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To: EDGES group

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Subject: Analysis of EDGES-3 data at the MRO from 2026 days 225 – 246

Following the repair of EDGES-3 at the MRO by John and Rigel in August 2026 an initial analysis of the data was made using the c-code pipeline was made in memo 512.

The available data from 2026 days 225 to 246 is now used to search for the global 21-cm spectrum using a script similar to the one used in memo 507. The result that was obtained is shown in table 1 below:

center MHZ	SNR	amp K	width MHZ	rms1 mK	rms2 mK	range MHZ	Tsky K	comments
78.5	14	0.56	21.7	74.5	52.0	60-104	2811	Calibration from 2026 day 243

Table 1. Search for global 21 cm absorption

The calibration plots are shown in Figure 1. The ambient and hot load values of 299K and 384K respectively were used.

The result of a search for the best fit 21-cm absorption using 5-terms, and $\tau = 7$ was obtained for 21 days of data is shown in table 1 and plotted in Figure 2.

An rms limit of 0.6 K was used for each one hour data block and it was found that we still need to exclude data with the sun above -30 deg below the horizon to avoid solar emissions . The antenna beam correction used azelq_box_perf_48_2e-2.txt file obtained from the FEKO analysis using an antenna azimuth of 269 degrees.

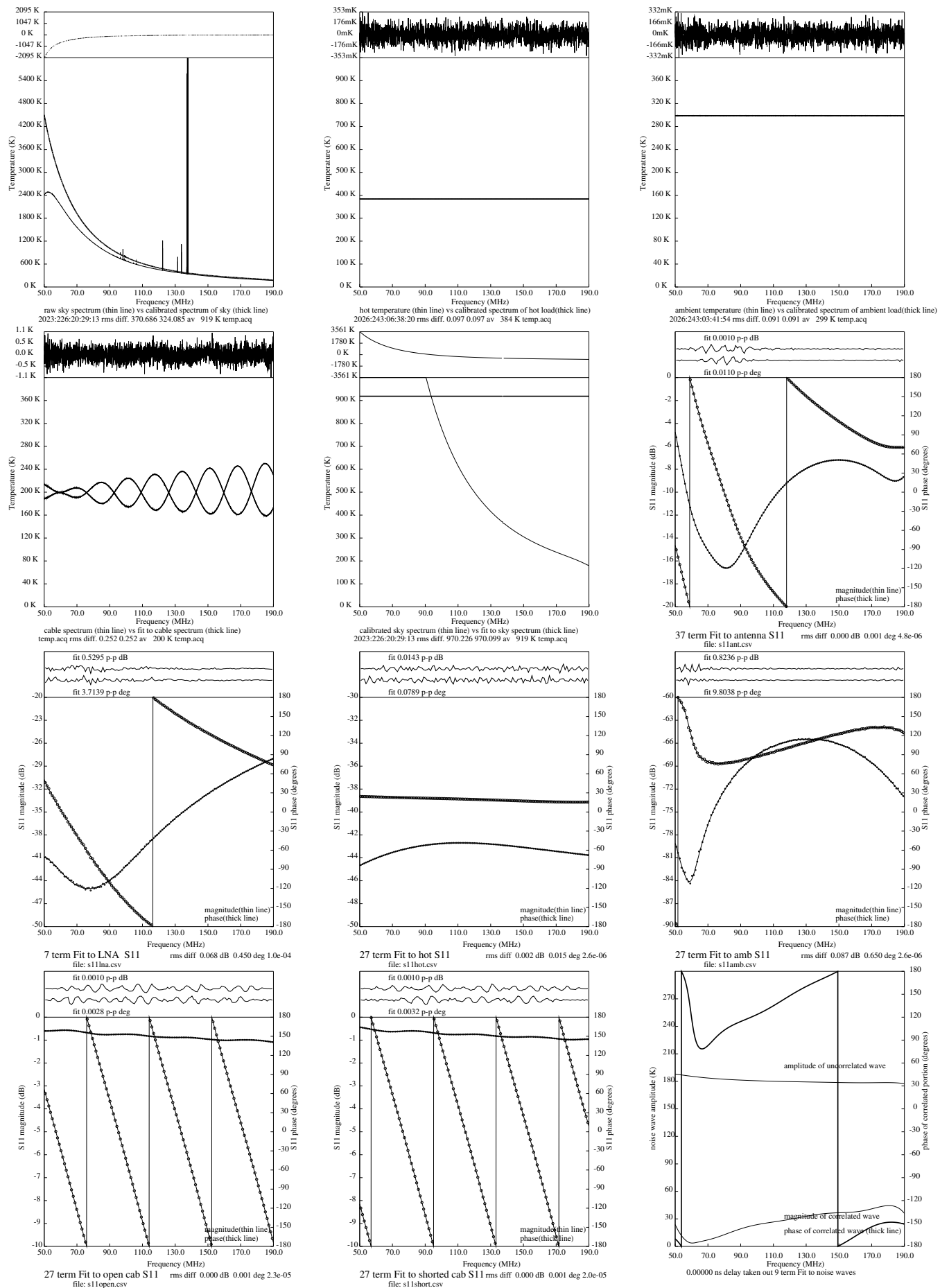
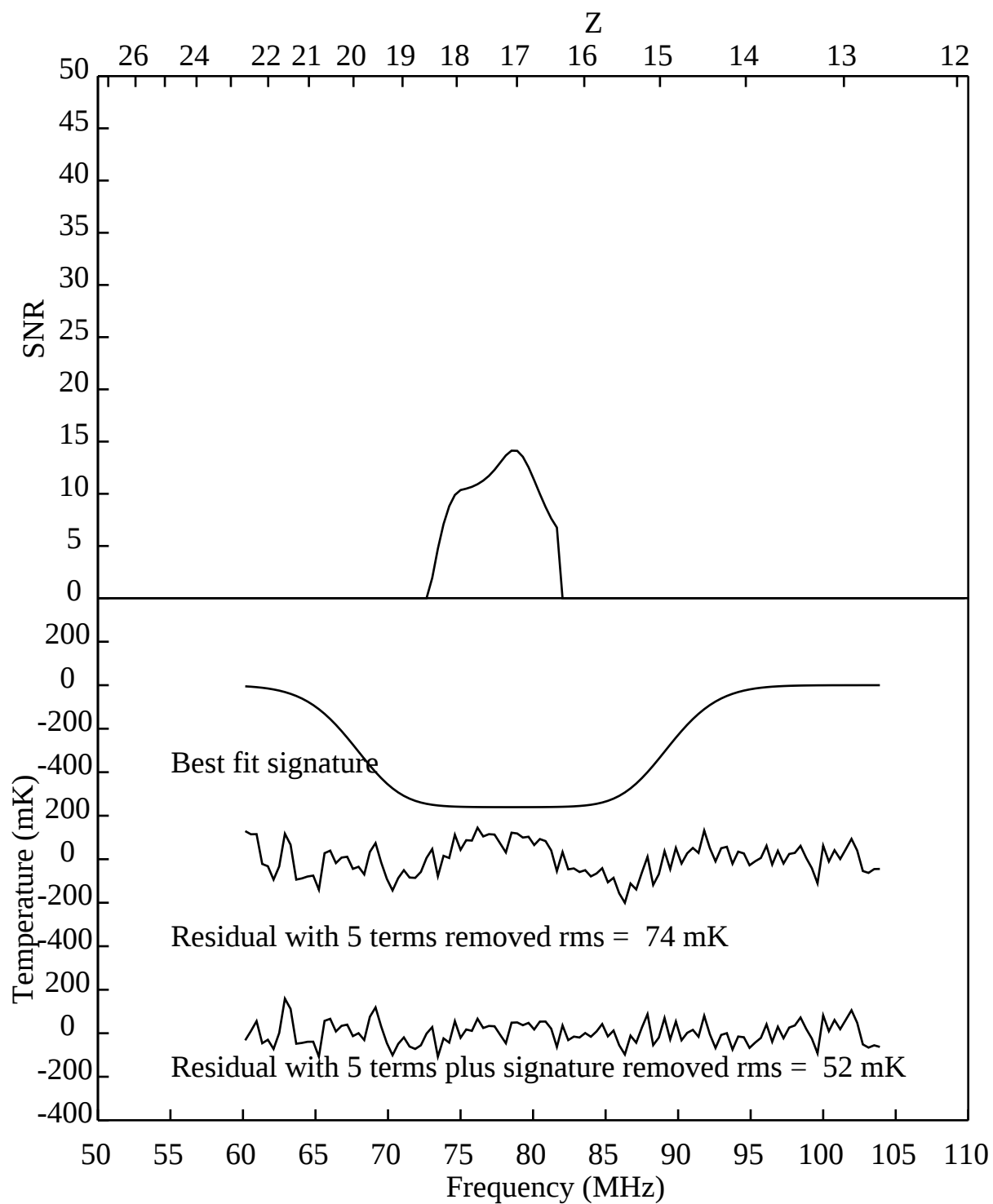


Figure 1. Calibration using s11 data from day 242 and spectra from day 243



freq 78.5 snr 14.1 sig 0.56 wid 21.70 tau 7 rmsin 0.0745 rms 0.0520 60 - 104

Figure 2. Global 21cm result using EDGES-3 data from 2026 day 225 to 246