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To: EDGES group

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Subject: Summary of EDGES-3 results from the WA from 2025 days 1 – 80

Table 1 shows the results of an absorption grid search of EDGES-3 data taken for 21 day blocks at the WA in 2025. The rms1 is the rms residual prior to fitting an absorption with fixed $\tau = 4$. The last entry is for a search made with the 2018 EDGES-2 result subtracted from the sky noise spectrum which shows a drop in the residuals prior to fitting an absorption labeled as rms1 from 74 to 39 mK.

2025	center MHz	SNR	amp K	width MHz	rms1 mK	rms2 mK	range MHz	rms lim K
01-20	77.3	24	0.67	22.3	89	37	57-104	0.25
21-40	79.3	20	0.53	20.0	82	40	57-104	0.25
41-60	80.9	24	0.37	17.6	76	47	57-104	0.25
61-80	79.7	14	0.47	20.0	78	47	57-104	0.25
01-80	78.9	27	0.52	20.6	74	27	57-104	0.25
01-80	79.3	33	0.54	19.4	83	26	57-106	0.30
01-80	84.4	7	0.14	19.5	39	32	57-104	0.25

Table 1. Results of 21-cm absorption grid search and absorption subtraction test

The key parameters used were:

Sun limit: Below -30 degrees

Frequency range: 57-104 MHz

GHA range: one hour blocks within sun limit

Beam correction: azelq_box_perf_48_2e-2.txt at 269 deg. azimuth

Sky map: 408 MHz Haslam map

Polynomial: Physical with first 4 terms as in equation (1) of Bowman et al. 2018

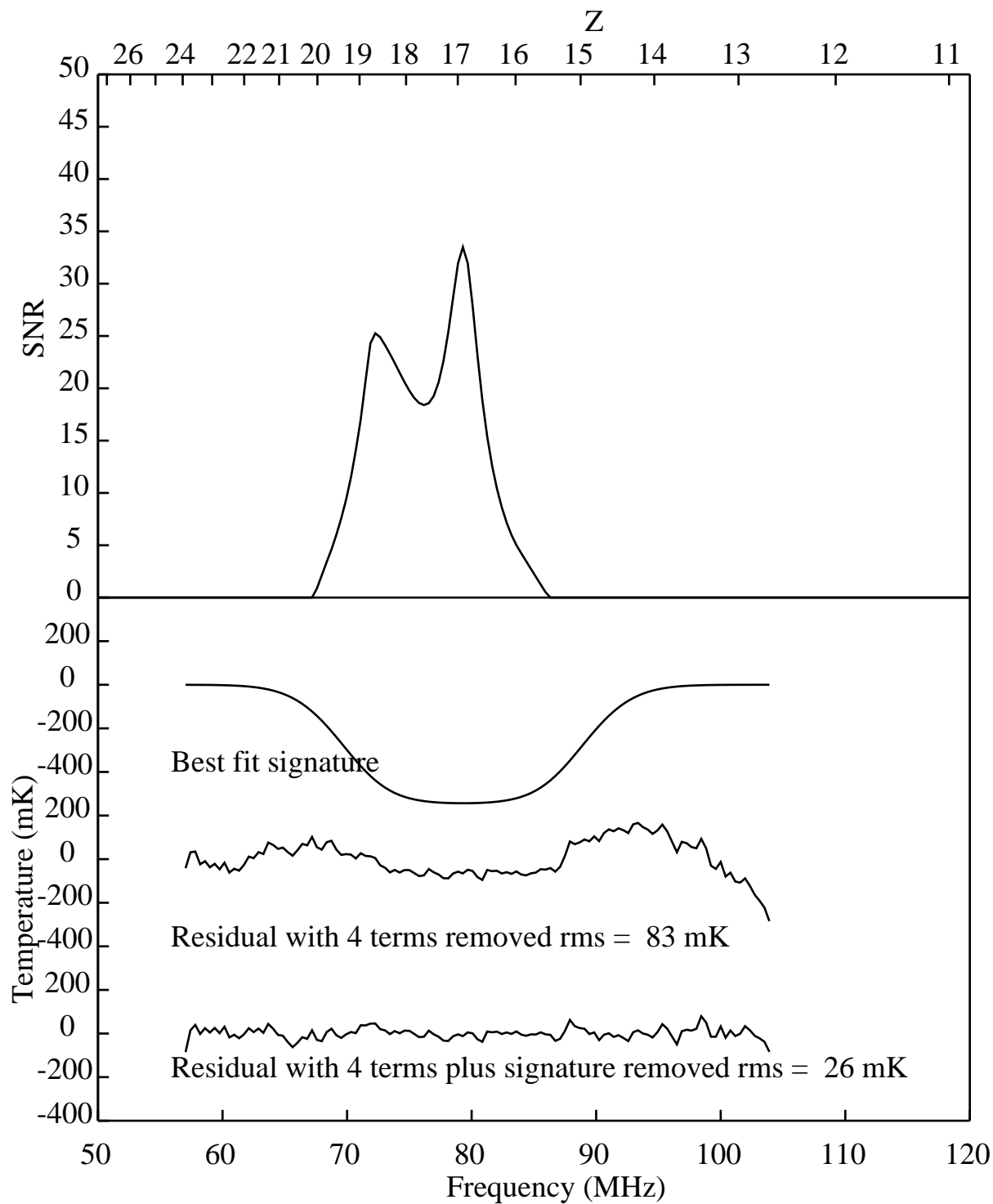
RFI filter: 2.1 sigma

acceptance rms limit for 1 hour data block 0.25 K

maxrmsf: 50

maxfm: 2000

In summary the results from the 2025 data are similar to those obtained from the 2024 data summarized in memo 466. Figure 1 shows the grid search plot for 57-106 MHz data span listed in Table 1.



freq 79.3 snr 33.5 sig 0.54 wid 19.40 tau 4 rmsin 0.0828 rms 0.0258 57 - 106

Figure 1. Grid search for global 21-cm absorption from EDGES-3 at WA 2025 day 1 to 80