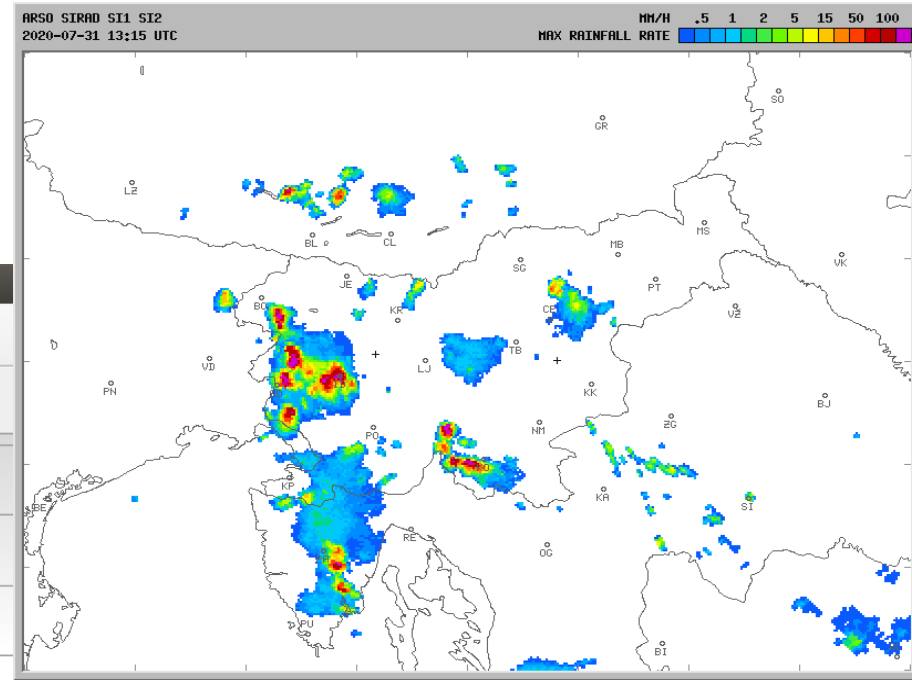


2D Spectrogram



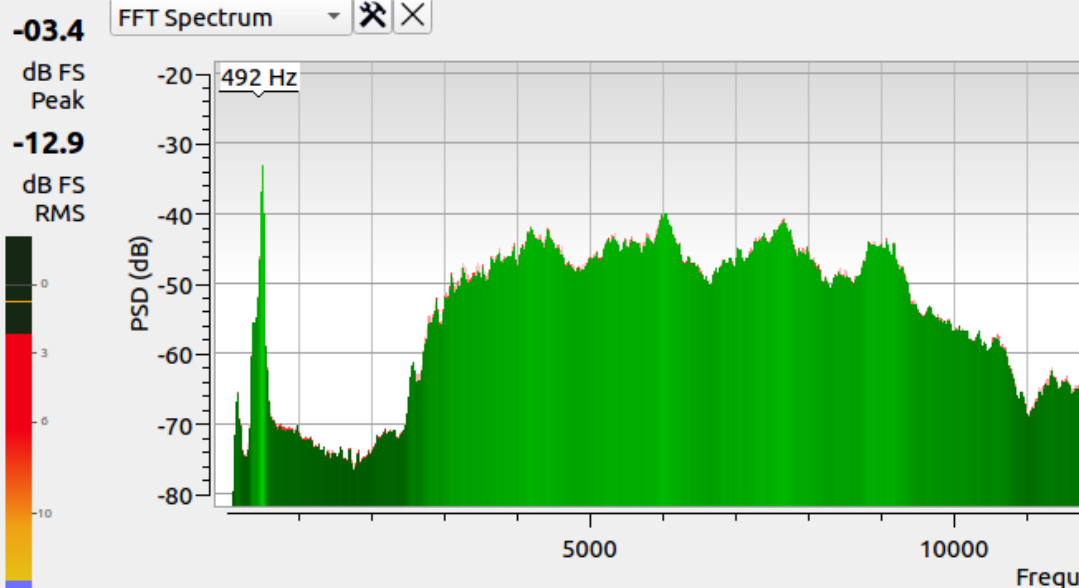
Razvoj nevihte 31.7.2020

Program Friture – vzorčenje 48kHz
Frekvenčni pas omejen na 20kHz

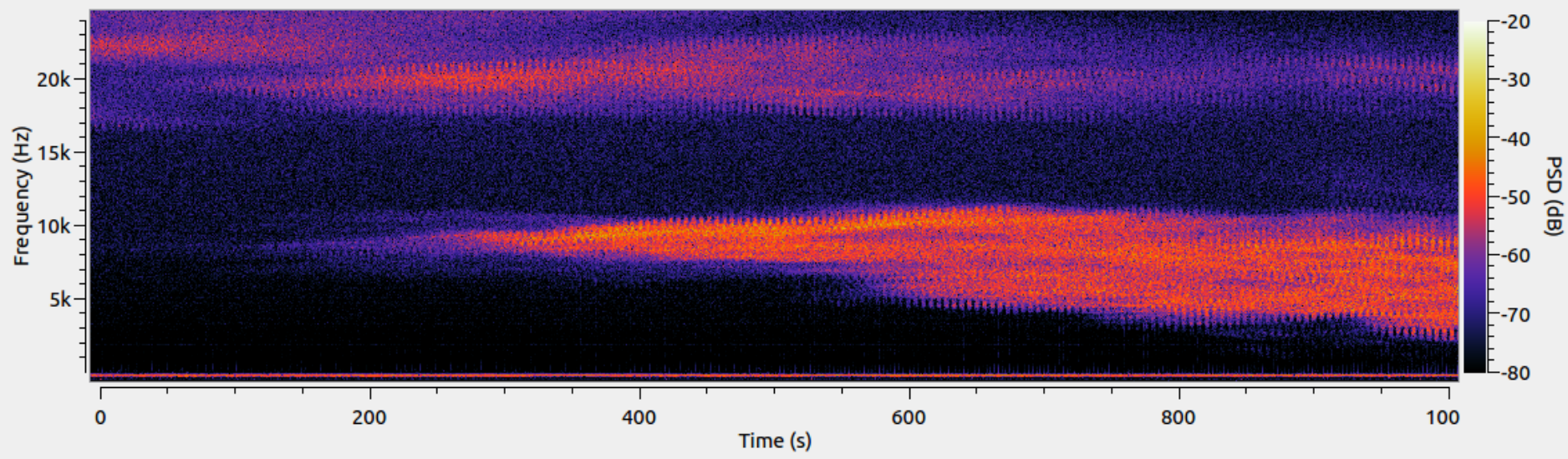


Friture

Stop New dock Settings About Friture

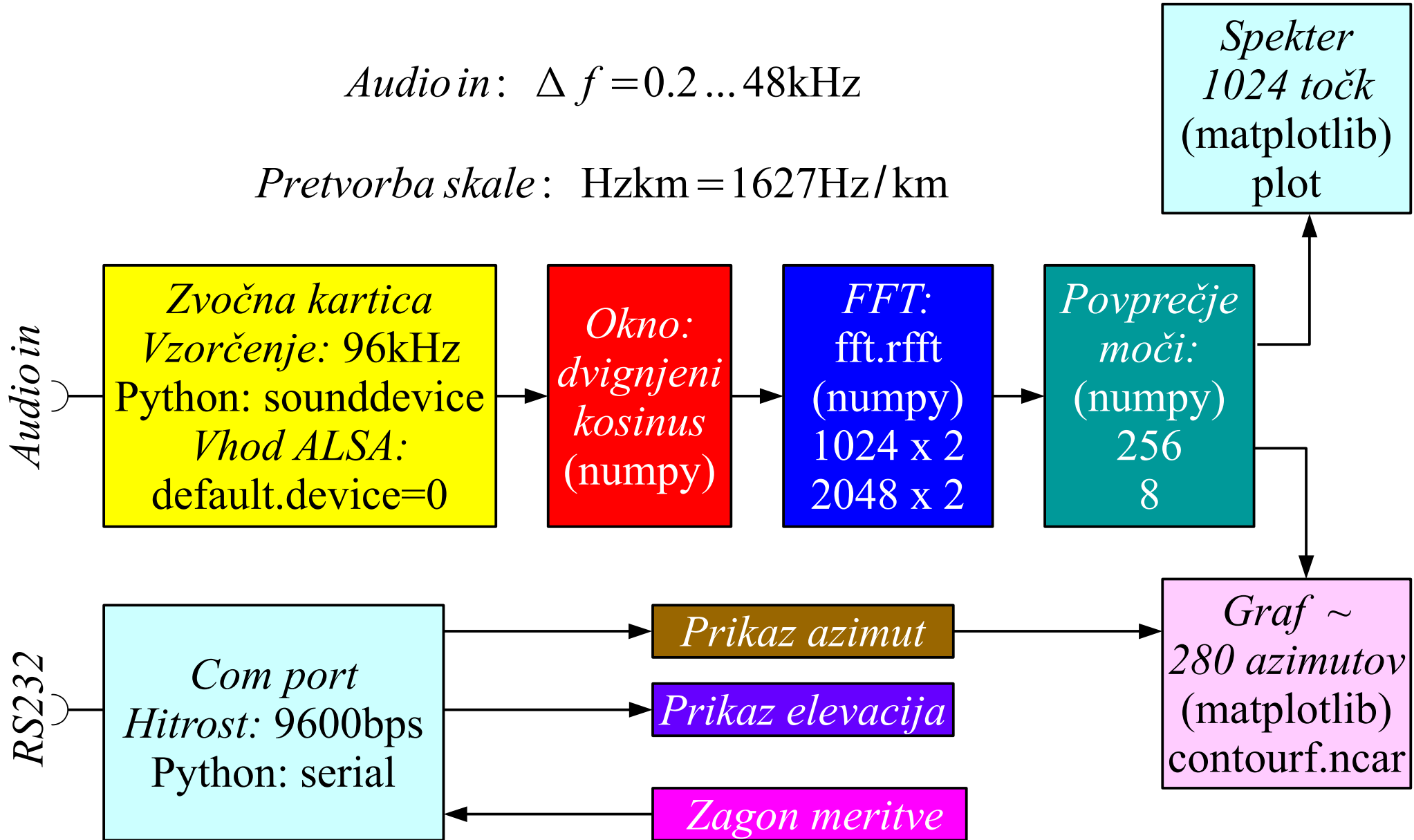


2D Spectrogram



Audio in: $\Delta f = 0.2 \dots 48\text{kHz}$

Pretvorba skale: $\text{Hzkm} = 1627\text{Hz/km}$

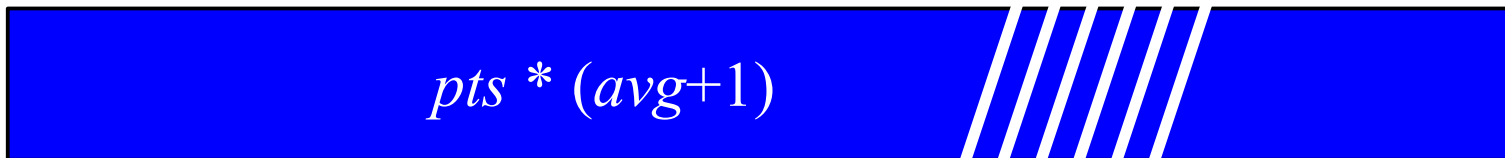


Azimut KR5600: $360^{\circ} \approx 65\text{s} \rightarrow \sim 280$ azimutov

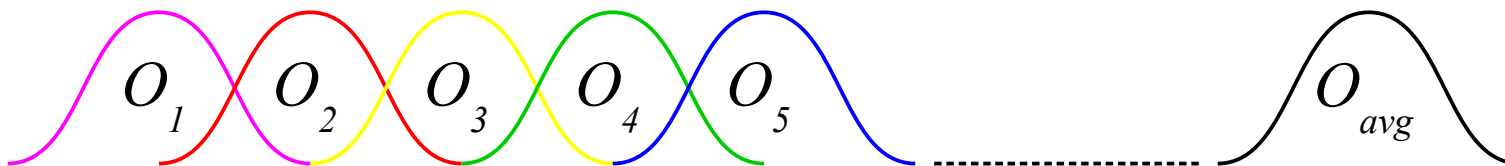
OS: Kubuntu 20.04.1

Namenski program na domačem računalniku

Vhod

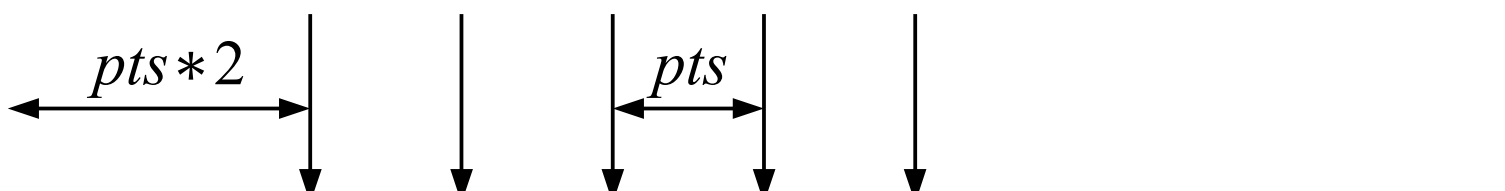
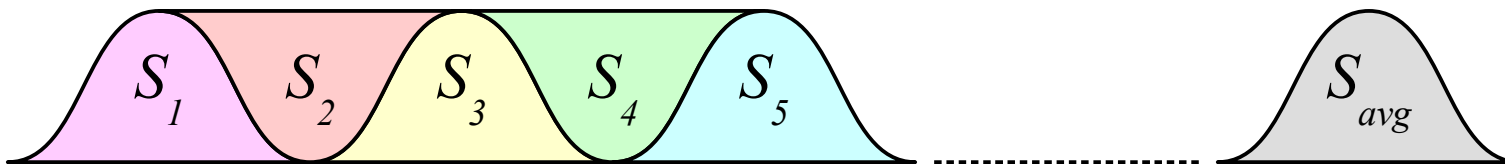


Okna

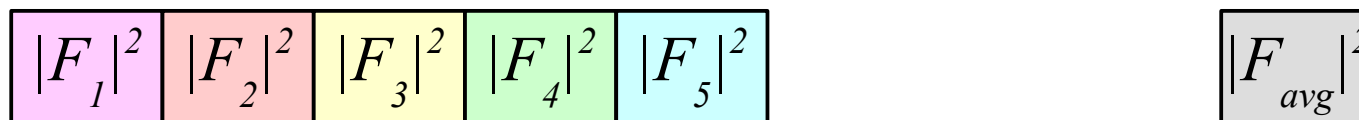


Dvignjeni kosinus

$f_j(t)$



$|FFT_j|^2$



Povprečenje
(video sito)

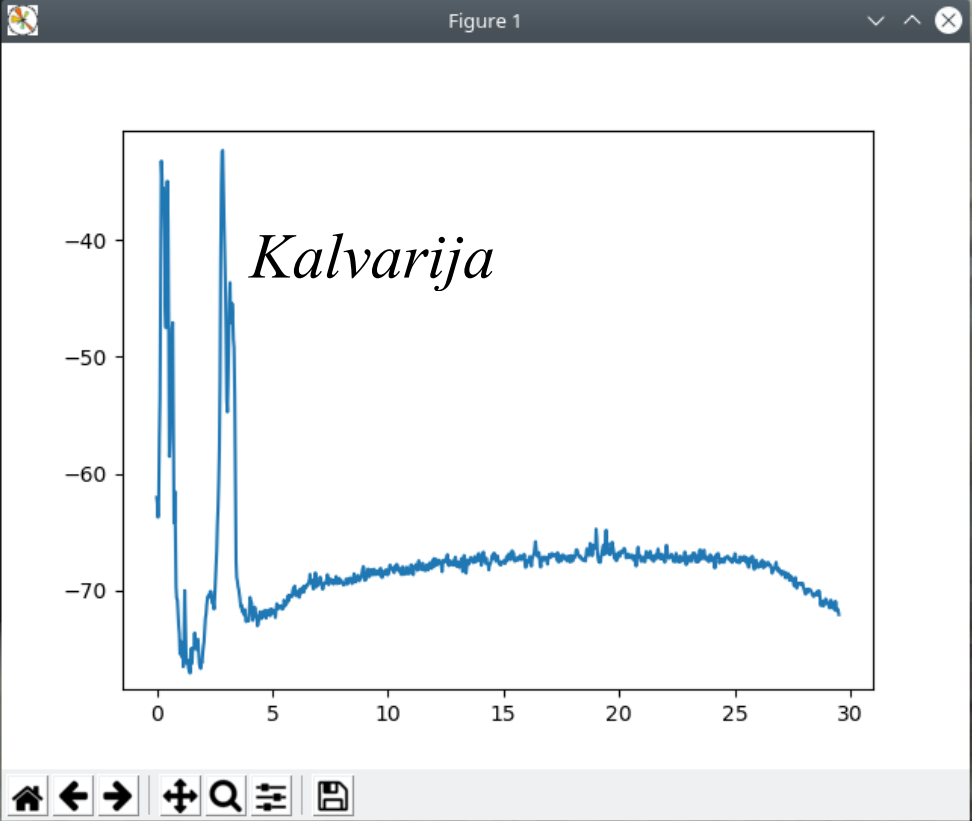
$$\langle |FFT|^2 \rangle = \frac{1}{avg} \sum_1^{avg} |F_j|^2$$

$$\Delta \log P \approx \frac{10\text{dB}}{\sqrt{avg}}$$

Računanje FFT


```

Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-24.8dB Vrh:-11.8 dB Max:-33.0dB @0.2km
Vrtiljak 71/17 AZ=264.5/EL=00.8 Jakost:-24.6dB Vrh:-10.9 dB Max:-32.9dB @2.8km
Vrtiljak 71/17 AZ=264.5/EL=00.8 Jakost:-24.8dB Vrh:-12.5 dB Max:-32.8dB @2.8km
Vrtiljak 71/17 AZ=264.5/EL=00.8 Jakost:-25.1dB Vrh:-12.4 dB Max:-33.2dB @2.8km
Vrtiljak 71/17 AZ=264.5/EL=00.8 Jakost:-25.0dB Vrh:-12.5 dB Max:-33.3dB @2.8km
Vrtiljak 71/17 AZ=264.5/EL=00.8 Jakost:-24.9dB Vrh:-11.6 dB Max:-32.6dB @2.9km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-24.9dB Vrh:-10.8 dB Max:-32.7dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-25.3dB Vrh:-11.7 dB Max:-32.8dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-25.0dB Vrh:-12.6 dB Max:-32.8dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-25.0dB Vrh:-11.4 dB Max:-32.5dB @2.9km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-24.9dB Vrh:-12.0 dB Max:-32.9dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-25.1dB Vrh:-12.2 dB Max:-33.2dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-24.7dB Vrh:-11.8 dB Max:-32.3dB @2.9km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-25.1dB Vrh:-12.5 dB Max:-32.9dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-25.2dB Vrh:-11.6 dB Max:-33.1dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-25.5dB Vrh:-12.8 dB Max:-33.2dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-25.4dB Vrh:-11.6 dB Max:-33.2dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-25.2dB Vrh:-12.8 dB Max:-33.4dB @2.8km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-25.0dB Vrh:-11.4 dB Max:-33.0dB @2.9km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-25.2dB Vrh:-13.0 dB Max:-33.4dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-25.2dB Vrh:-11.4 dB Max:-33.1dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-25.1dB Vrh:-12.8 dB Max:-32.7dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-25.1dB Vrh:-12.4 dB Max:-32.8dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-25.2dB Vrh:-12.7 dB Max:-32.7dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-25.2dB Vrh:-12.1 dB Max:-32.8dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-24.8dB Vrh:-11.7 dB Max:-32.9dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-24.9dB Vrh:-11.7 dB Max:-32.8dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-25.0dB Vrh:-11.7 dB Max:-32.8dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-25.0dB Vrh:-11.8 dB Max:-32.8dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-24.9dB Vrh:-12.2 dB Max:-32.7dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-24.9dB Vrh:-12.2 dB Max:-32.7dB @2.9km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-25.1dB Vrh:-11.6 dB Max:-32.7dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-25.1dB Vrh:-12.4 dB Max:-32.8dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-25.1dB Vrh:-12.1 dB Max:-32.6dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-25.0dB Vrh:-10.8 dB Max:-32.7dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-25.0dB Vrh:-12.3 dB Max:-32.7dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-24.8dB Vrh:-12.1 dB Max:-31.6dB @2.9km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-24.6dB Vrh:-11.6 dB Max:-32.2dB @2.9km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-24.9dB Vrh:-12.5 dB Max:-32.8dB @0.2km
Vrtiljak 70/17 AZ=263.0/EL=00.8 Jakost:-24.9dB Vrh:-12.0 dB Max:-32.3dB @2.9km
    
```



Spekter s programom wxs1.py

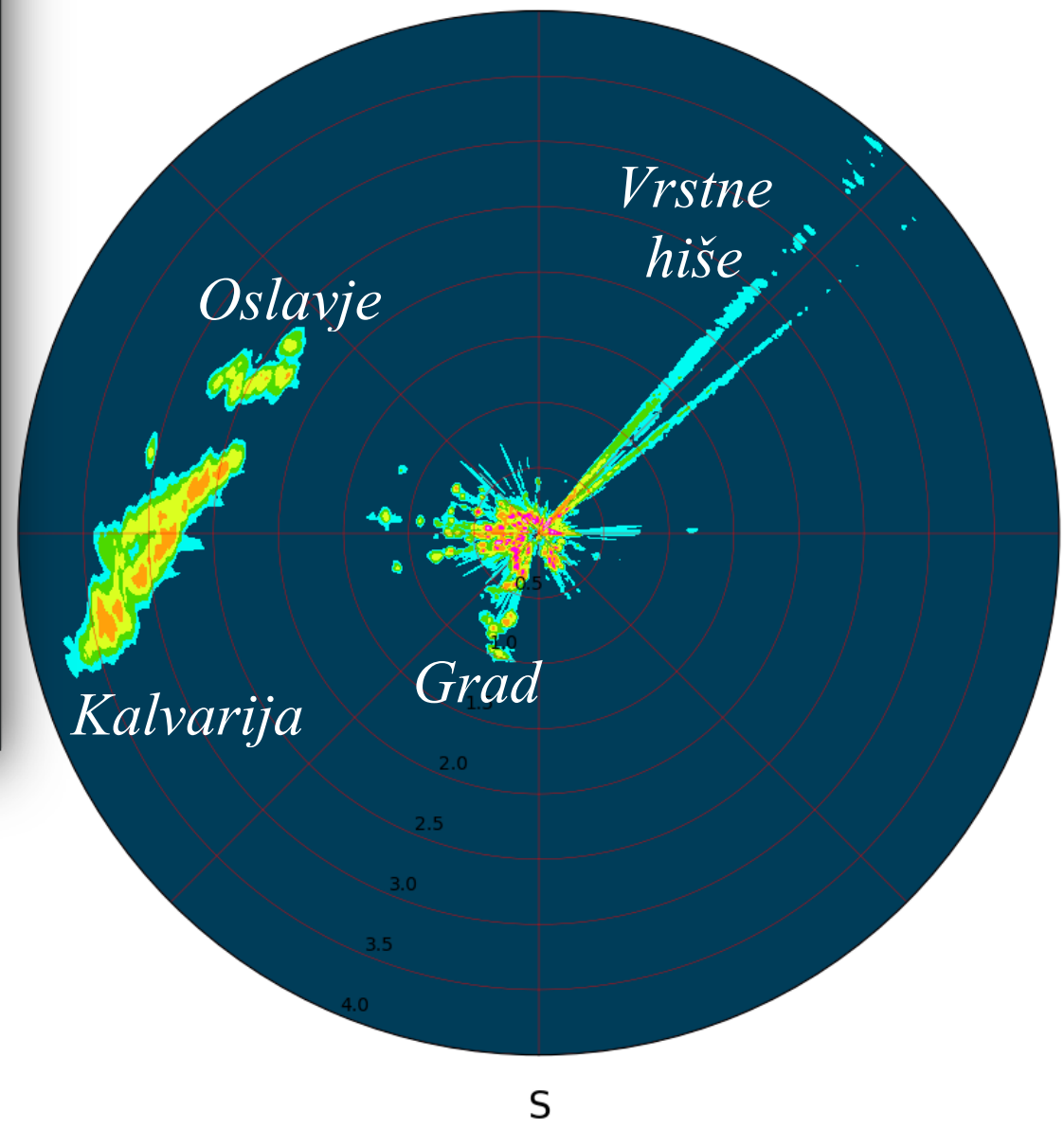
Desktop : wxr1.py — Konsole

```

File Edit View Bookmarks Settings Help
Vrtiljak 220/17 AZ=137.7/EL=00.8 Jakost -39.8dB Vrh -27.6dB Max -47.1dB @@.2k
Vrtiljak 221/17 AZ=139.3/EL=00.8 Jakost -37.6dB Vrh -26.1dB Max -41.6dB @@.2k
Vrtiljak 222/17 AZ=140.9/EL=00.8 Jakost -31.2dB Vrh -20.7dB Max -32.6dB @@.2k
Vrtiljak 223/17 AZ=142.4/EL=00.8 Jakost -30.4dB Vrh -19.0dB Max -32.6dB @@.2k
Vrtiljak 224/17 AZ=144.0/EL=00.8 Jakost -29.2dB Vrh -17.3dB Max -34.5dB @@.2k
Vrtiljak 225/17 AZ=145.6/EL=00.8 Jakost -28.1dB Vrh -15.3dB Max -32.8dB @@.2k
Vrtiljak 226/17 AZ=147.1/EL=00.8 Jakost -27.5dB Vrh -18.2dB Max -30.1dB @@.2k
Vrtiljak 227/17 AZ=148.7/EL=00.8 Jakost -27.2dB Vrh -15.5dB Max -31.4dB @@.2k
Vrtiljak 227/17 AZ=148.7/EL=00.8 Jakost -30.5dB Vrh -19.8dB Max -36.2dB @@.2k
Vrtiljak 229/17 AZ=151.8/EL=00.8 Jakost -29.5dB Vrh -19.0dB Max -33.7dB @@.2k
Vrtiljak 229/17 AZ=151.8/EL=00.8 Jakost -29.0dB Vrh -16.0dB Max -32.9dB @@.2k
Vrtiljak 230/17 AZ=153.4/EL=00.8 Jakost -27.3dB Vrh -17.0dB Max -31.3dB @@.2k
Vrtiljak 231/17 AZ=155.0/EL=00.8 Jakost -26.2dB Vrh -14.3dB Max -30.9dB @@.3k
Vrtiljak 232/17 AZ=156.5/EL=00.8 Jakost -27.2dB Vrh -16.1dB Max -31.2dB @@.2k
Vrtiljak 233/17 AZ=158.1/EL=00.8 Jakost -26.0dB Vrh -15.6dB Max -28.6dB @@.2k
Vrtiljak 234/17 AZ=159.7/EL=00.8 Jakost -27.5dB Vrh -16.2dB Max -30.3dB @@.2k
Vrtiljak 234/17 AZ=159.7/EL=00.8 Jakost -28.8dB Vrh -17.7dB Max -34.0dB @@.2k
Vrtiljak 235/17 AZ=161.2/EL=00.8 Jakost -31.3dB Vrh -18.8dB Max -33.4dB @@.2k
Vrtiljak 236/17 AZ=162.8/EL=00.8 Jakost -34.8dB Vrh -24.0dB Max -36.6dB @@.2k
Vrtiljak 237/17 AZ=164.3/EL=00.8 Jakost -37.4dB Vrh -25.6dB Max -42.8dB @@.2k
Vrtiljak 238/17 AZ=165.9/EL=00.8 Jakost -34.2dB Vrh -23.7dB Max -35.6dB @@.2k
Vrtiljak 239/17 AZ=167.5/EL=00.8 Jakost -36.6dB Vrh -23.9dB Max -40.0dB @@.2k
Vrtiljak 240/17 AZ=169.0/EL=00.8 Jakost -36.3dB Vrh -22.5dB Max -40.3dB @@.2k
Vrtiljak 240/17 AZ=169.0/EL=00.8 Jakost -36.9dB Vrh -21.1dB Max -41.0dB @@.2k
Vrtiljak 241/17 AZ=170.6/EL=00.8 Jakost -38.5dB Vrh -27.3dB Max -42.9dB @@.2k
Vrtiljak 242/17 AZ=172.2/EL=00.8 Jakost -40.0dB Vrh -27.2dB Max -49.4dB @@.2k
Vrtiljak 243/17 AZ=173.7/EL=00.8 Jakost -40.1dB Vrh -27.1dB Max -50.7dB @@.1k
Vrtiljak 244/17 AZ=175.3/EL=00.8 Jakost -40.9dB Vrh -29.0dB Max -51.5dB @@.0k
Vrtiljak 245/17 AZ=176.9/EL=00.8 Jakost -41.3dB Vrh -27.6dB Max -54.3dB @@.0k
Vrtiljak 246/17 AZ=178.4/EL=00.8 Jakost -38.3dB Vrh -26.1dB Max -42.6dB @@.0k
Vrtiljak 247/17 AZ=180.0/EL=00.8 Jakost -40.1dB Vrh -28.1dB Max -47.6dB @@.0k
Vrtiljak 247/17 AZ=180.0/EL=00.8 Jakost -41.3dB Vrh -29.2dB Max -56.0dB @@.0k
Dolzina zapisa 281 azimutov
Ime meritve: 2023May03-093420
Smer vrtenja 1
Domet 29.5 km
EL=00.8°
Polmer[km] risbe: 4
Polmer 4.0 km
Prečitano 281 azimutov

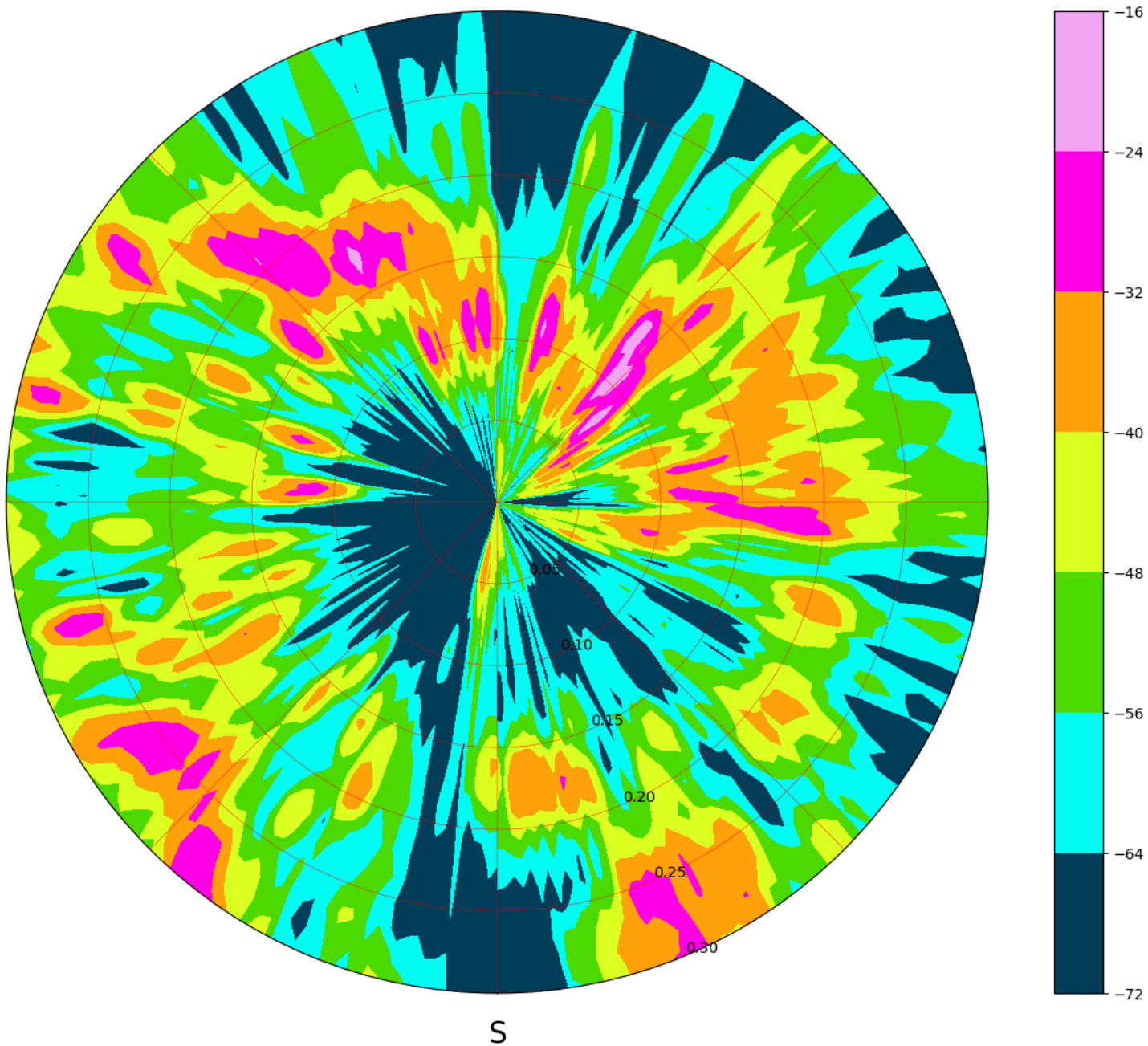
```

2023May03-093420 EL=00.8° Smer=1 4.0/29.5km



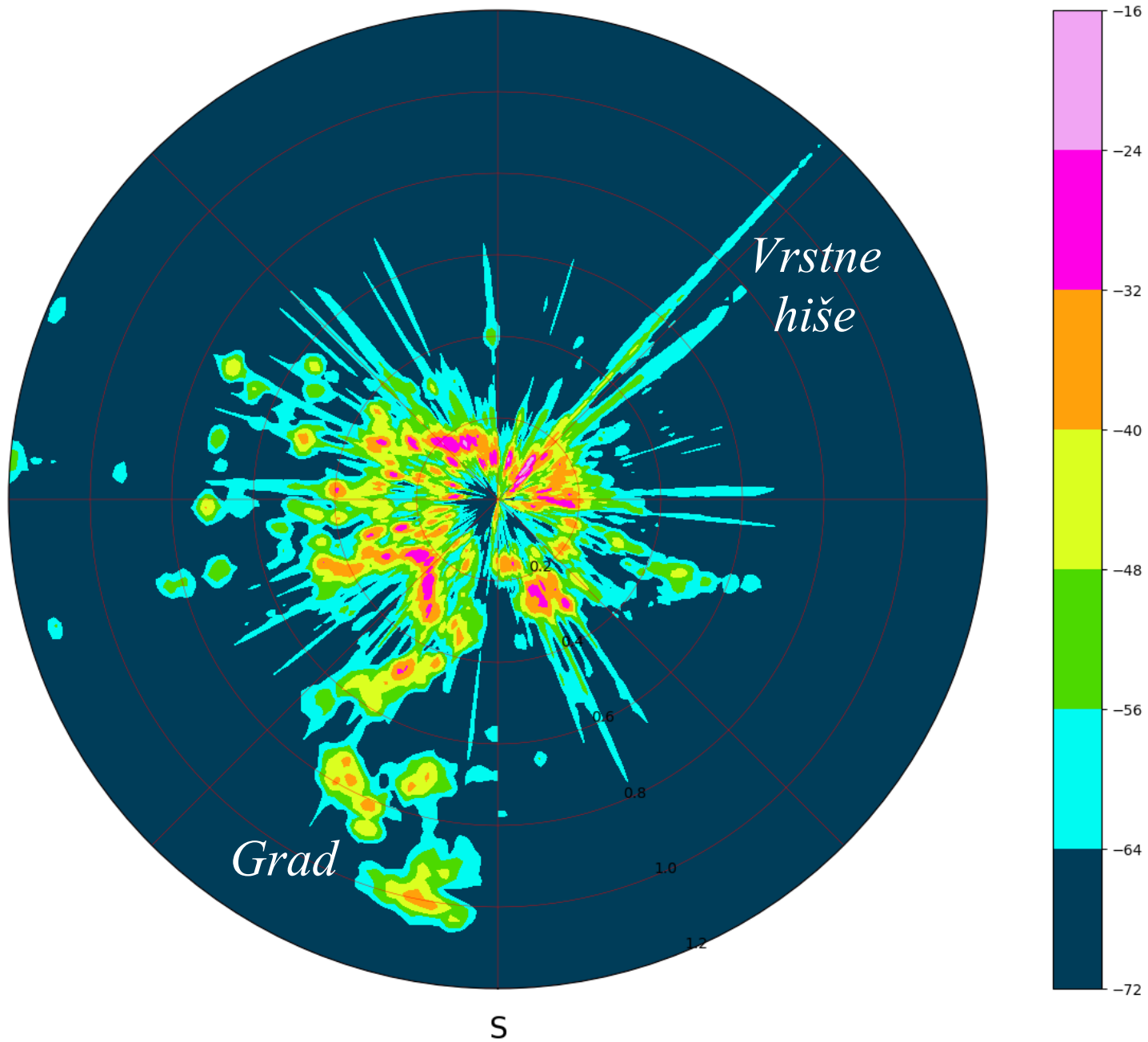
Graf s programom wxr1.py

2023Mar20-120310 EL=01.6° Smer=-1 0.3/29.5km



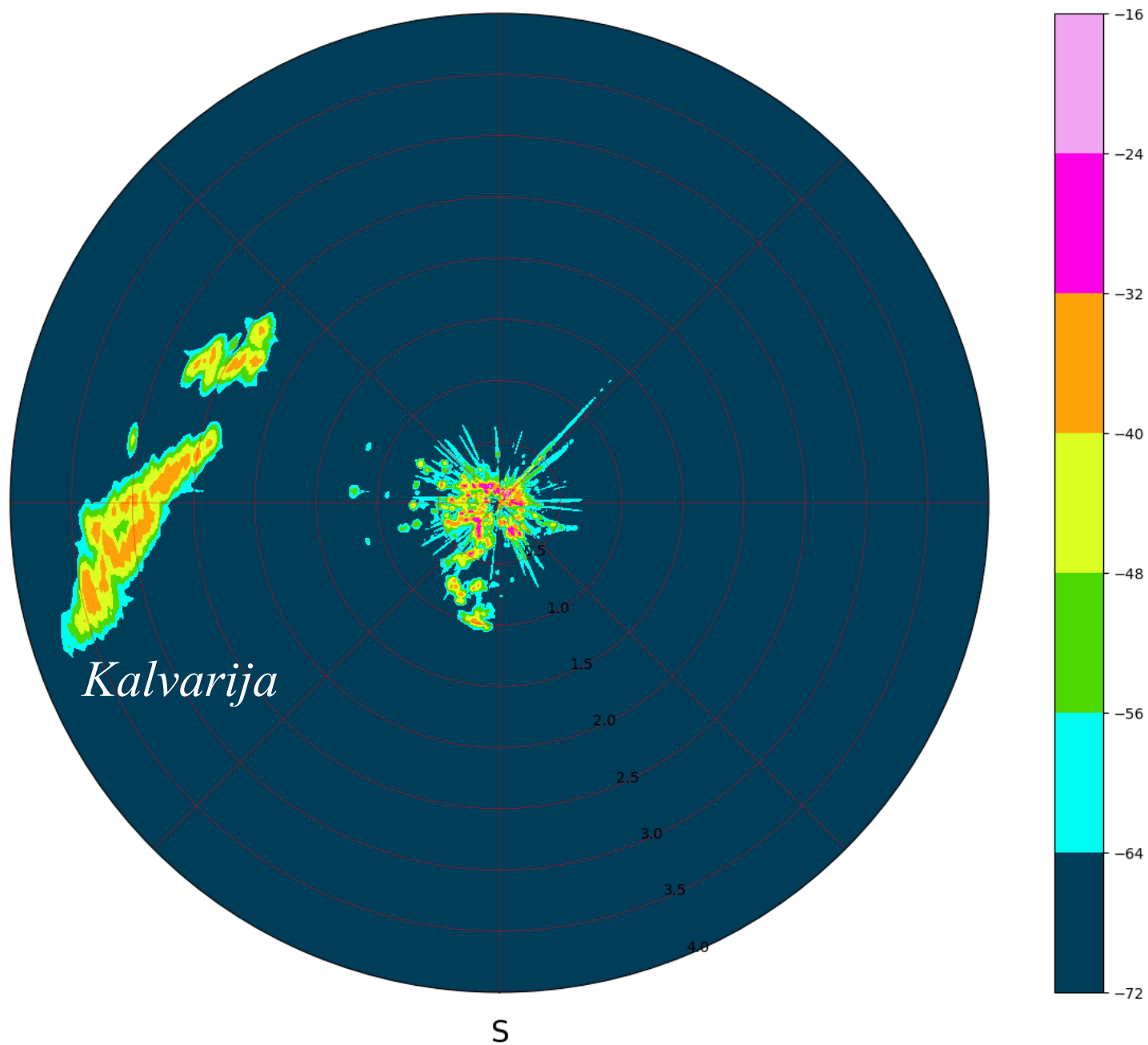
Elevacija 1.6° domet 300m

2023Mar20-120310 EL=01.6° Smer=-1 1.2/29.5km



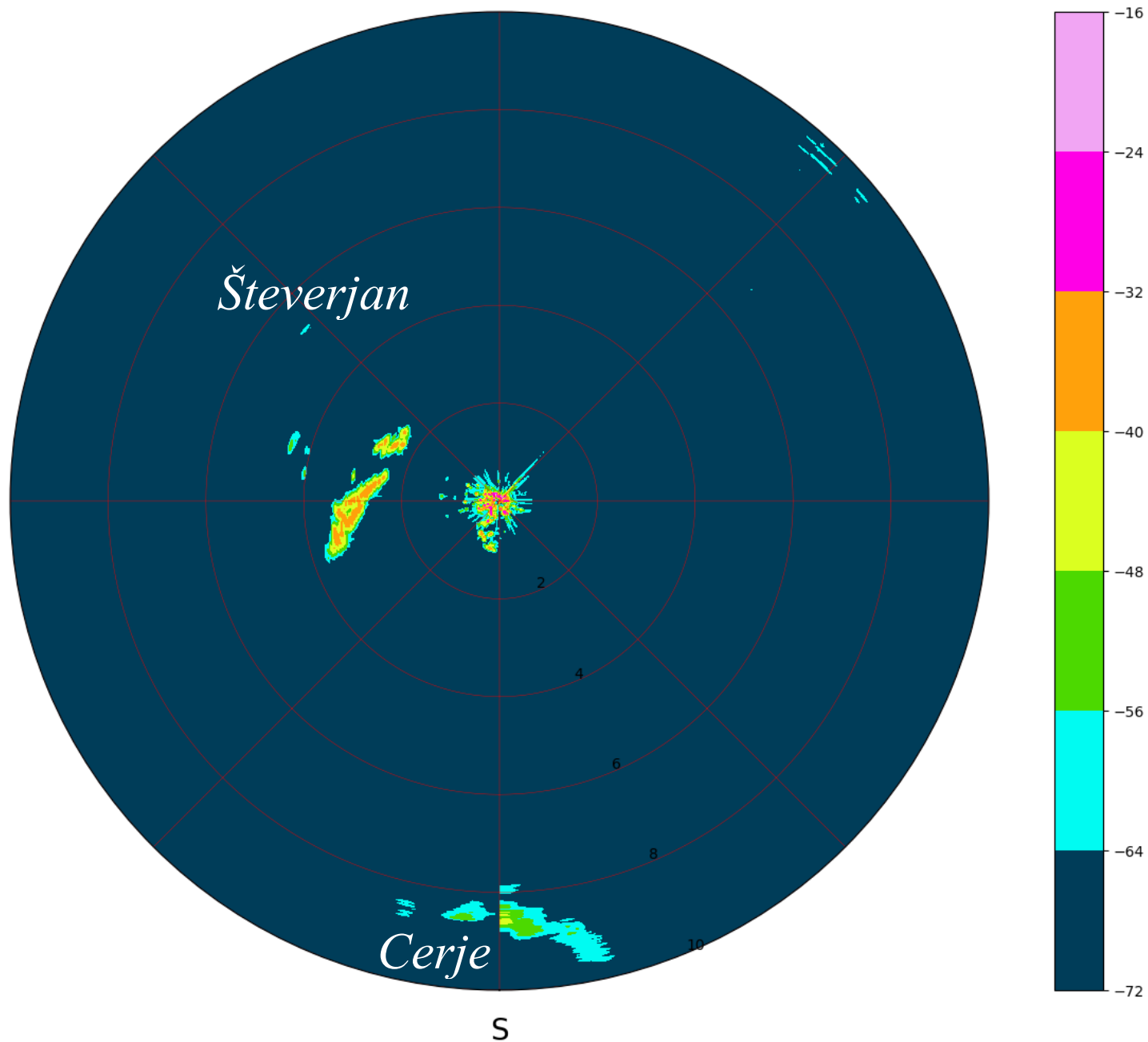
Elevacija 1.6° domet 1.2km

2023Mar20-120310 EL=01.6° Smer=-1 4.0/29.5km



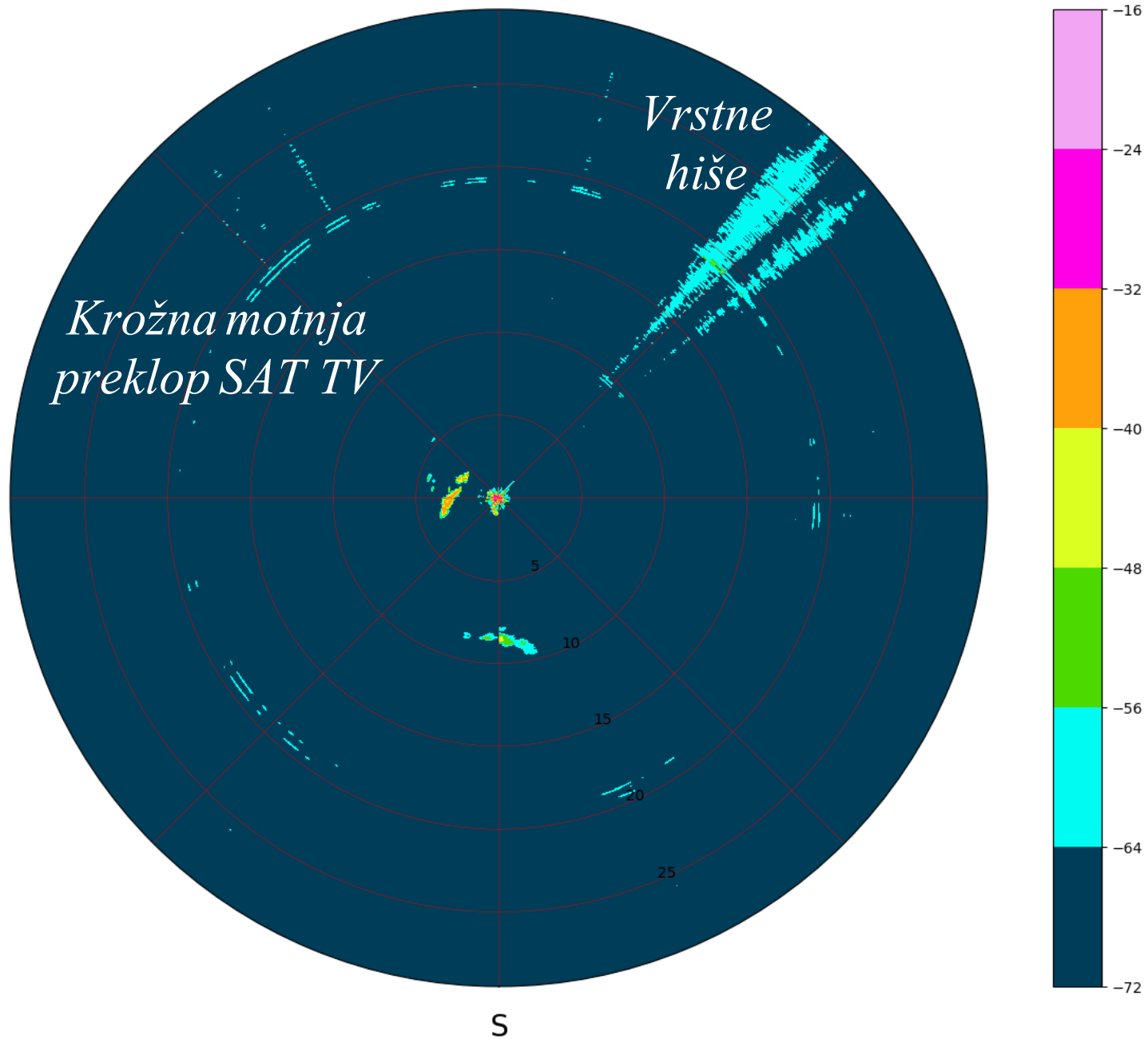
Elevacija 1.6° domet 4km

2023Mar20-120310 EL=01.6° Smer=-1 10.0/29.5km



Elevacija 1.6° domet 10km

2023Mar20-120310 EL=01.6° Smer=-1 29.5/29.5km

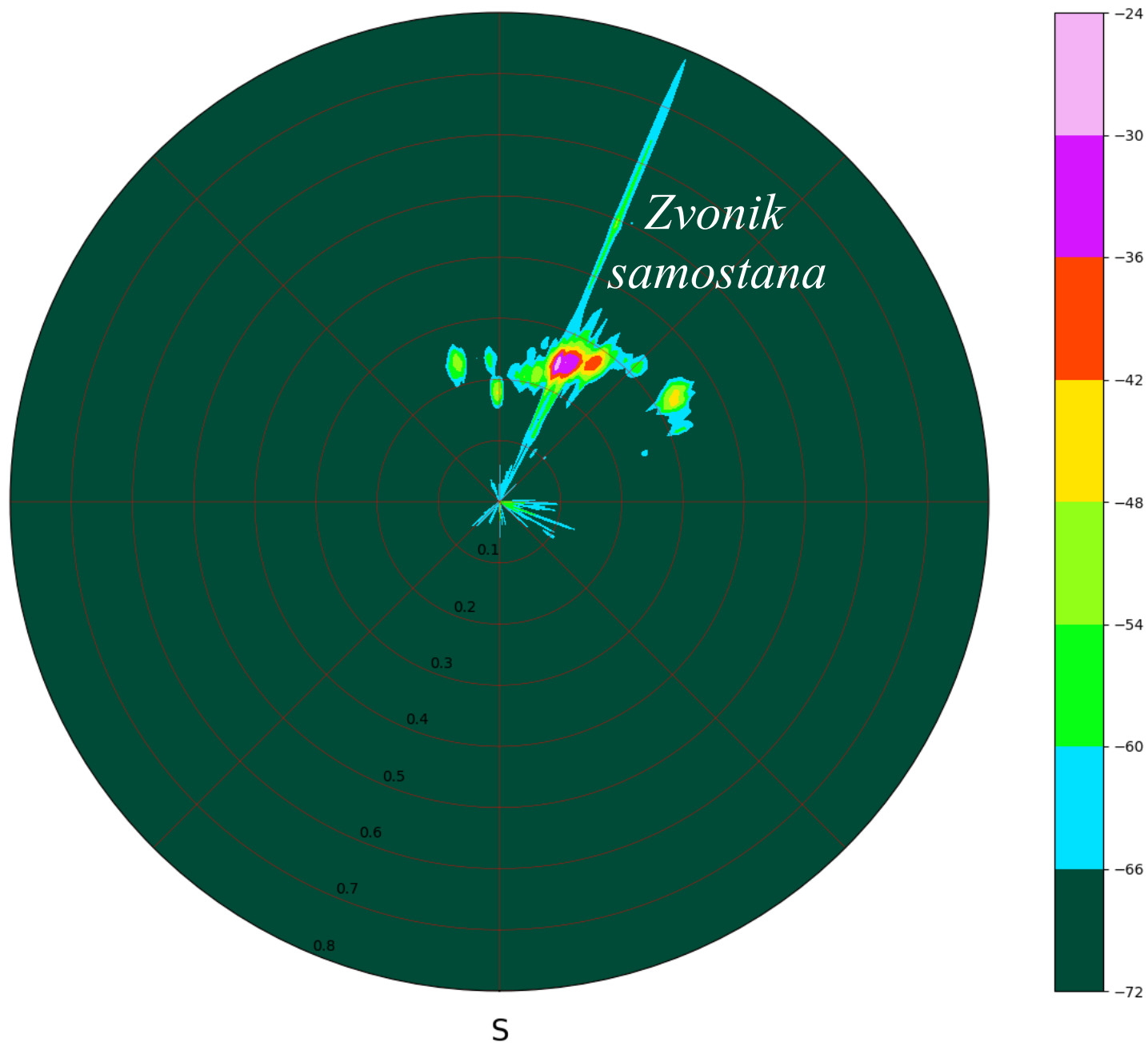


Elevacija 1.6° domet 29.5km



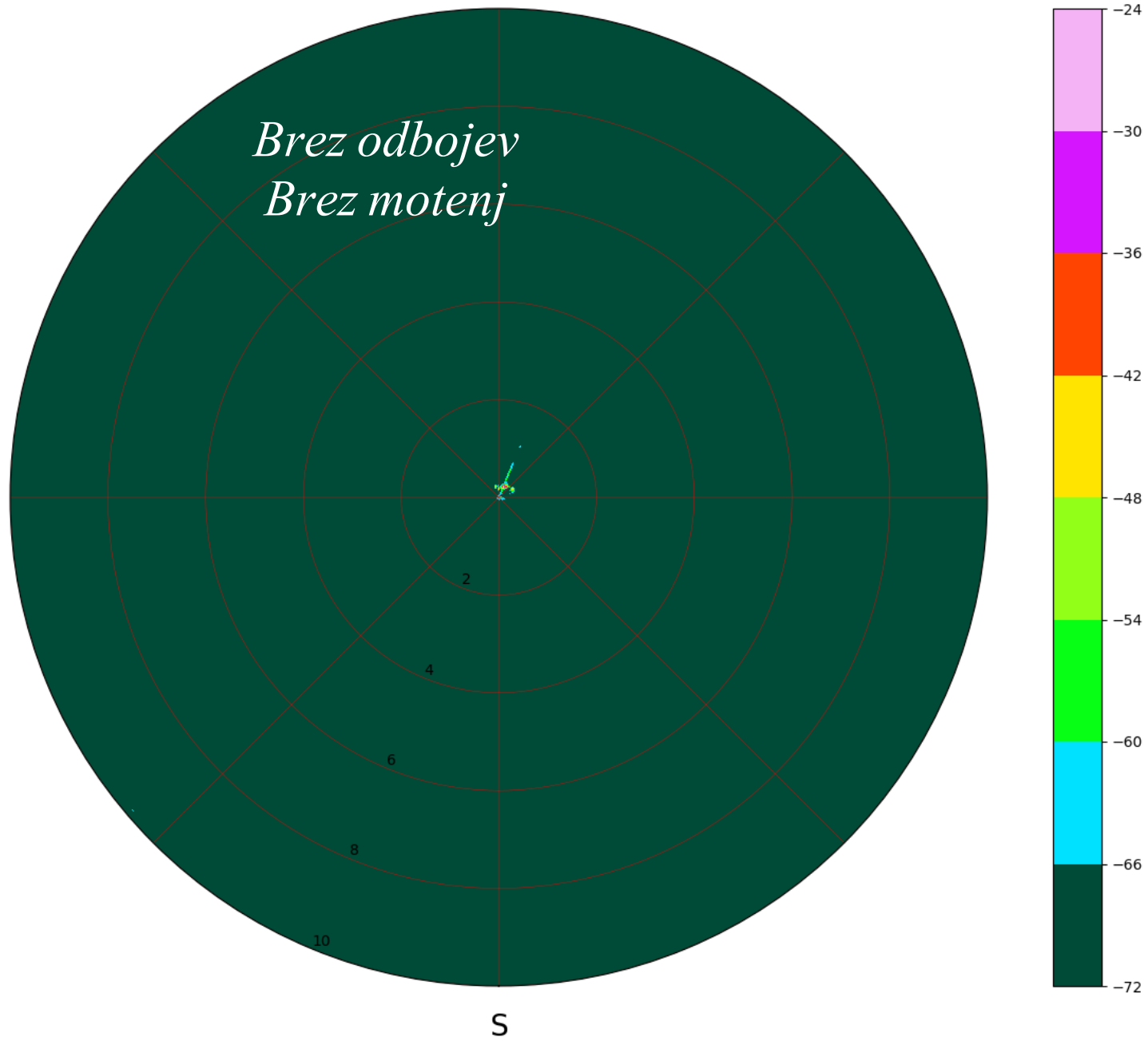
Samostan Kostanjevica

2023Apr02-161838 EL=15.0° Smer=1 0.8/29.5km



Elevacija 15° domet 800m

2023Apr02-161838 EL=15.0° Smer=1 10.0/29.5km



Elevacija 15° domet 10km