



THR Status

A. Vecchio, M. Maksimovic and the THR team

- TNR and HFR are both operating well
- NO significant ISSUES to be reported

Current THR configuration

V1-V2	V1-V2	V1-V2	V1-V2	<ul style="list-style-type: none"> • NO magnetic measurements • Measurements at one dipole (V1-V2) only
A	B	C	D	
32	32	32	32	
2 s				

V1-V2	V1-V2	
HF1	HF2	
5x10+50	5x10+50	5 frequencies at : 3.2, 5.1, 6.9, 10, 12.2 MHz + list 50 frequencies standard
2s		deltat 5 freq = 0.02

TNR-HFR intercalibration issue

	HFR/TNR
V1V2 (CONF 9)	1.332 ± 0.098
V2V3 (CONF 10)	1.142 ± 0.122
V3V1 (CONF 11)	1.390 ± 0.187

- Difference in the Intercalibration between HFR and TNR of the order of 14-35 %. Probably due to the effect of a cable used for HFR for calibration on ground
- The agreement between TNR and TDS is quite good, we assumed that TNR is well calibrated.

Soon implemented in the CALBAR software

Antenna gains (together with Vratislav Krupar)

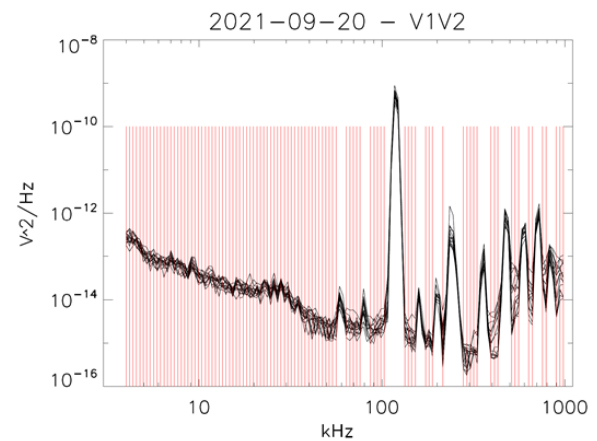
	ΓL_{eff} (m) for $f \leq 2000$ kHz	ΓL_{eff} (m) $f > 2000$ kHz
V1V2 (CONF 9)	2.903 ± 0.184	$2.903 \times \exp[1.514 \cdot 10^{-4}(f - 2000)]$
V2V3 (CONF 10)	2.410 ± 0.186	$2.410 \times \exp[1.369 \cdot 10^{-4}(f - 2000)]$
V3V1 (CONF 11)	2.925 ± 0.175	$2.925 \times \exp[1.472 \cdot 10^{-4}(f - 2000)]$

The THR effective lengths have been obtained after a detailed comparison between the Stereo/Wind and the RPW simultaneous observations of a dataset of 12 radio Type III bursts.

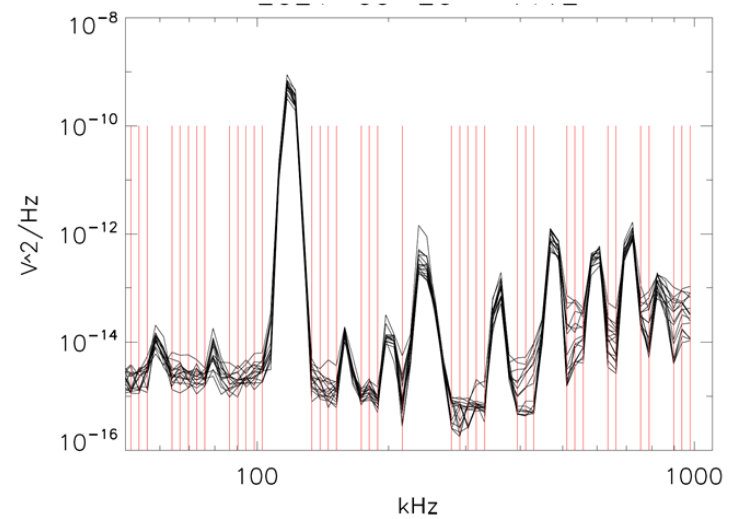
Documentation will be released soon

Frequency coverage (together with Vratislav Krupar)

98 clean frequencies for TNR and 50 for HFR have been identified



HFR can be configured to only measure the selected 50 frequencies.



This is not possible for TNR

Production of L3 data

- Plasma frequency from THR peak tracking
- After definition of antenna parameters the L3 data, providing 2D arrays of the dynamic spectra, will be delivered very soon
- Direction finding data

Issue with the full HFR quicklook plot


- This is probably due to the new configuration of HFR (high time cadence)


Daily Summary Plots

Monday 2 October 2023, by Florence HENRY

Use this browser to plots RPW daily science data.

N.B. It can have several plots for a given data product and day.

21/06/2023  Previous day Next day

rpw-thr-surv  Show Previous plot Next plot

No results

[Access to all the plots for day 2023-06-21 ↗](#)

Quasi-Thermal Noise measurements from TNR

Collaboration with Mihailo Martinovic (University of Arizona)

- Quasi-Thermal Noise (QTN) spectroscopy
→ electron density and T and comparison with SWA measurements
- Removing interference and technical issues

Analysis and interpretation of the signals sent by HAARP observatory

- Refine antenna calibration

3. Send a radio signal from the ground during the last EGAM via HAARP (November 2021)



HAARP Viewing of Solar Explorer Pass, 26-27 November 2021
Frequency Plan: 2.775, 3.275, 4.075, 5.775, 6.775, 9.575 MHz with 10 Minute Dwell

