

MWA RFI

Soncity FM

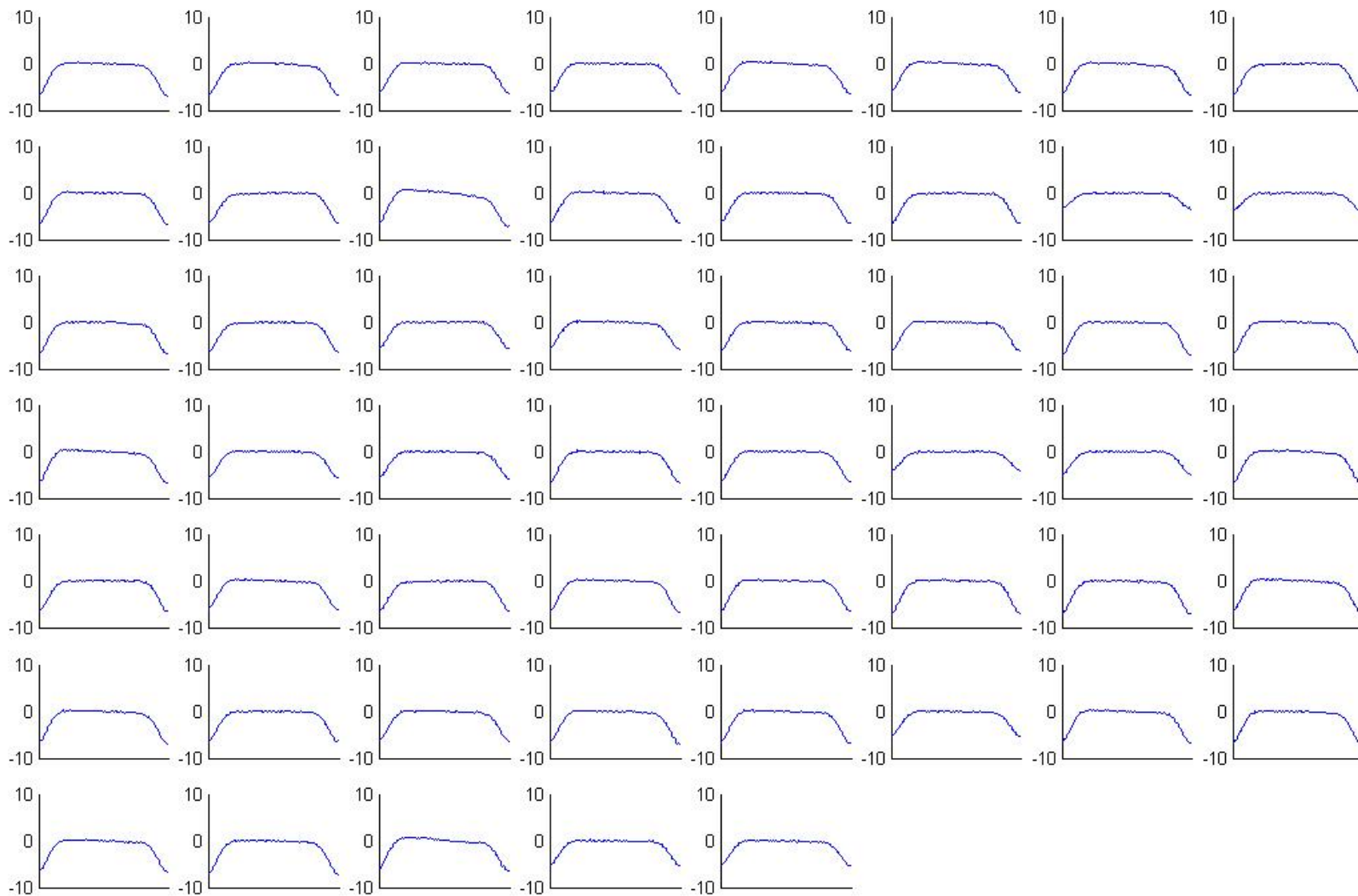
Hydra A

Solar

Soncity FM

- Expected to find 97.3MHz, 500 watt signal, ~300km away.
- Found nothing in 5 minute integration.

Power (dB)



Freq (Ch)

Soncity FM

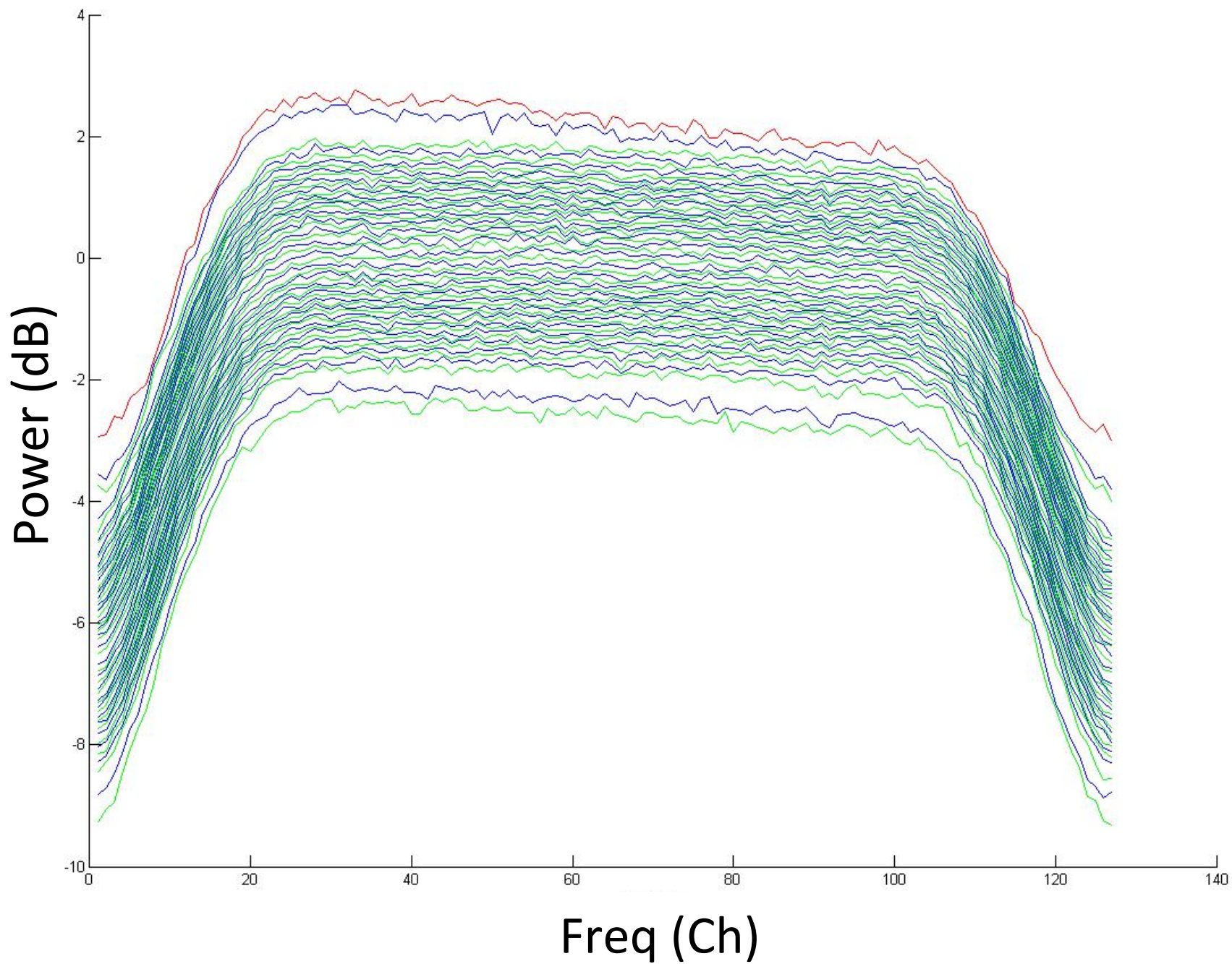
- Looked at eigenvalue spectra, power increasing by square of inputs.
- Still found nothing.

$$C = U \Sigma U^H$$

$$\begin{pmatrix} c_{11} & \cdots & c_{1N} \\ \vdots & \ddots & \vdots \\ c_{N1} & \cdots & c_{NN} \end{pmatrix} = \begin{pmatrix} u_{11} & \cdots & u_{1N} \\ \vdots & \ddots & \vdots \\ u_{N1} & \cdots & u_{NN} \end{pmatrix} \begin{pmatrix} \sigma_{11} & 0 & 0 \\ 0 & \ddots & 0 \\ 0 & 0 & \sigma_{NN} \end{pmatrix} \begin{pmatrix} u_{11} & \cdots & u_{1N} \\ \vdots & \ddots & \vdots \\ u_{N1} & \cdots & u_{NN} \end{pmatrix}^H$$



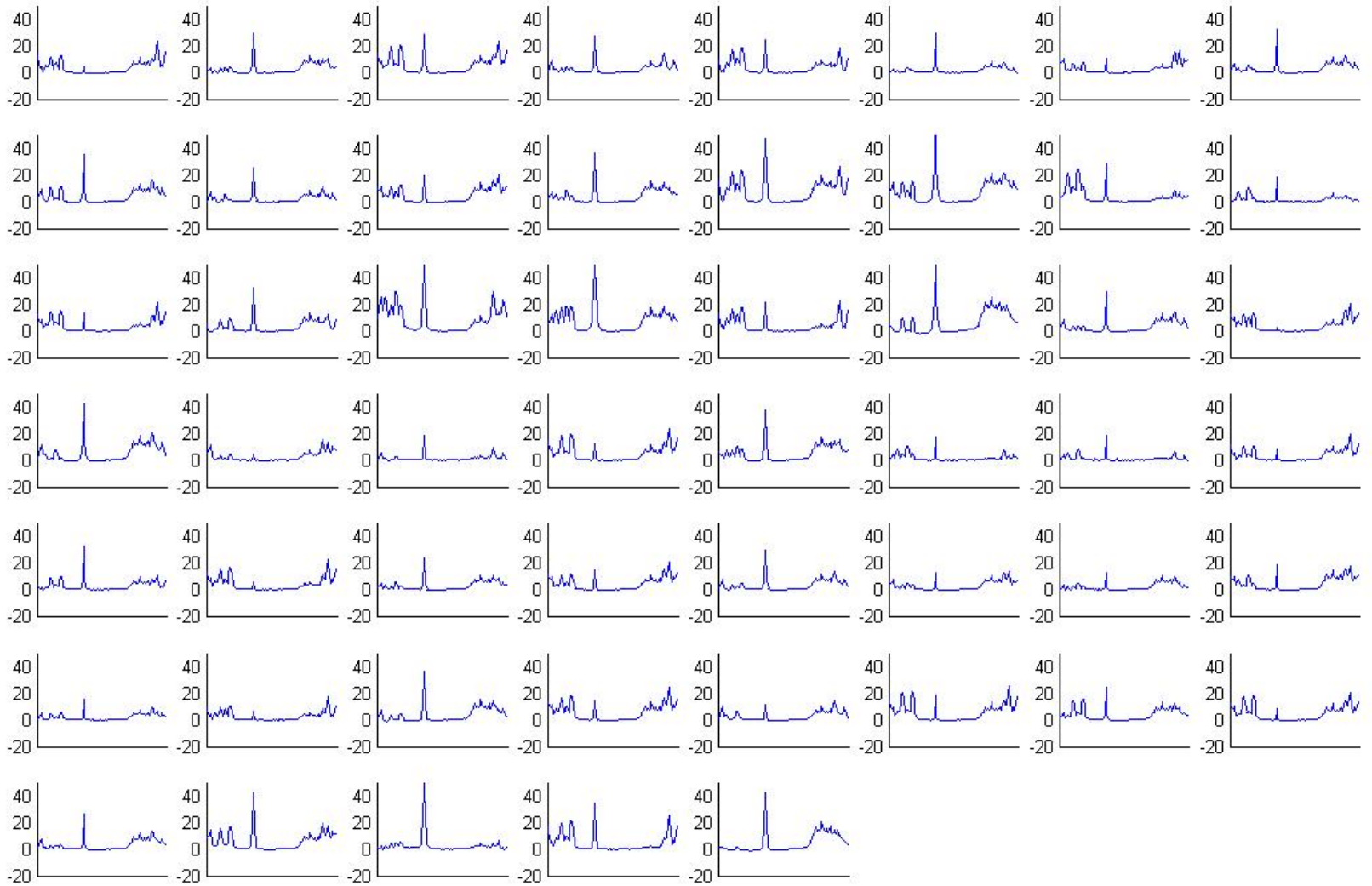
Powers



Hydra A- 261MHz

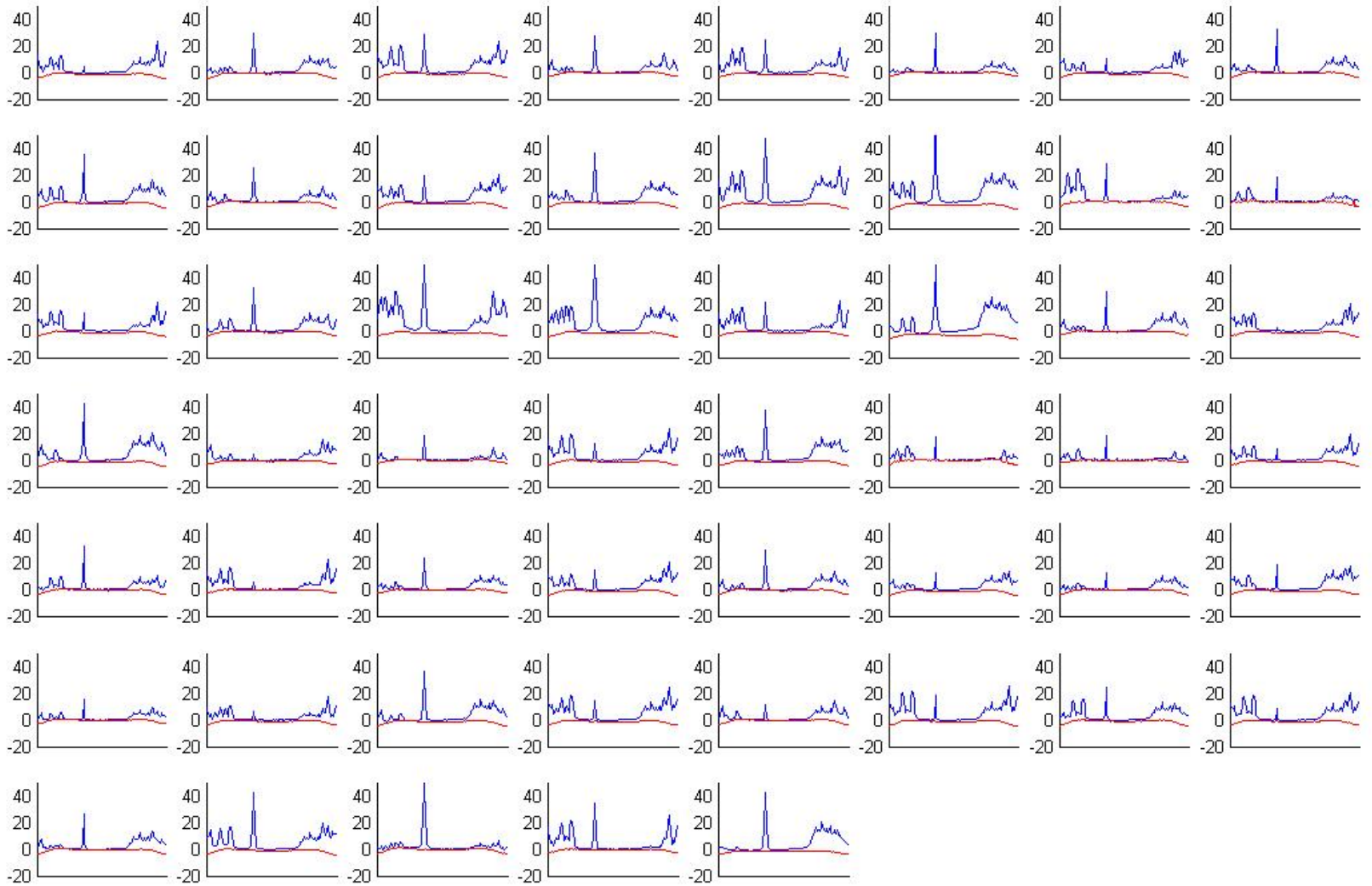
- Lots of satellite interference.
- Cancels quite well.

Power (dB)



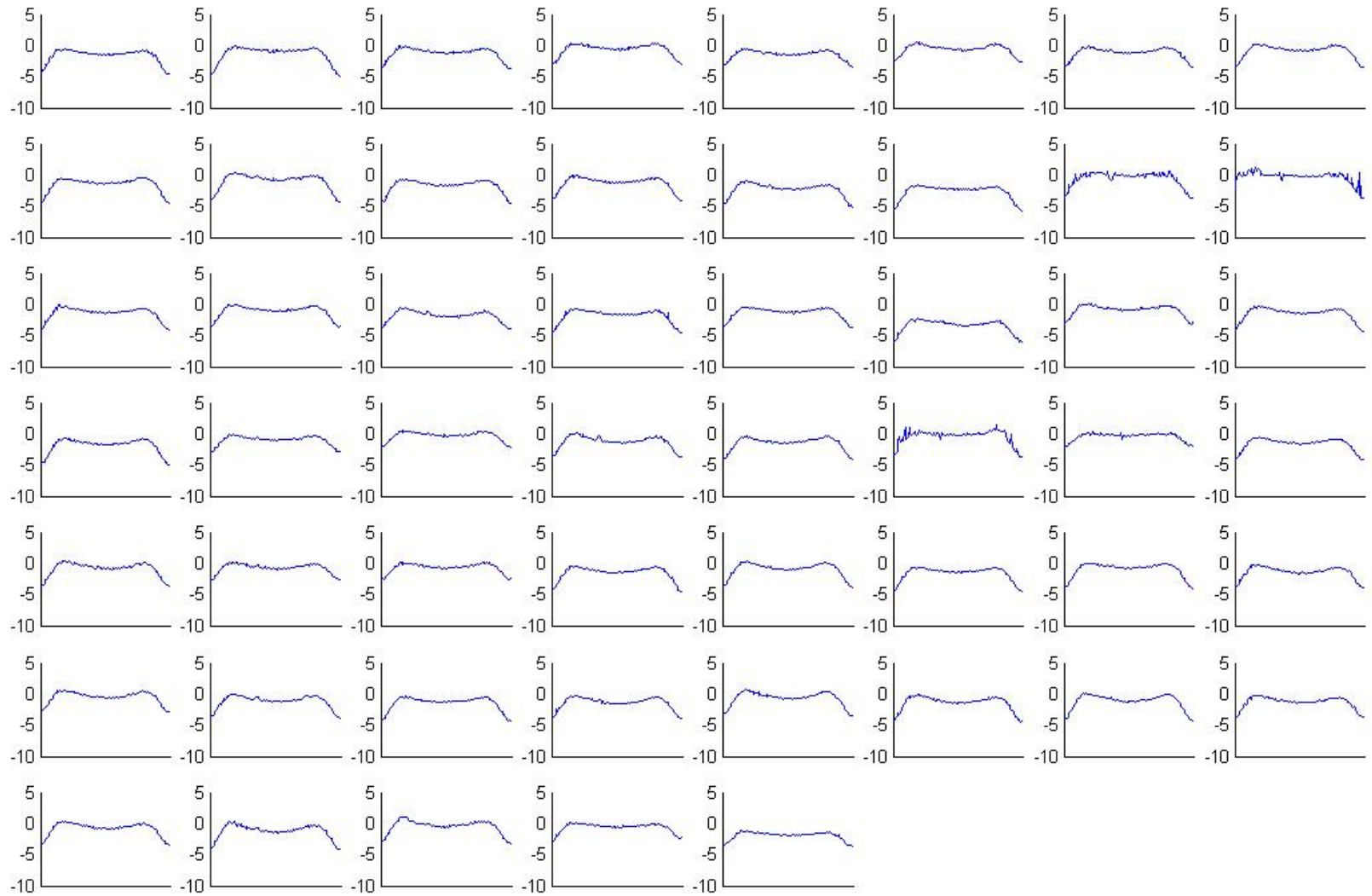
Freq (Ch)

Power (dB)



Freq (Ch)

Power (dB)

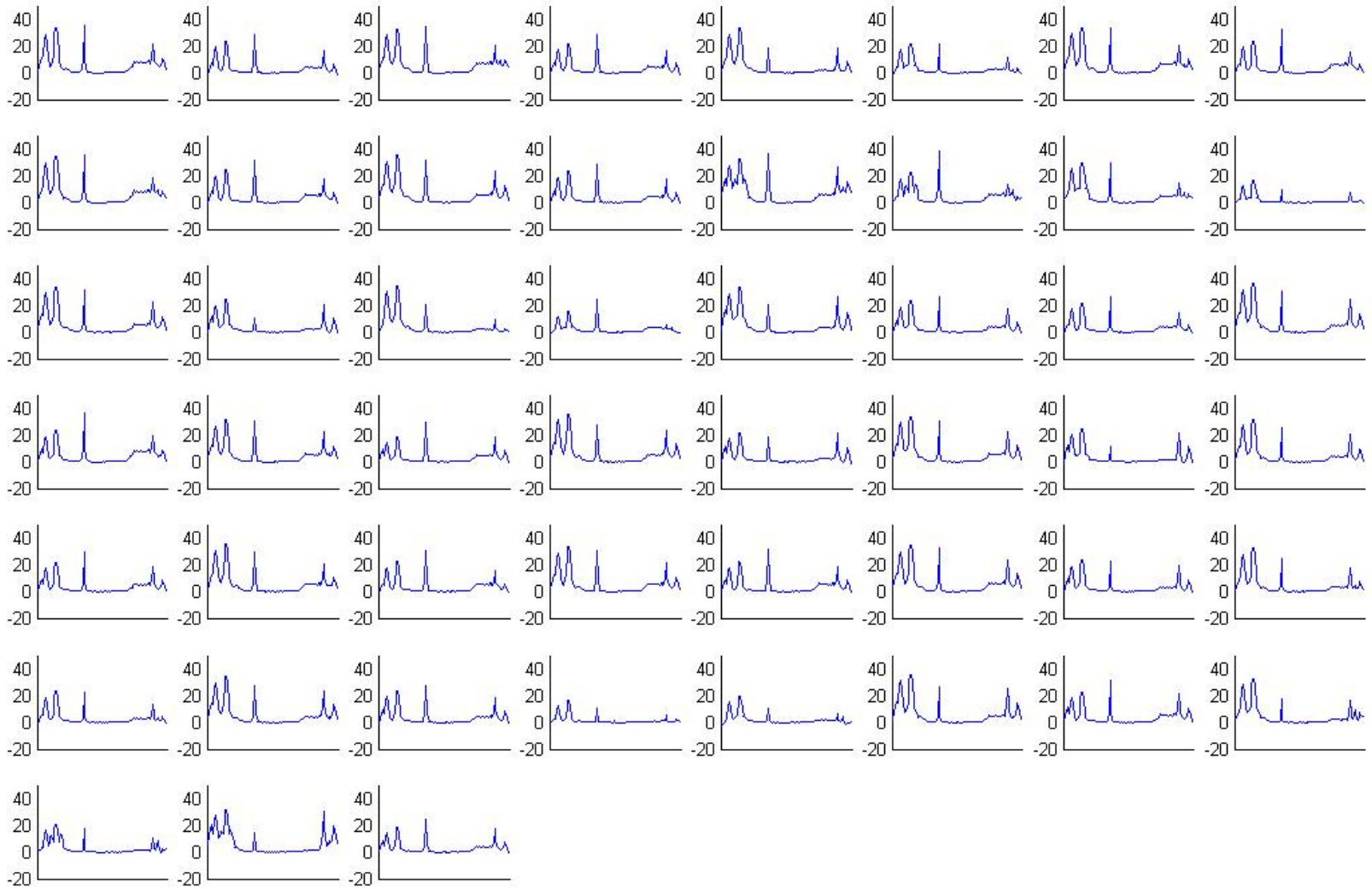


Freq (Ch)

Solar – 261MHz

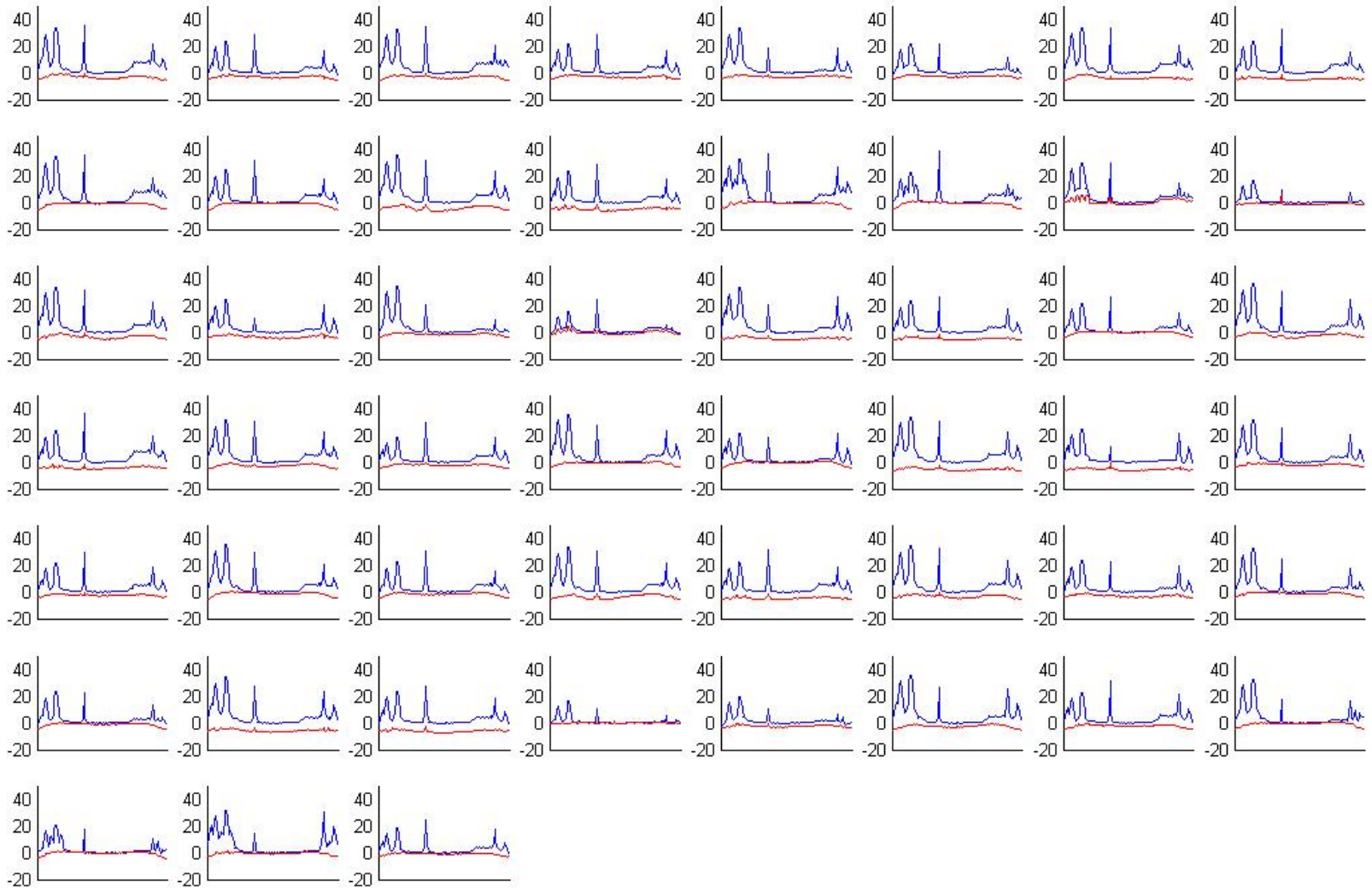
- Solar observations containing similar interference to Hydra, but much less successful cancellation.
- Configuration differences?

Power (dB)



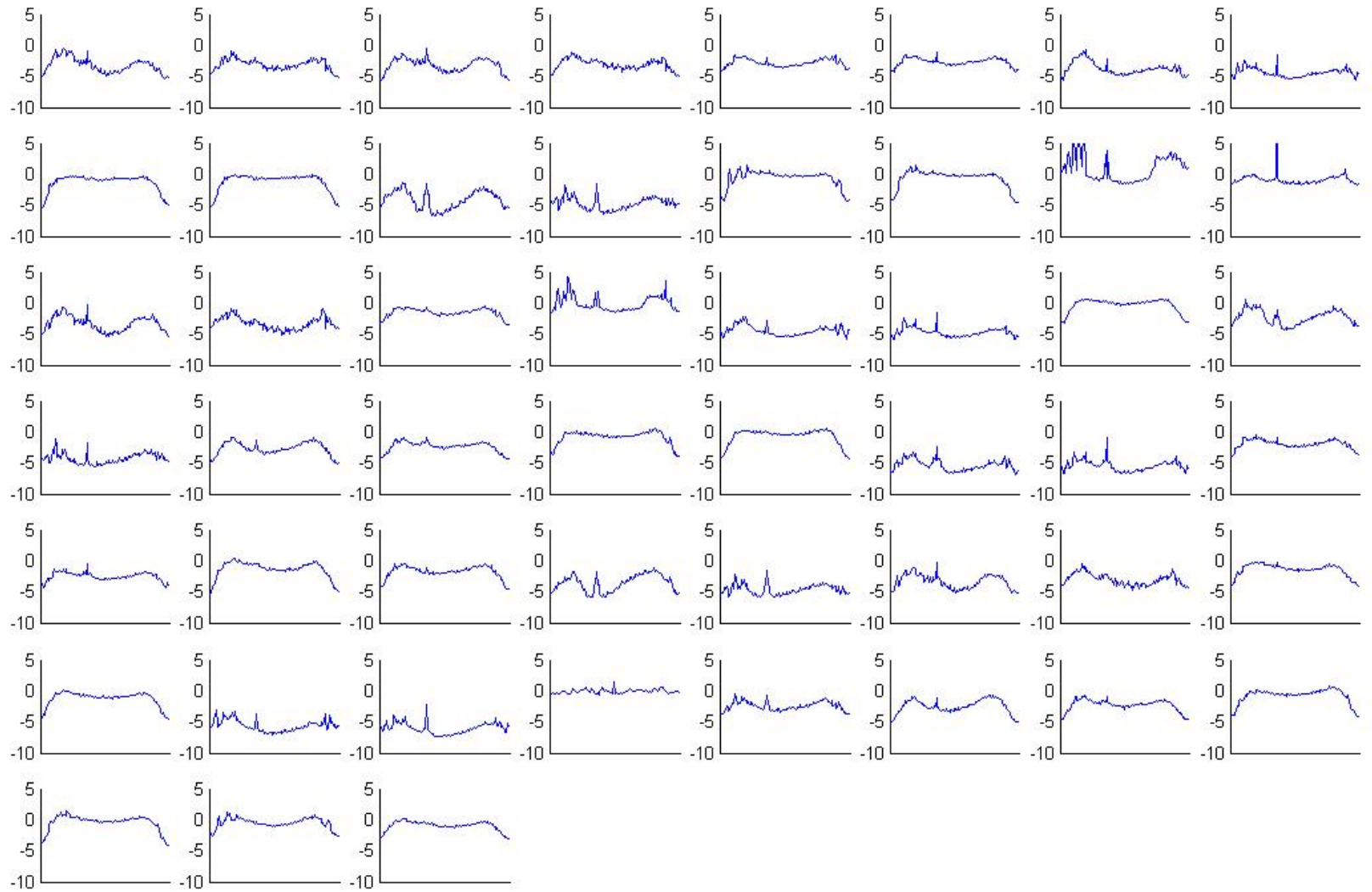
Freq (Ch)

Power (dB)



Freq (Ch)

Power (dB)



Freq (Ch)