Appendix C - Spectrograms for Orbiter SAMS TSH A (62.5 Hz)

SAMS TSH A data collected during the STS-89 mission were used to generate the spectrogram plots in this appendix. These data were collected at a rate of 125 samples per second with a lowpass filter cutoff frequency of 25 Hz. The Nyquist frequency (62.5 Hz) was used as the upper limit on the frequency axis of the plots, so spectral content above 25 Hz has been attenuated by the lowpass filter. With the exception of the first and the last, each spectrogram in this appendix spans a total of 6 hours. The time resolution used to compute the spectrograms was 16.384 seconds, and the frequency resolution was 0.0305 Hz. To produce the spectrogram image, power spectral densities were computed using a Hanning window for successive time intervals. In order to combine all three axes into a single plot, the power spectral densities of the three orthogonal axes were combined in root-sum-of-squares fashion.

These spectrograms are intended to provide a broad overview of how the measured acceleration spectrum varied with time. These plots are not intended for quantitative assessment of the microgravity environment. Other plot types are better suited for this task. Those interested in further details are encouraged to contact the PIMS team.

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Figure C−1: STS−89, TSH A (fc=25 Hz)

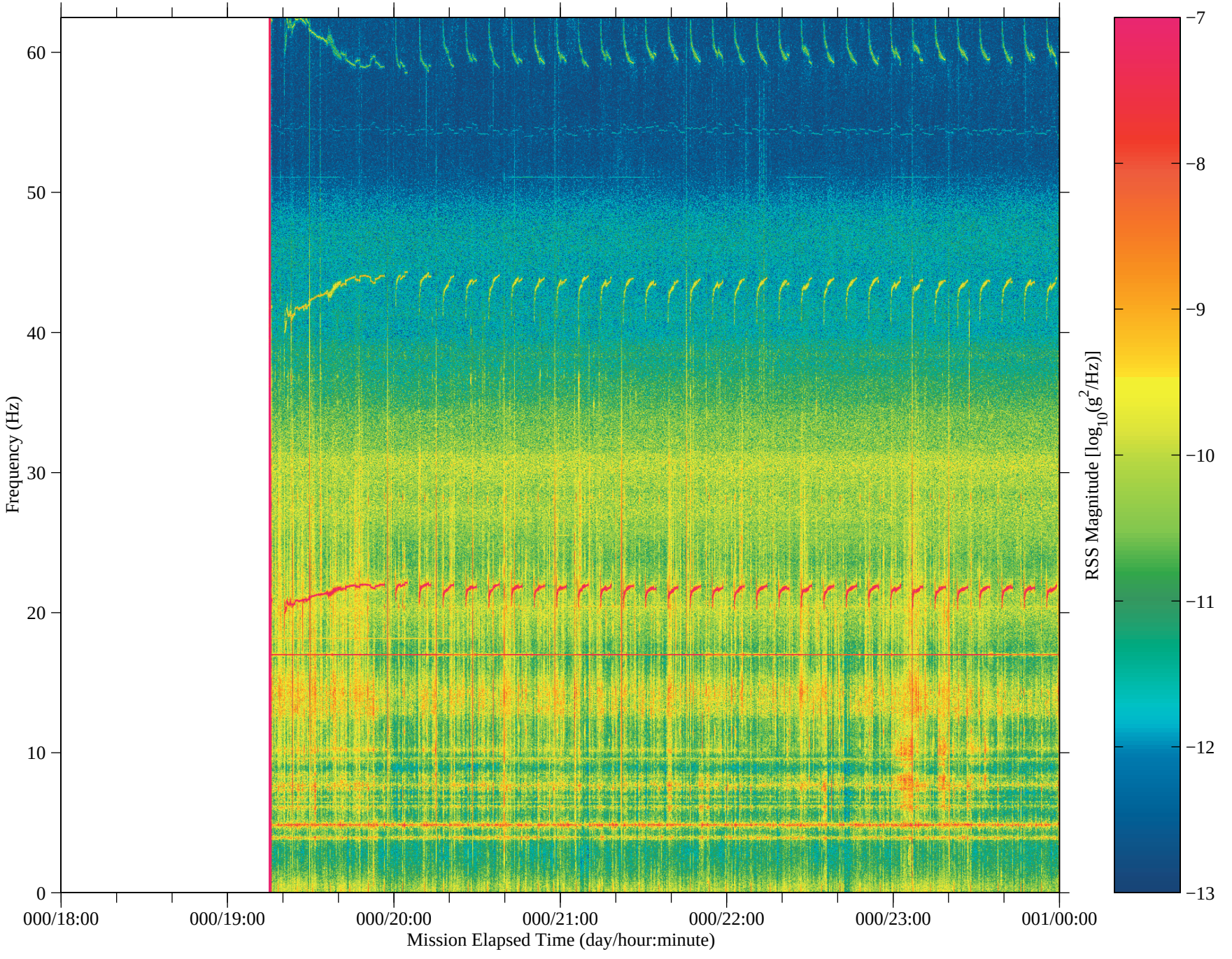

Figure C−2: STS−89, TSH A (fc=25 Hz)

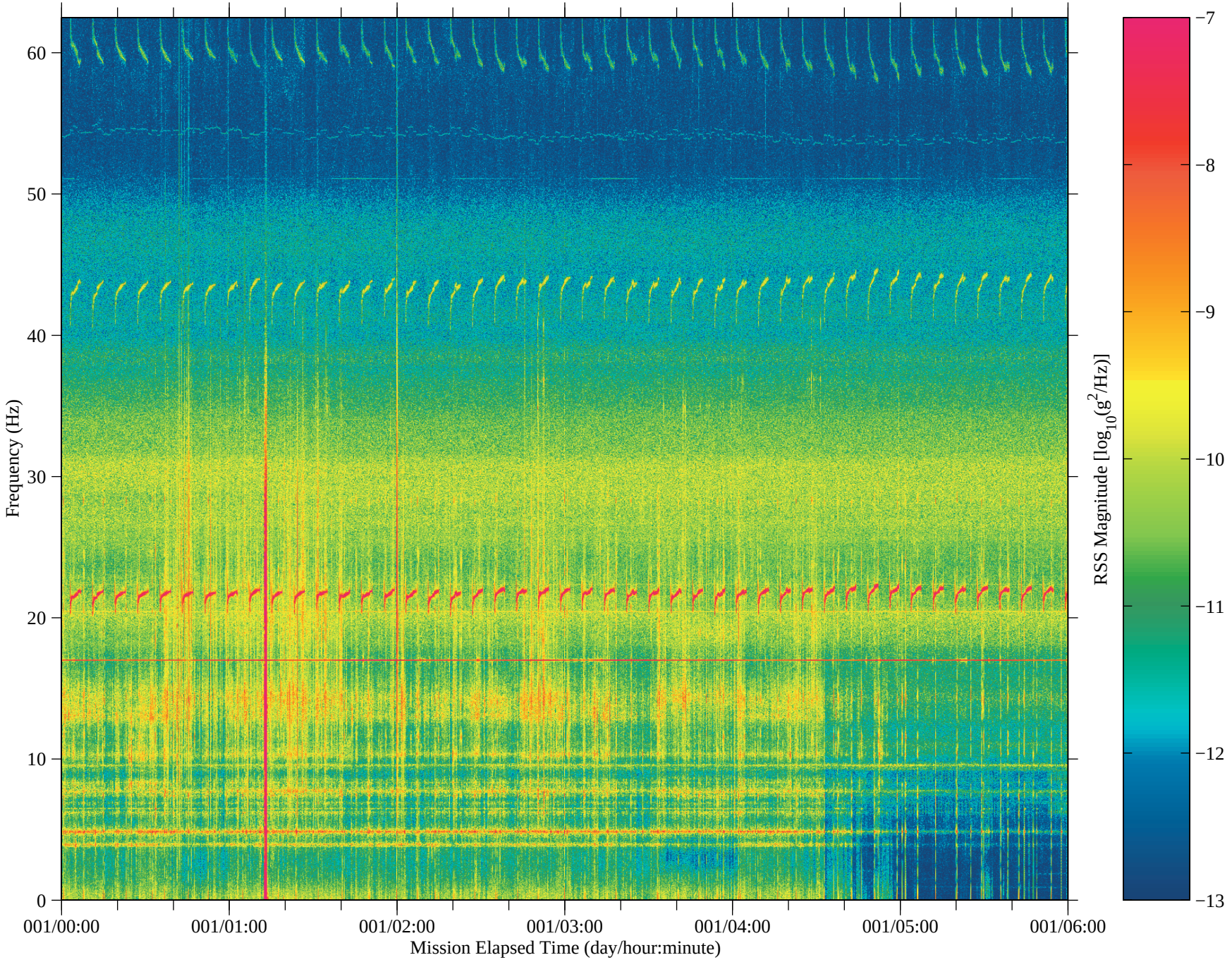

Figure C−3: STS−89, TSH A (fc=25 Hz)

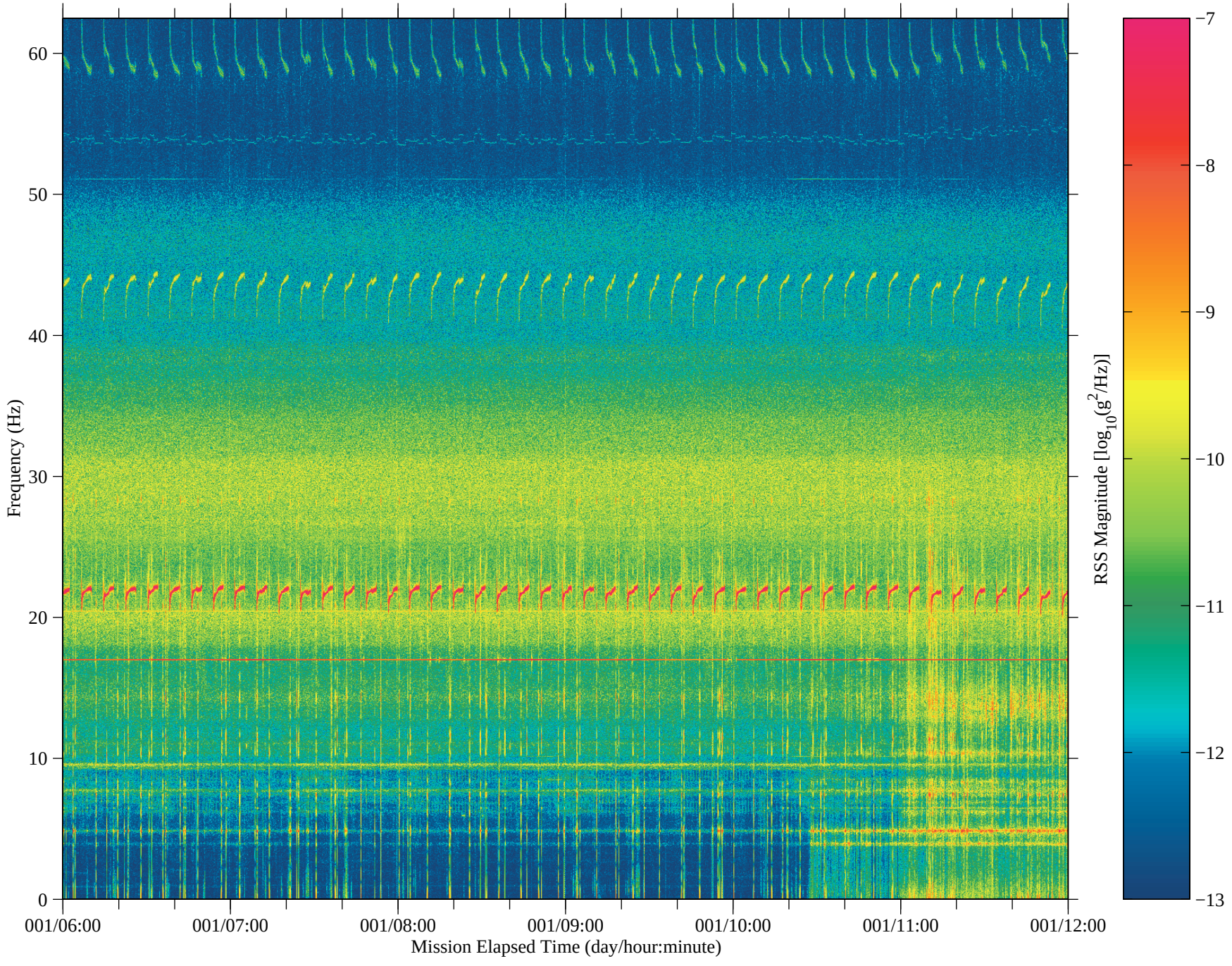

Figure C−4: STS−89, TSH A (fc=25 Hz)

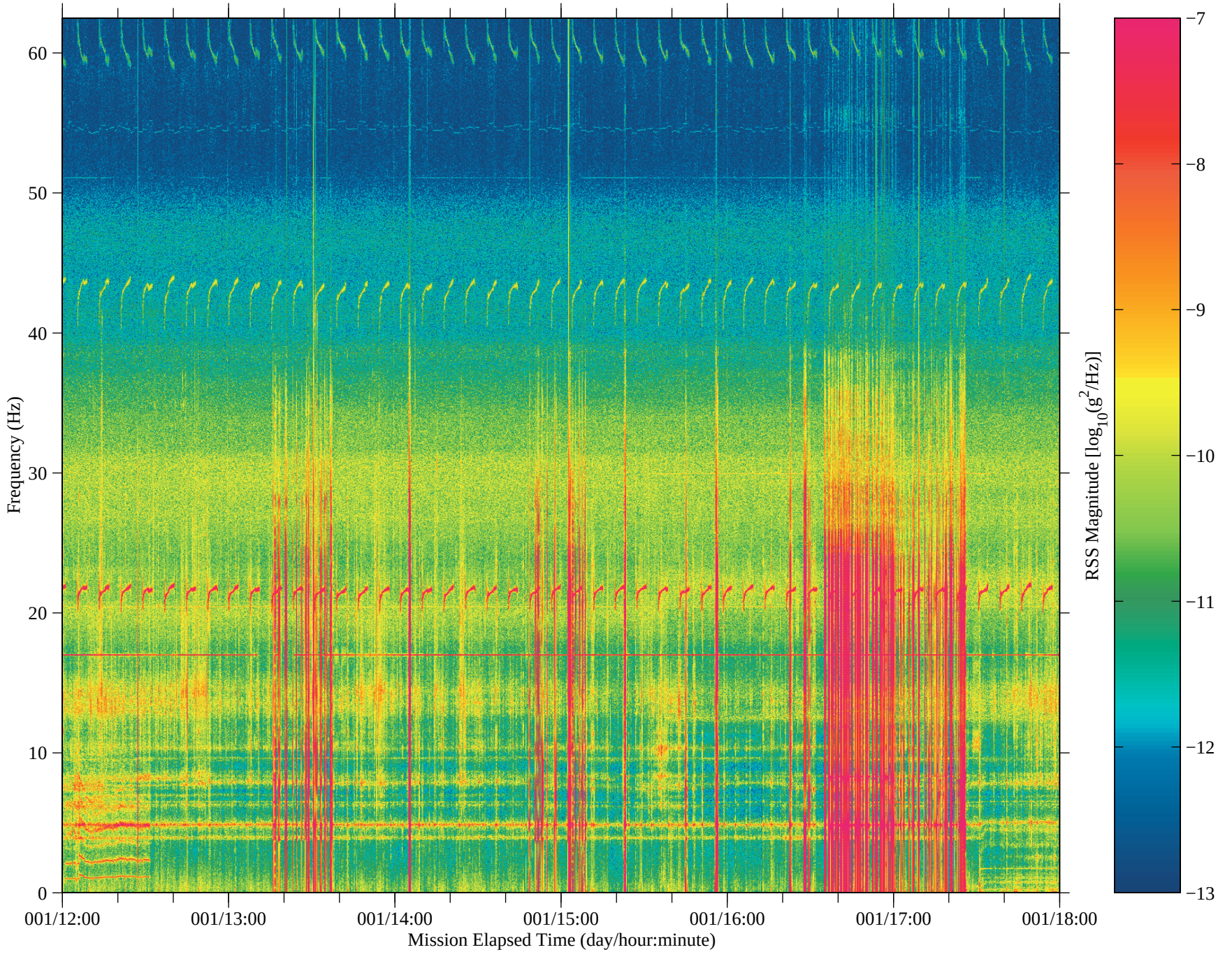

Figure C−5: STS−89, TSH A (fc=25 Hz)

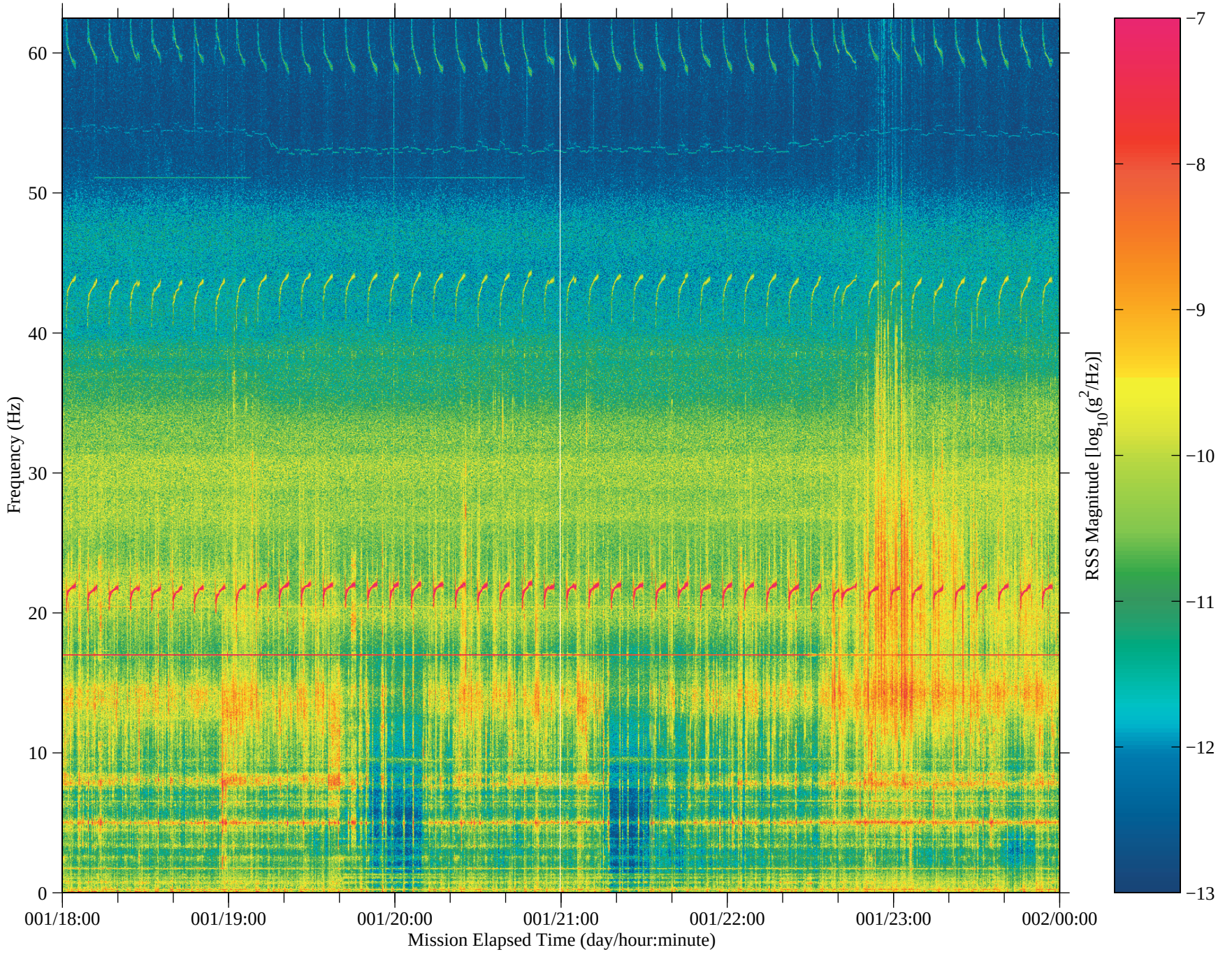

Figure C−6: STS−89, TSH A (fc=25 Hz)

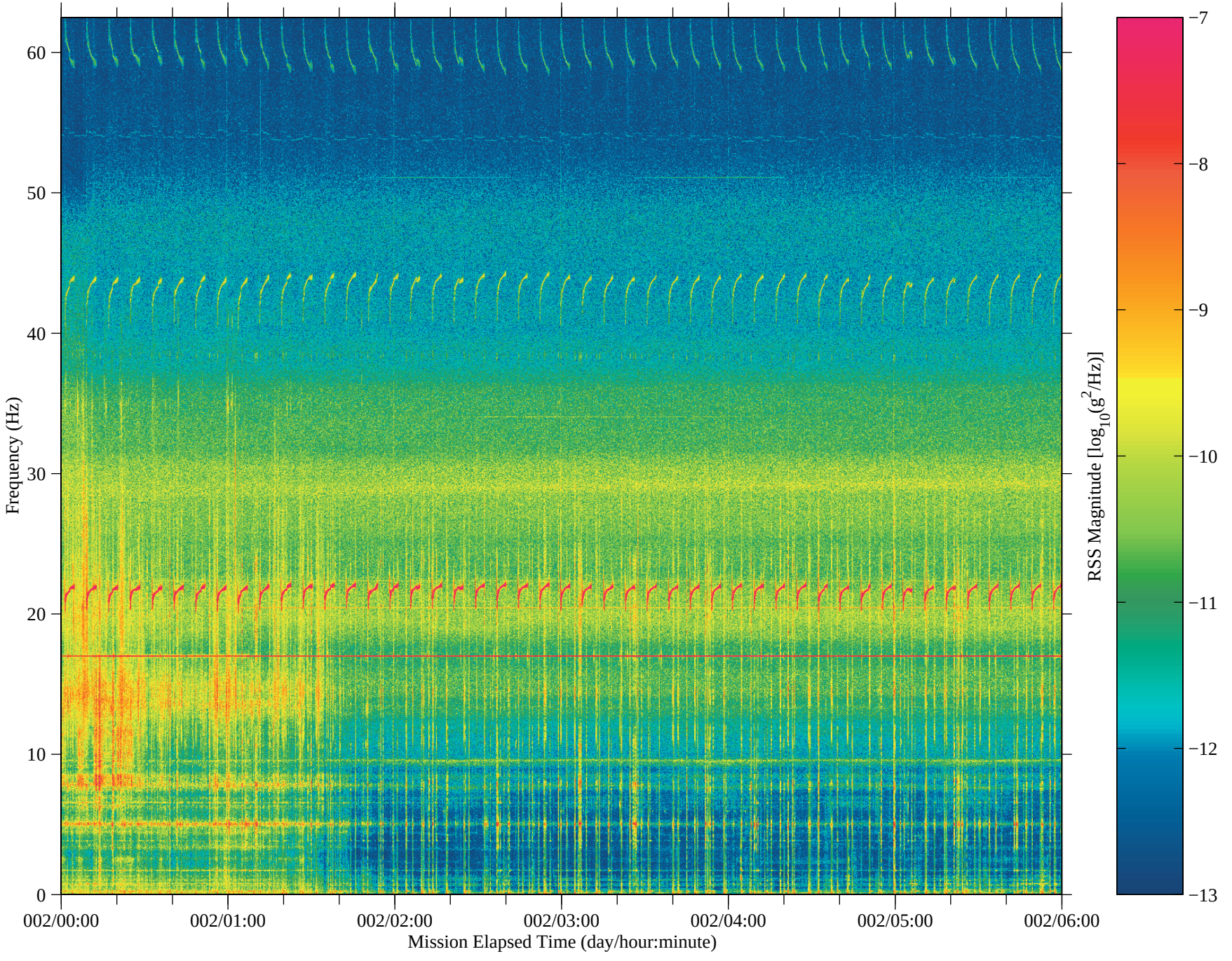

Figure C−7: STS−89, TSH A (fc=25 Hz)

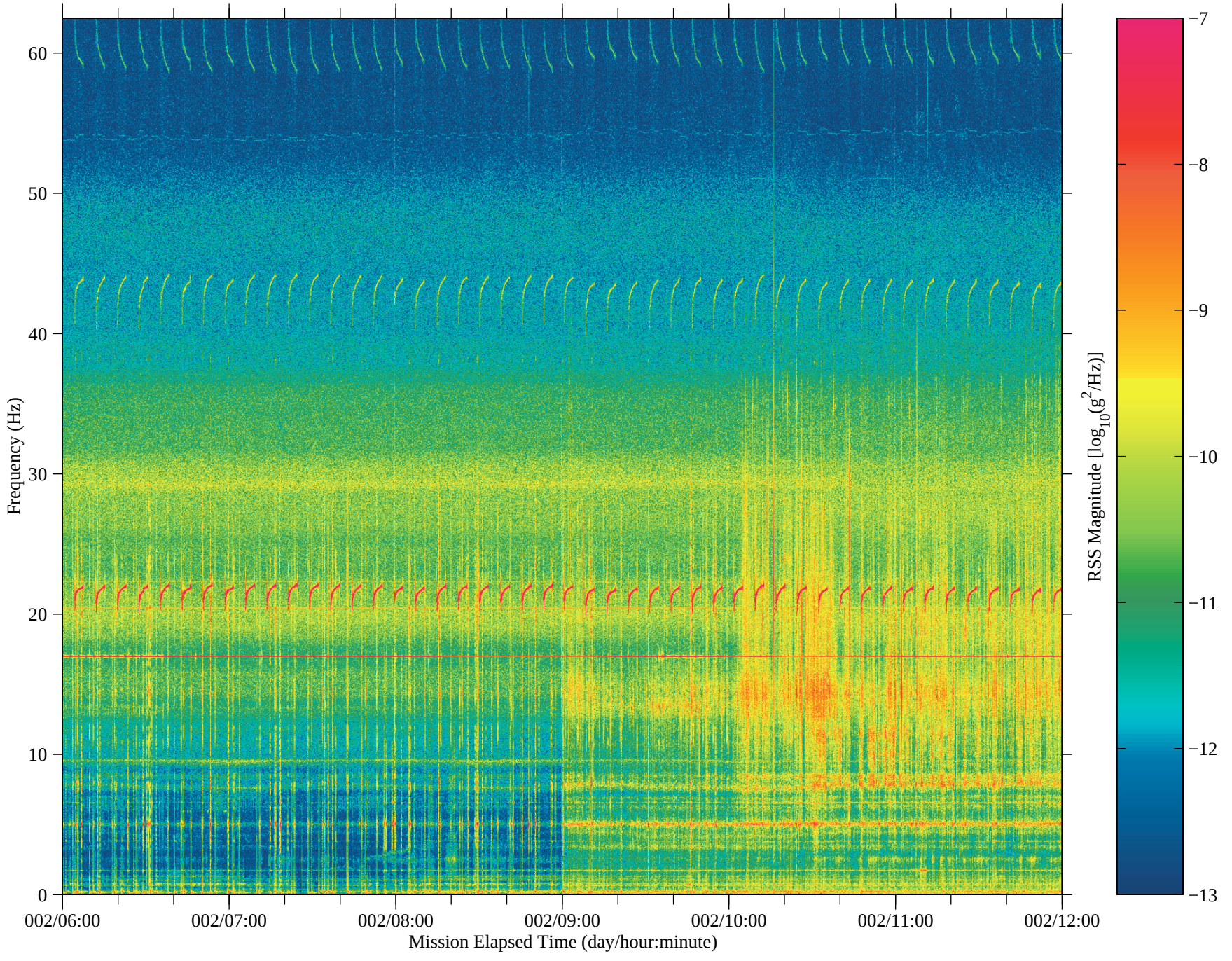

Figure C−8: STS−89, TSH A (fc=25 Hz)

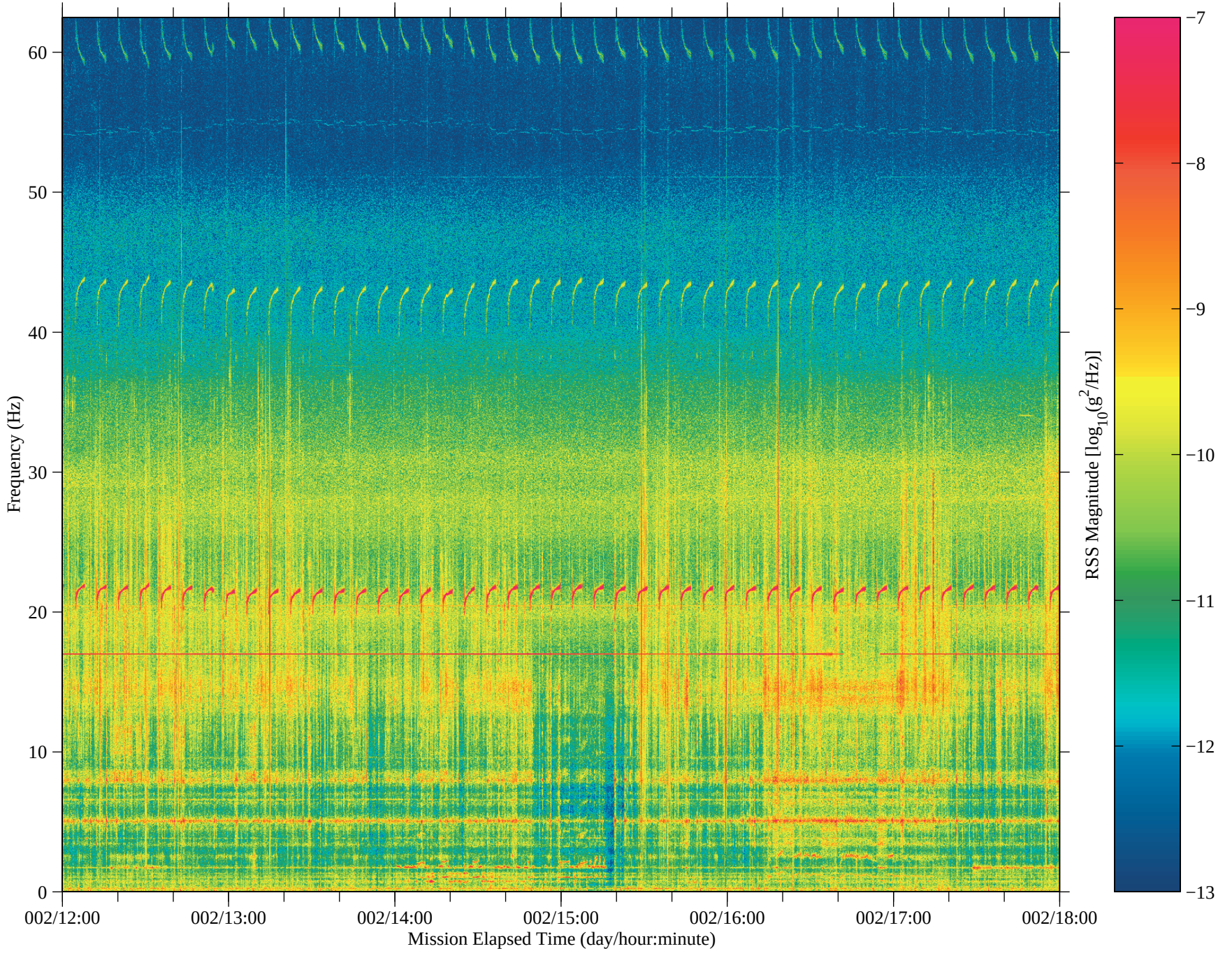

Figure C−9: STS−89, TSH A (fc=25 Hz)

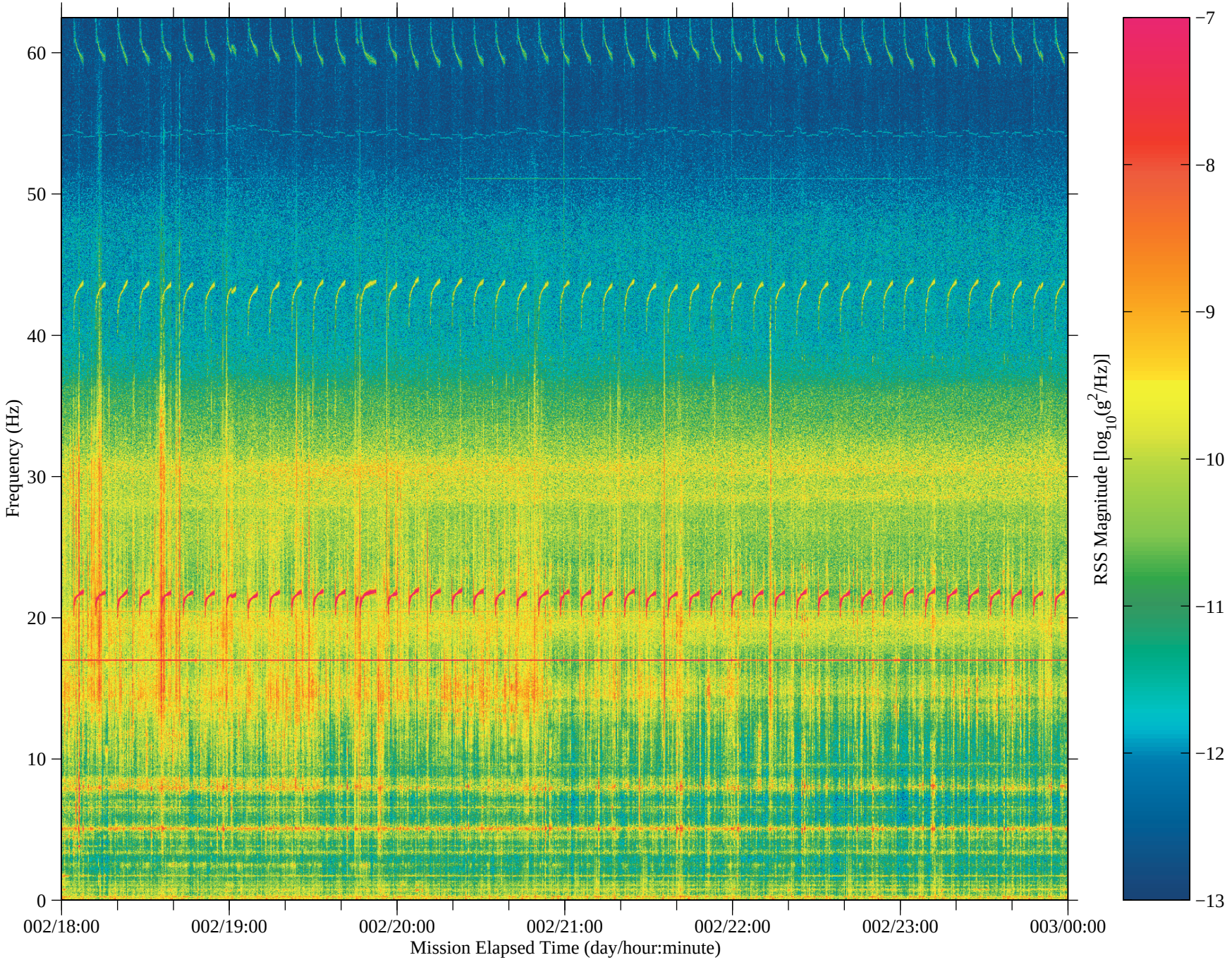

Figure C−10: STS−89, TSH A (fc=25 Hz)

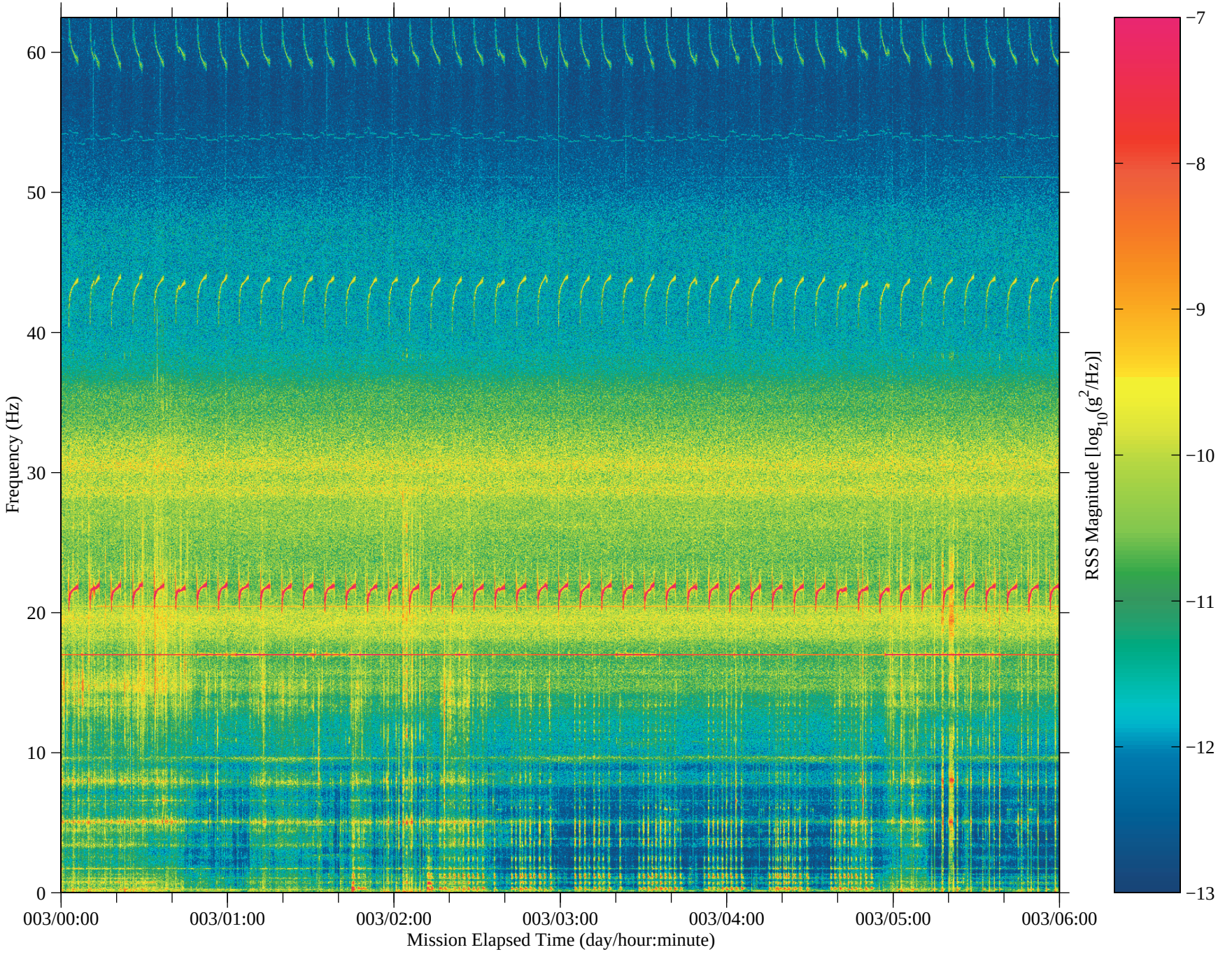

Figure C−11: STS−89, TSH A (fc=25 Hz)

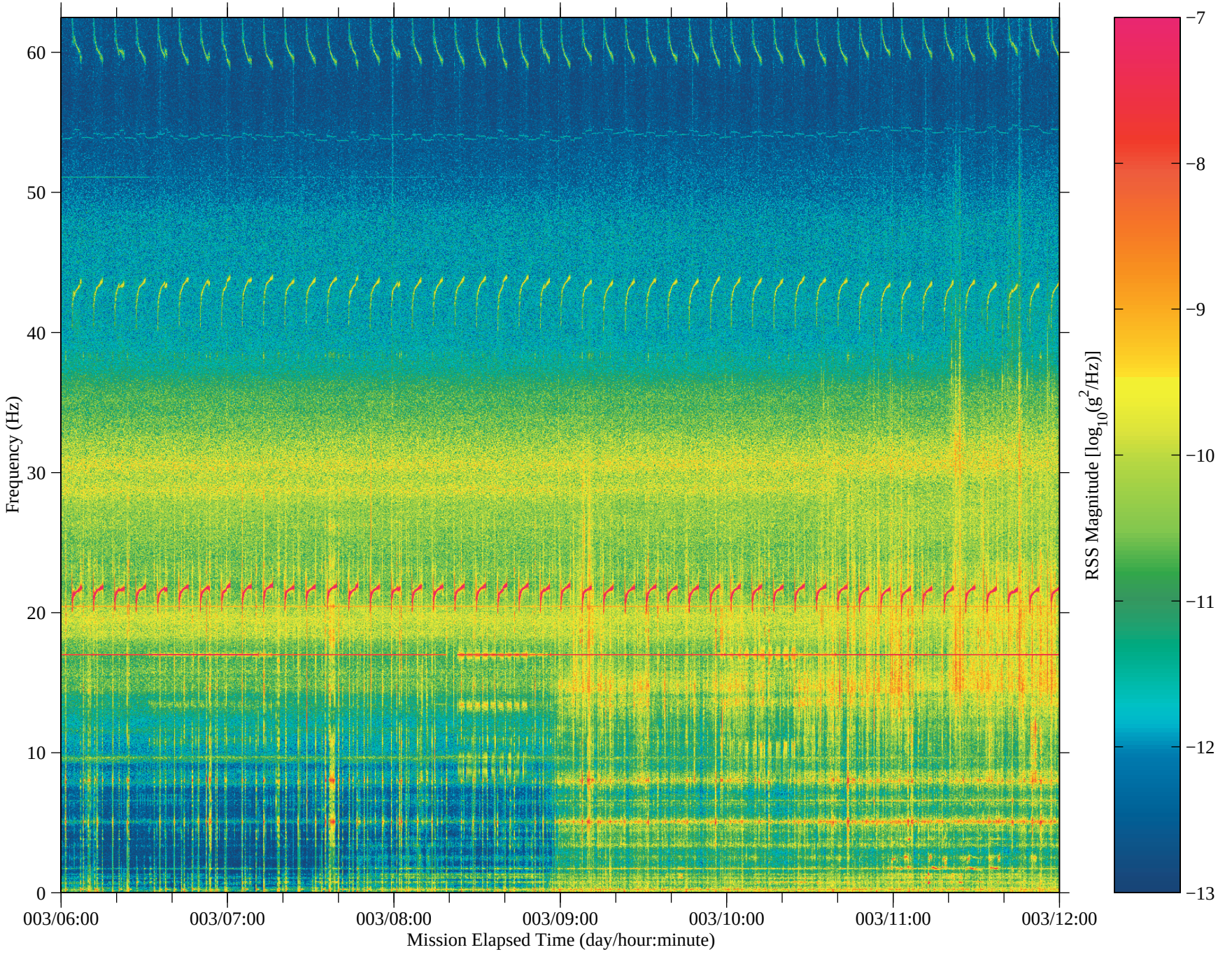

Figure C−12: STS−89, TSH A (fc=25 Hz)

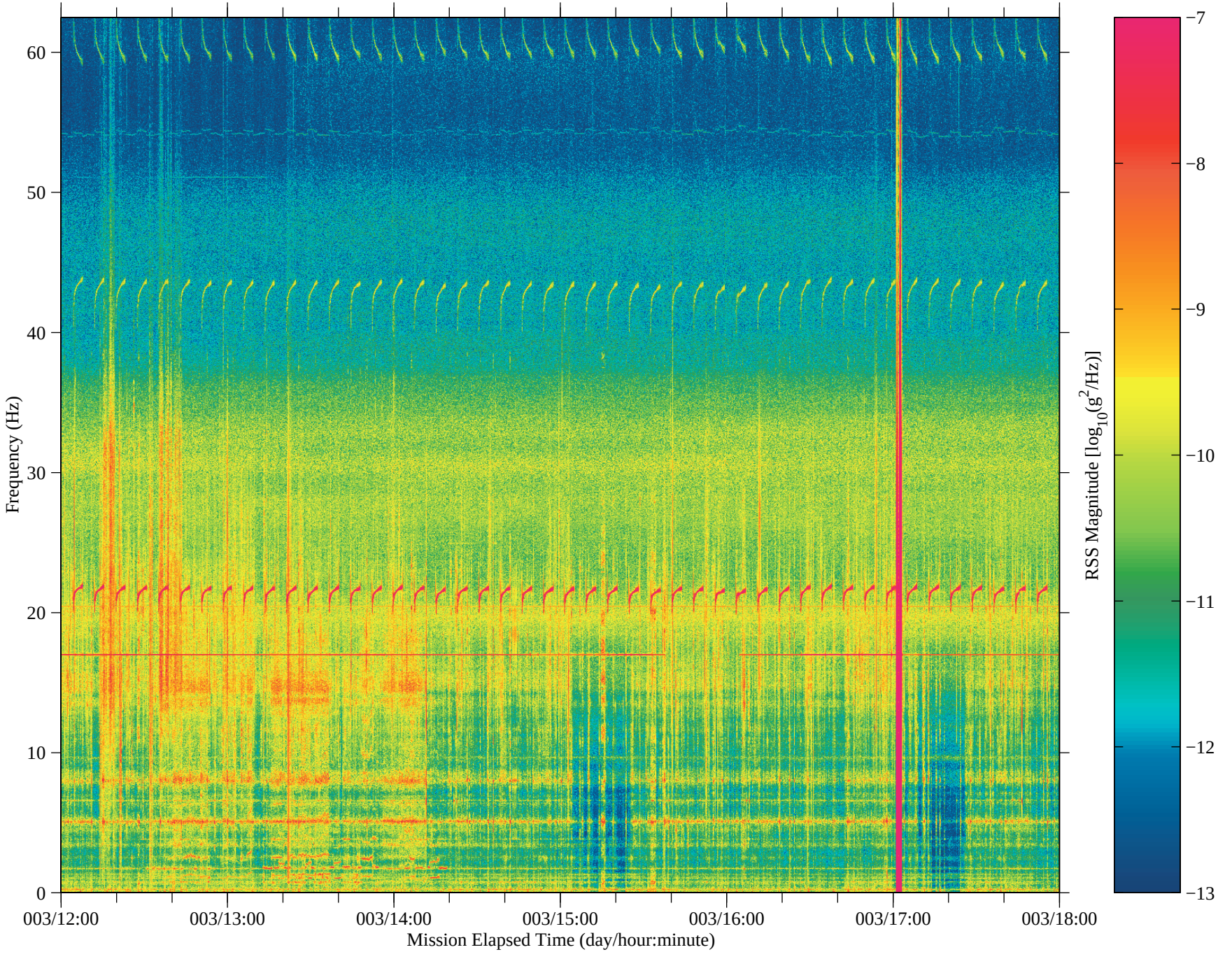

Figure C−13: STS−89, TSH A (fc=25 Hz)

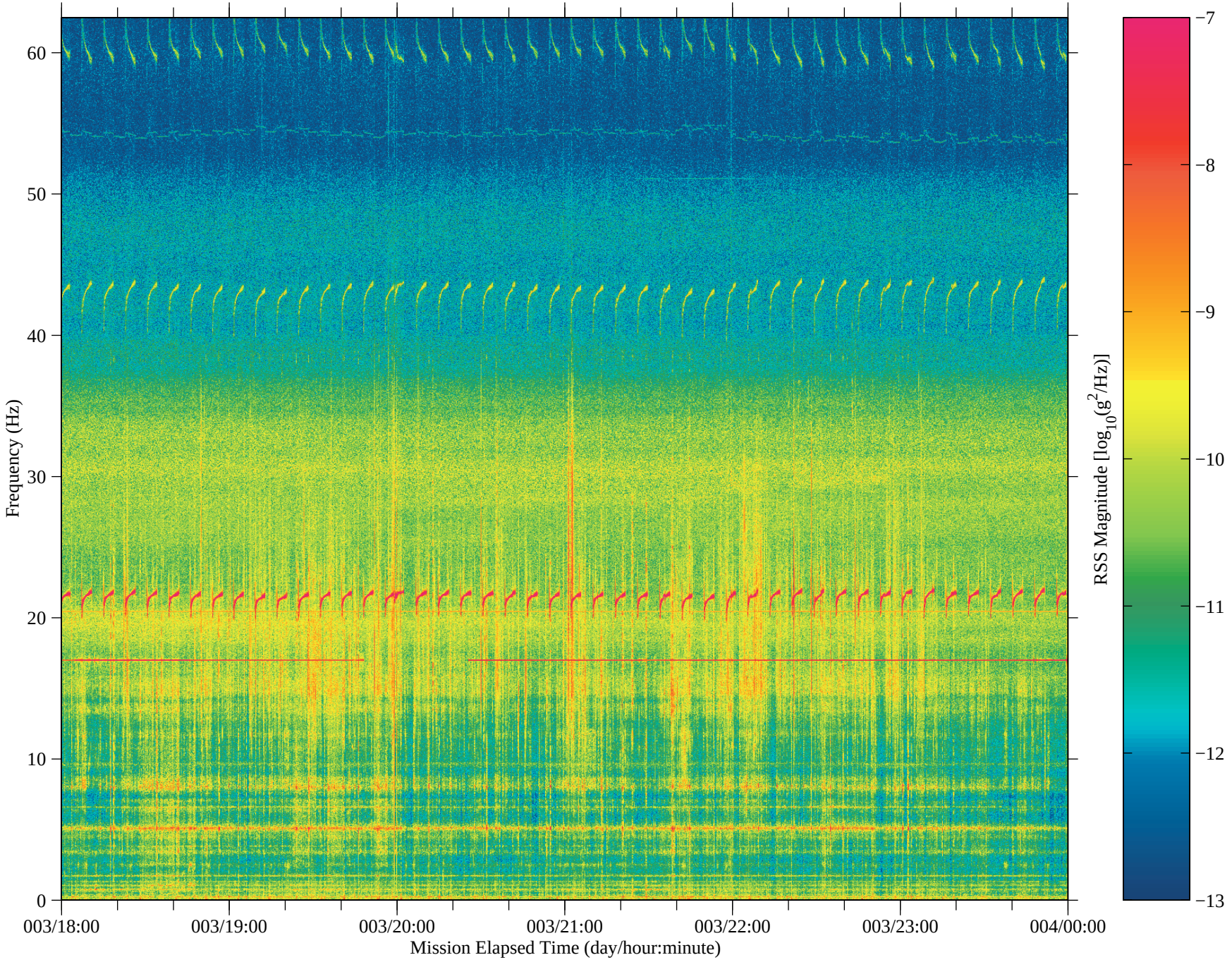

Figure C−14: STS−89, TSH A (fc=25 Hz)

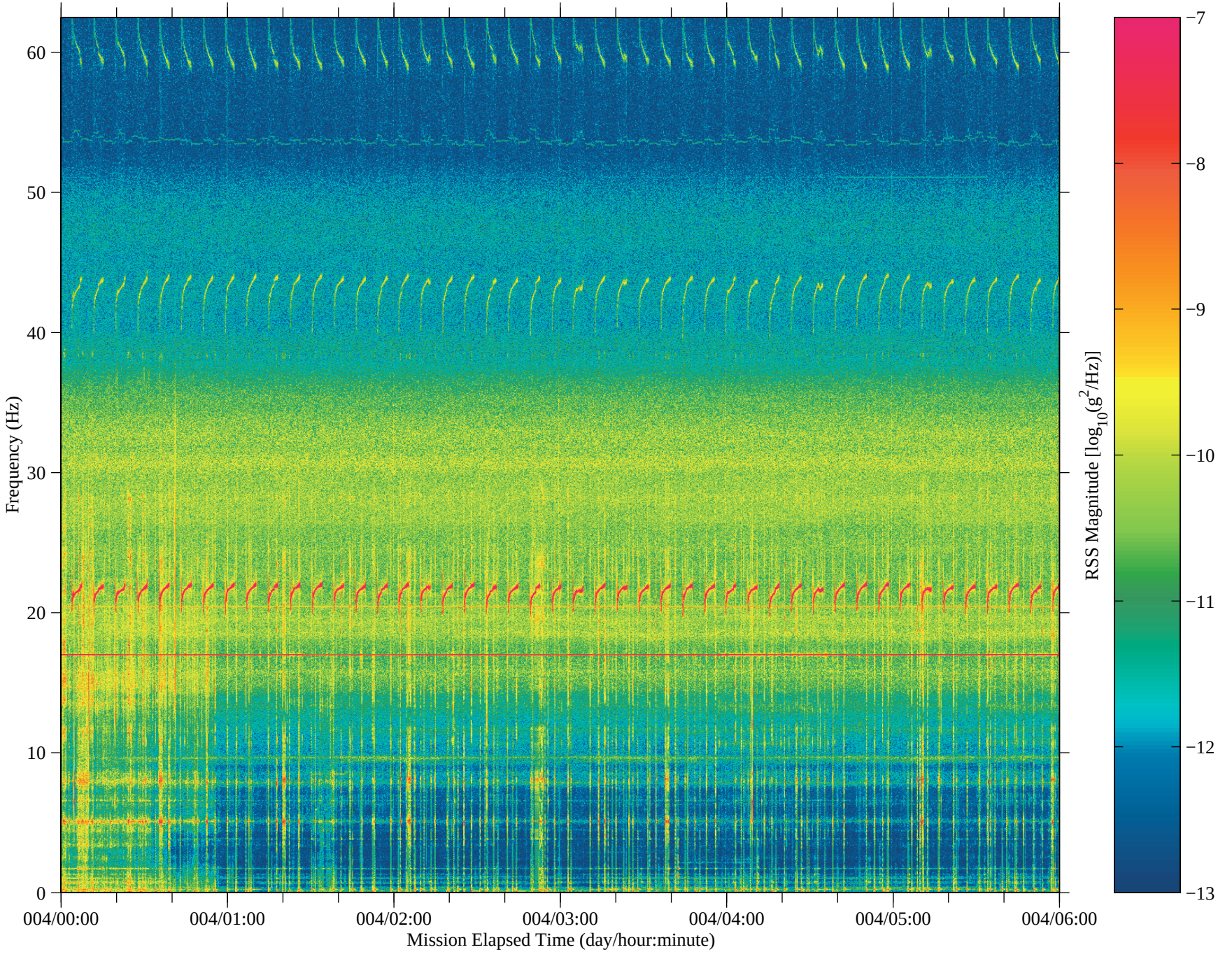

Figure C−15: STS−89, TSH A (fc=25 Hz)

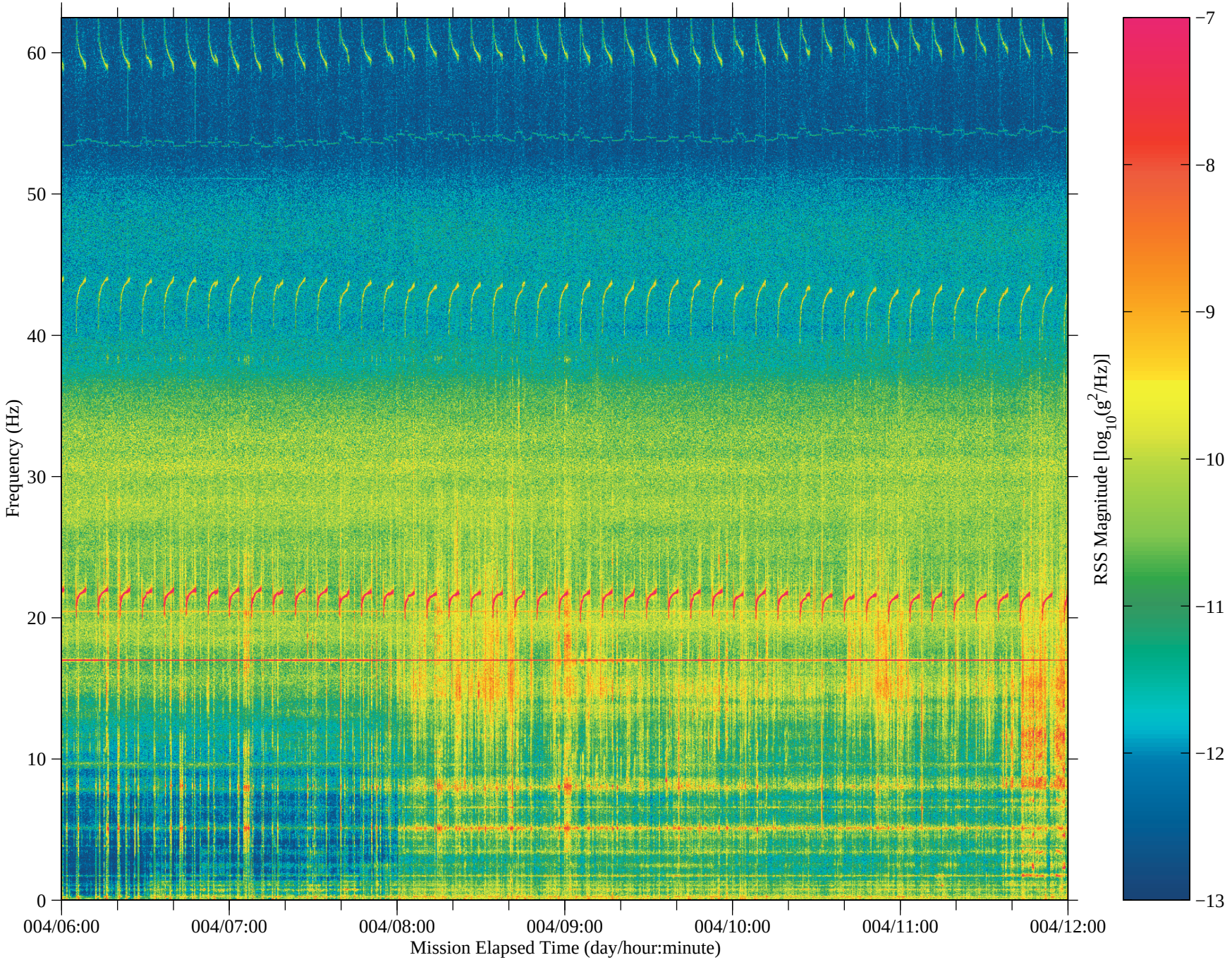

Figure C−16: STS−89, TSH A (fc=25 Hz)

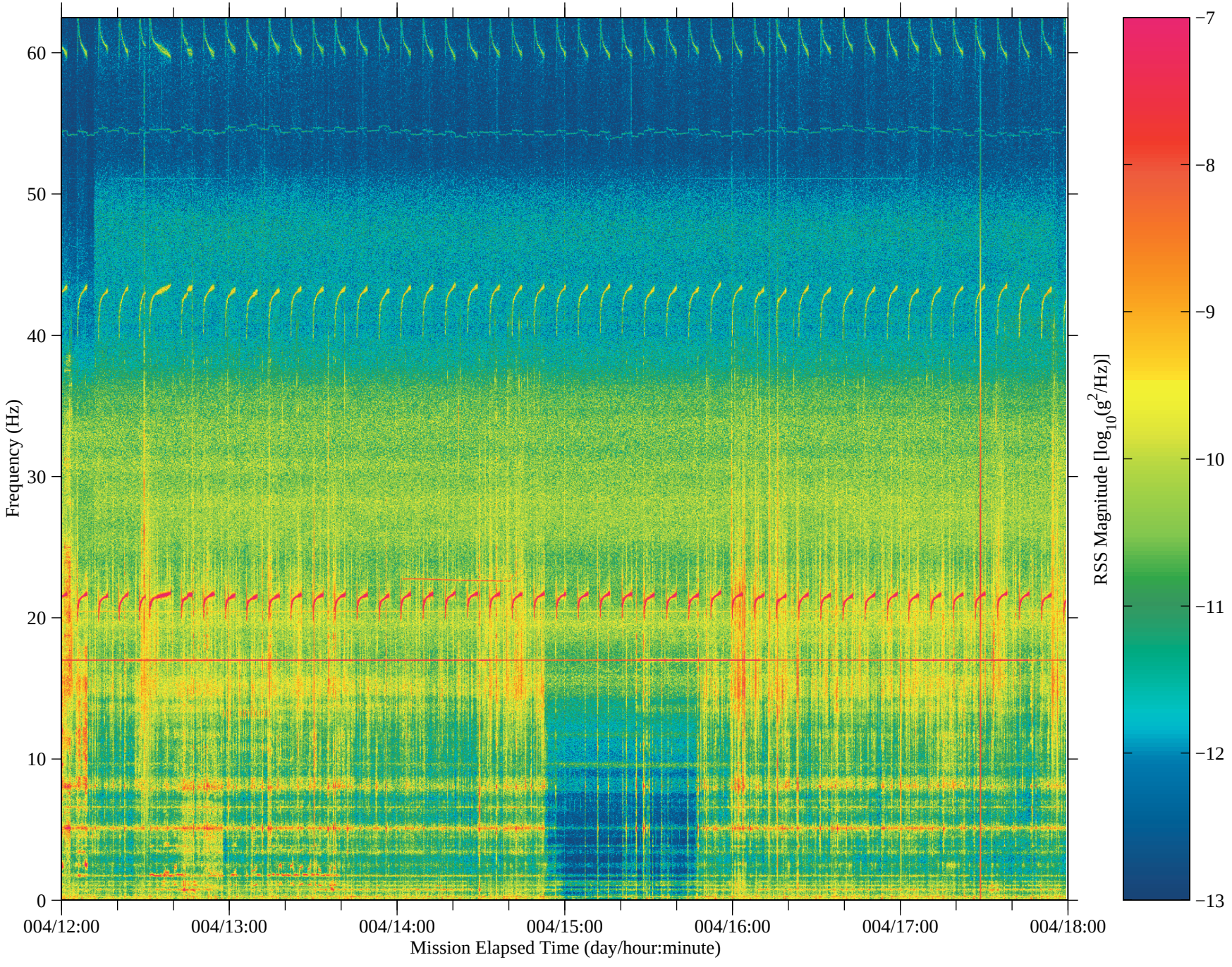

Figure C−17: STS−89, TSH A (fc=25 Hz)

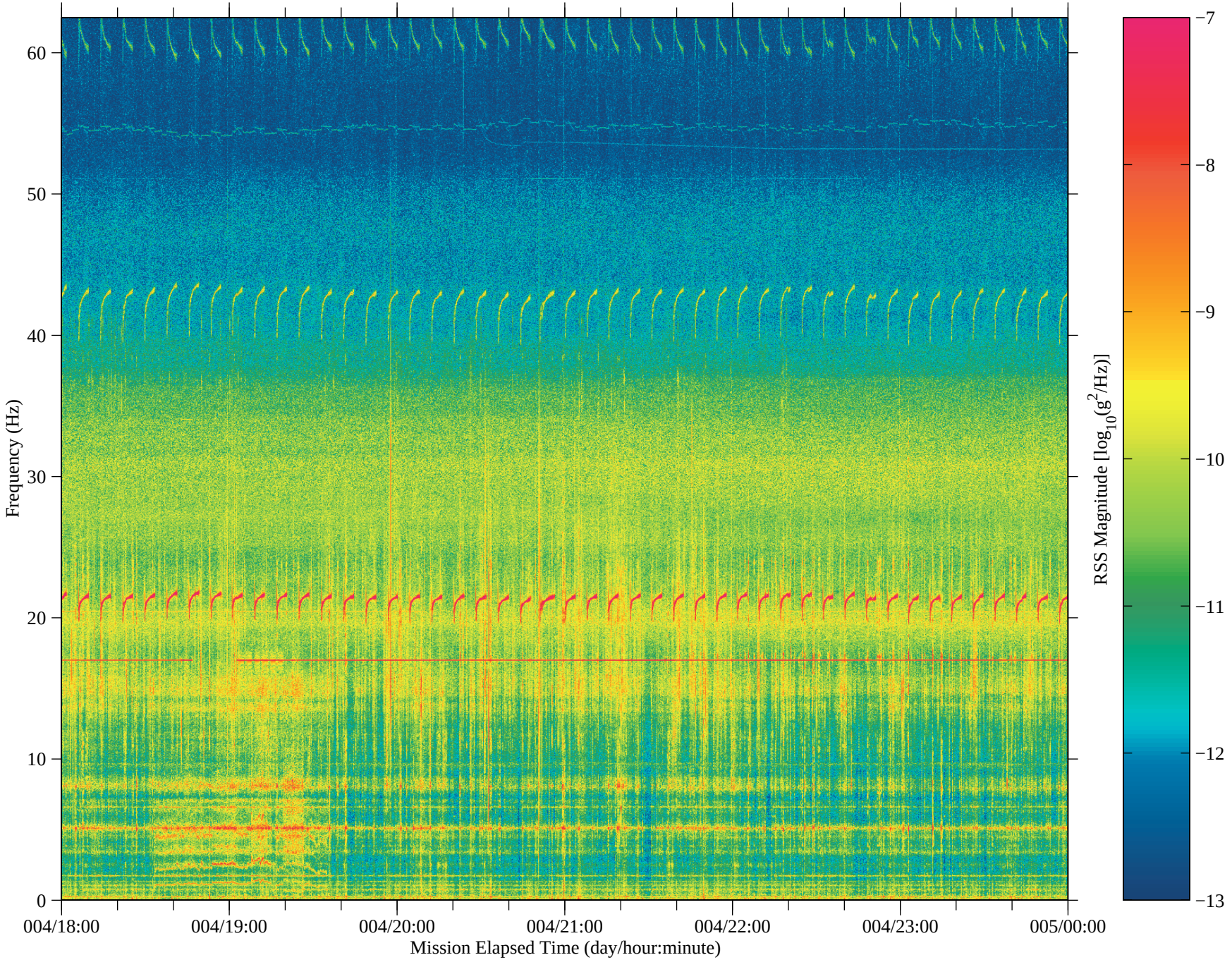

Figure C−18: STS−89, TSH A (fc=25 Hz)

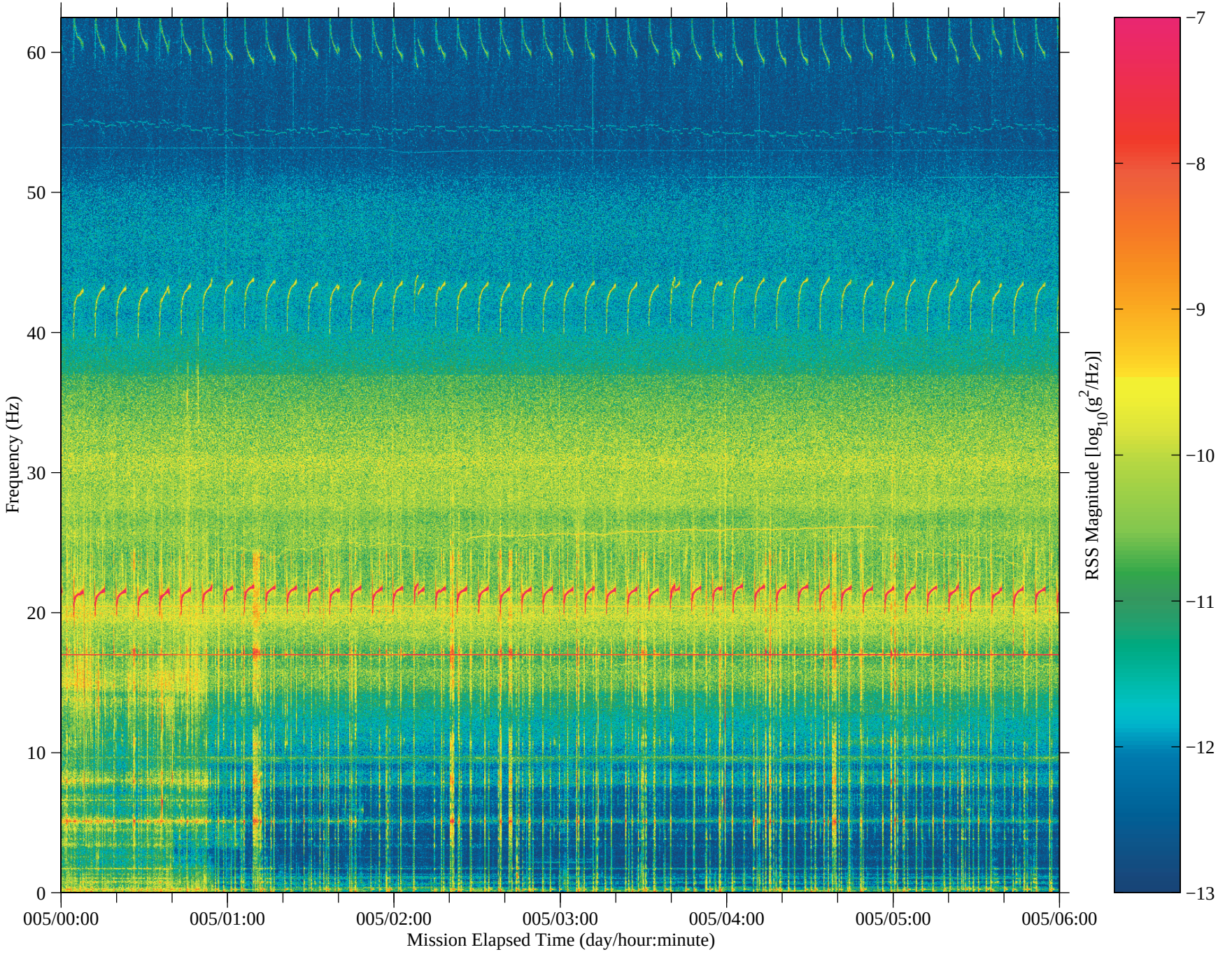

Figure C−19: STS−89, TSH A (fc=25 Hz)

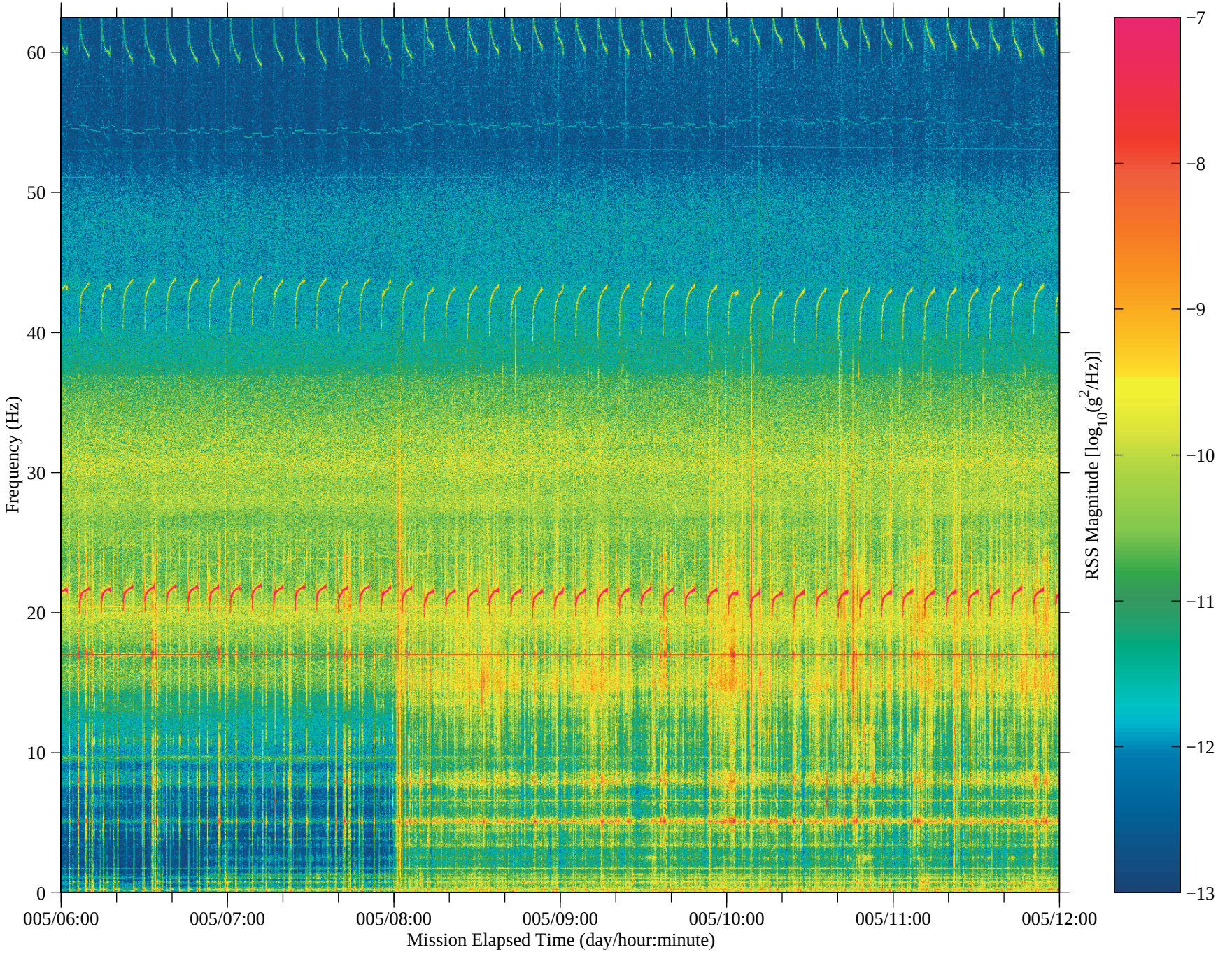

Figure C−20: STS−89, TSH A (fc=25 Hz)

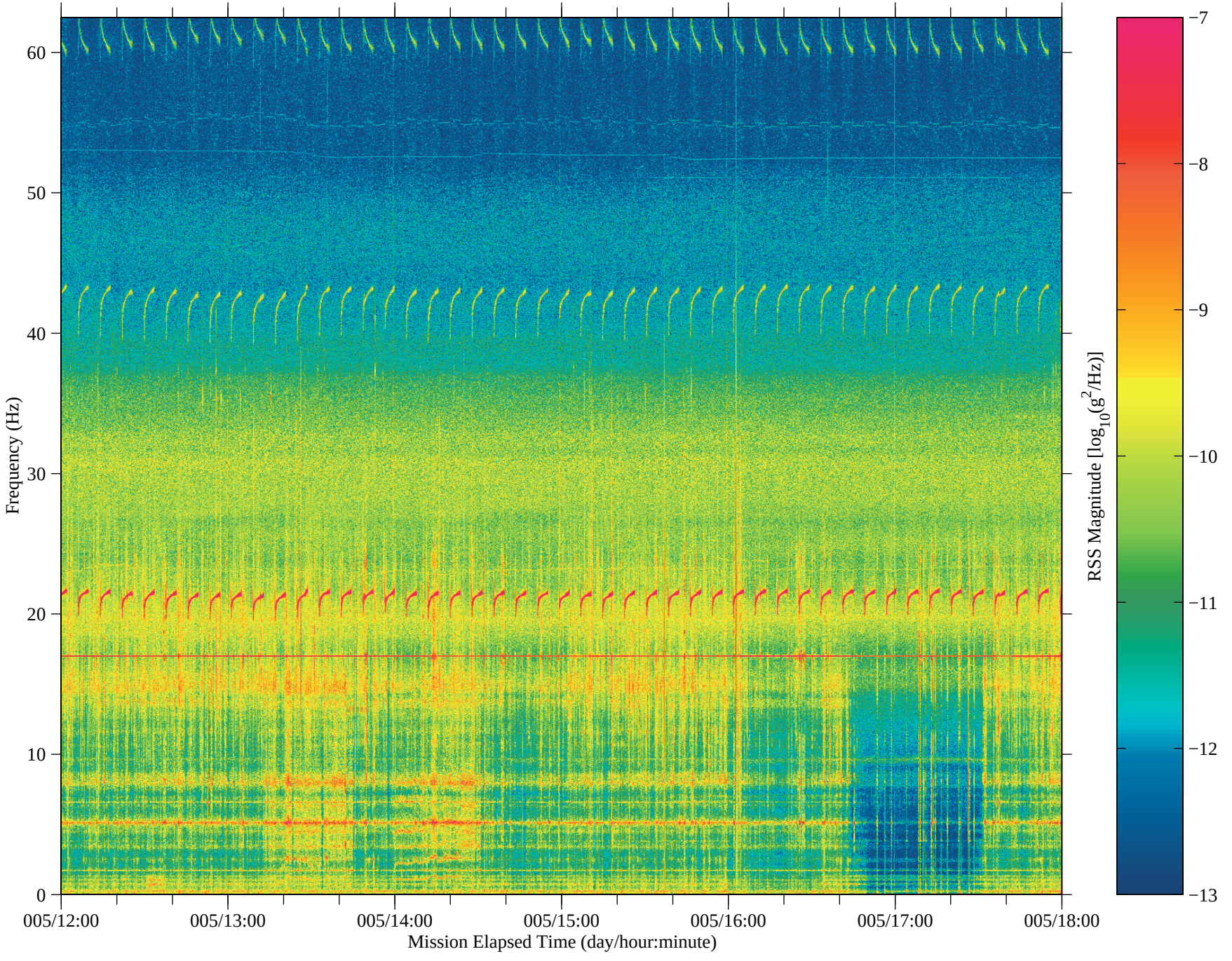

Figure C−21: STS−89, TSH A (fc=25 Hz)

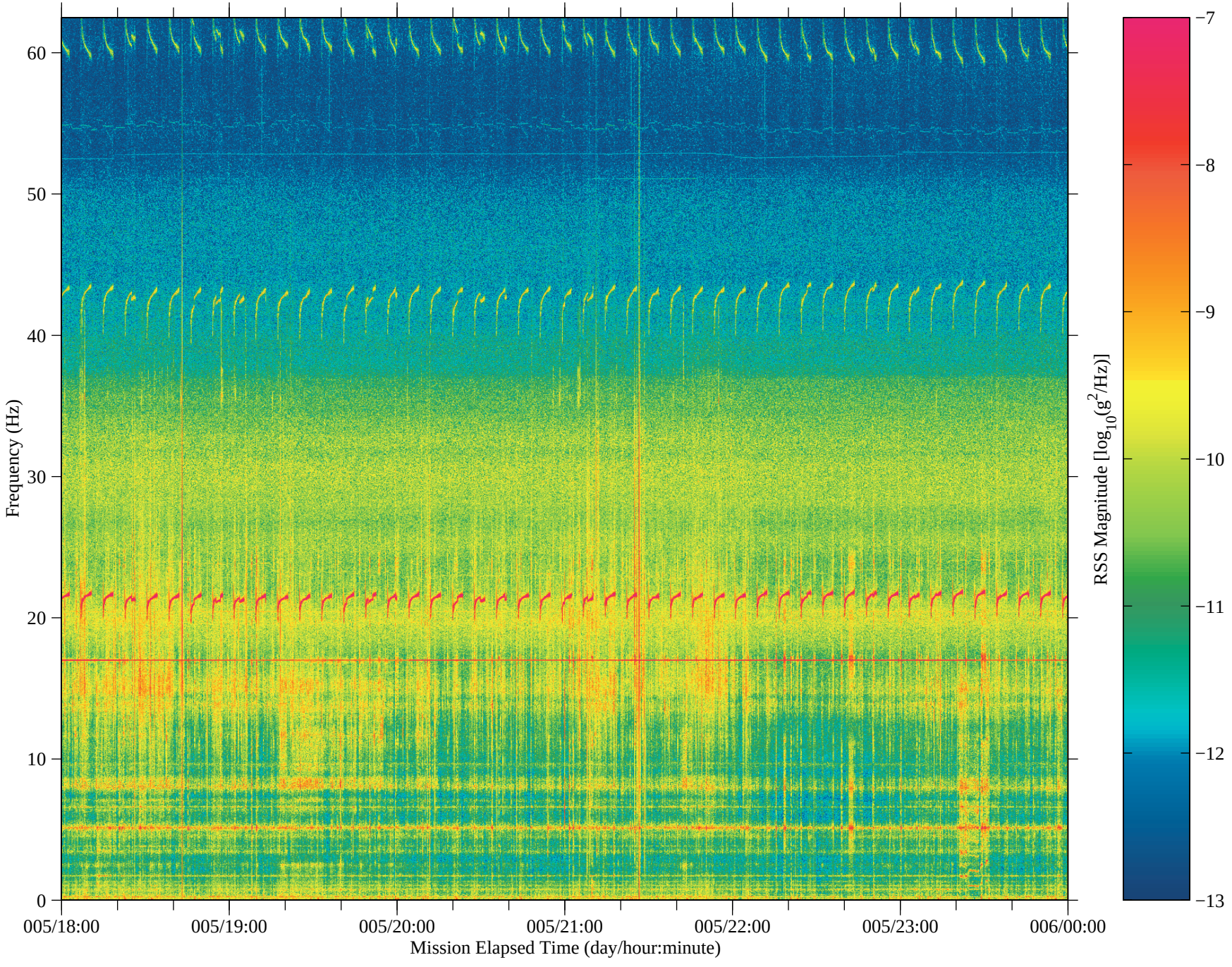

Figure C−22: STS−89, TSH A (fc=25 Hz)

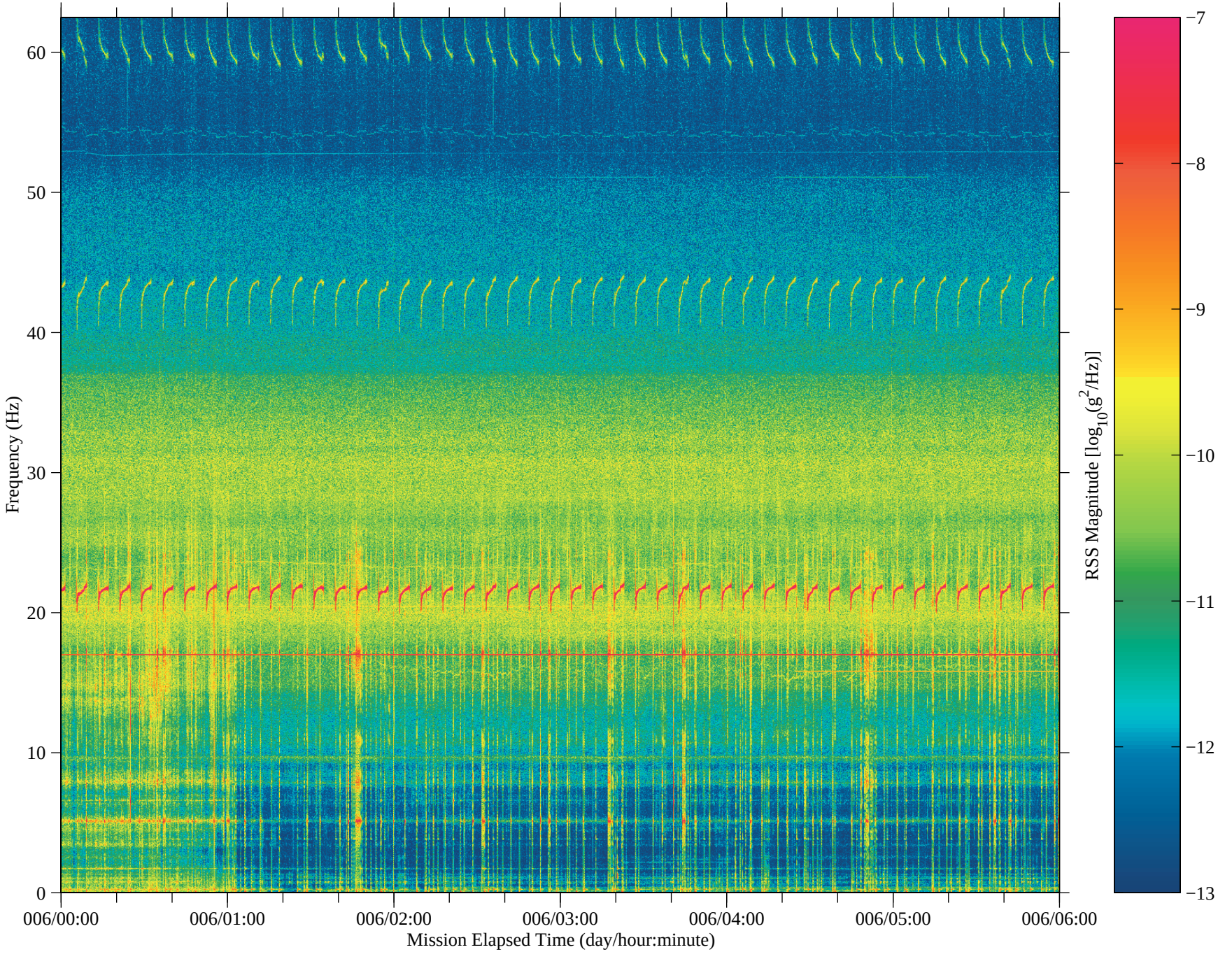

Figure C−23: STS−89, TSH A (fc=25 Hz)

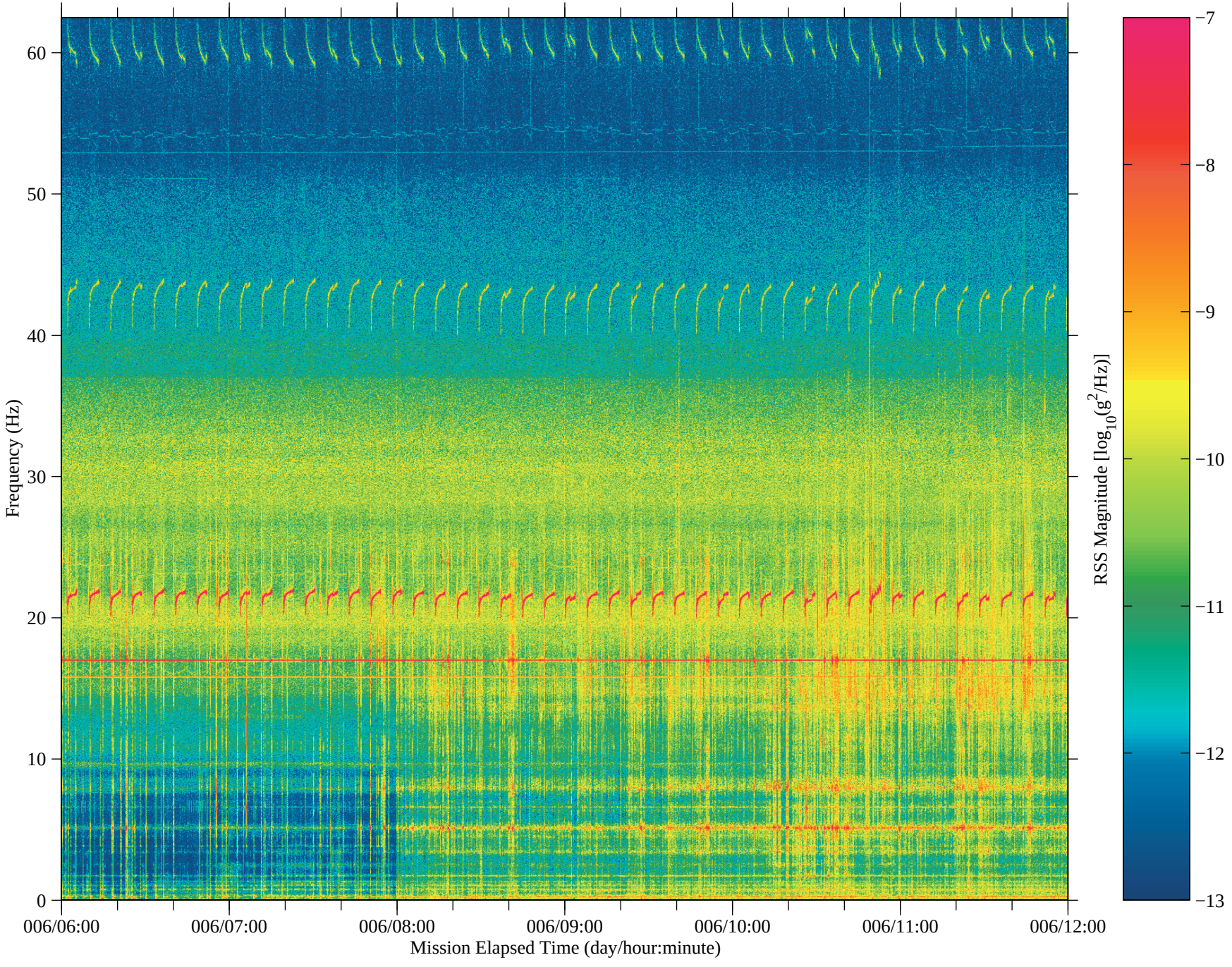

Figure C−24: STS−89, TSH A (fc=25 Hz)

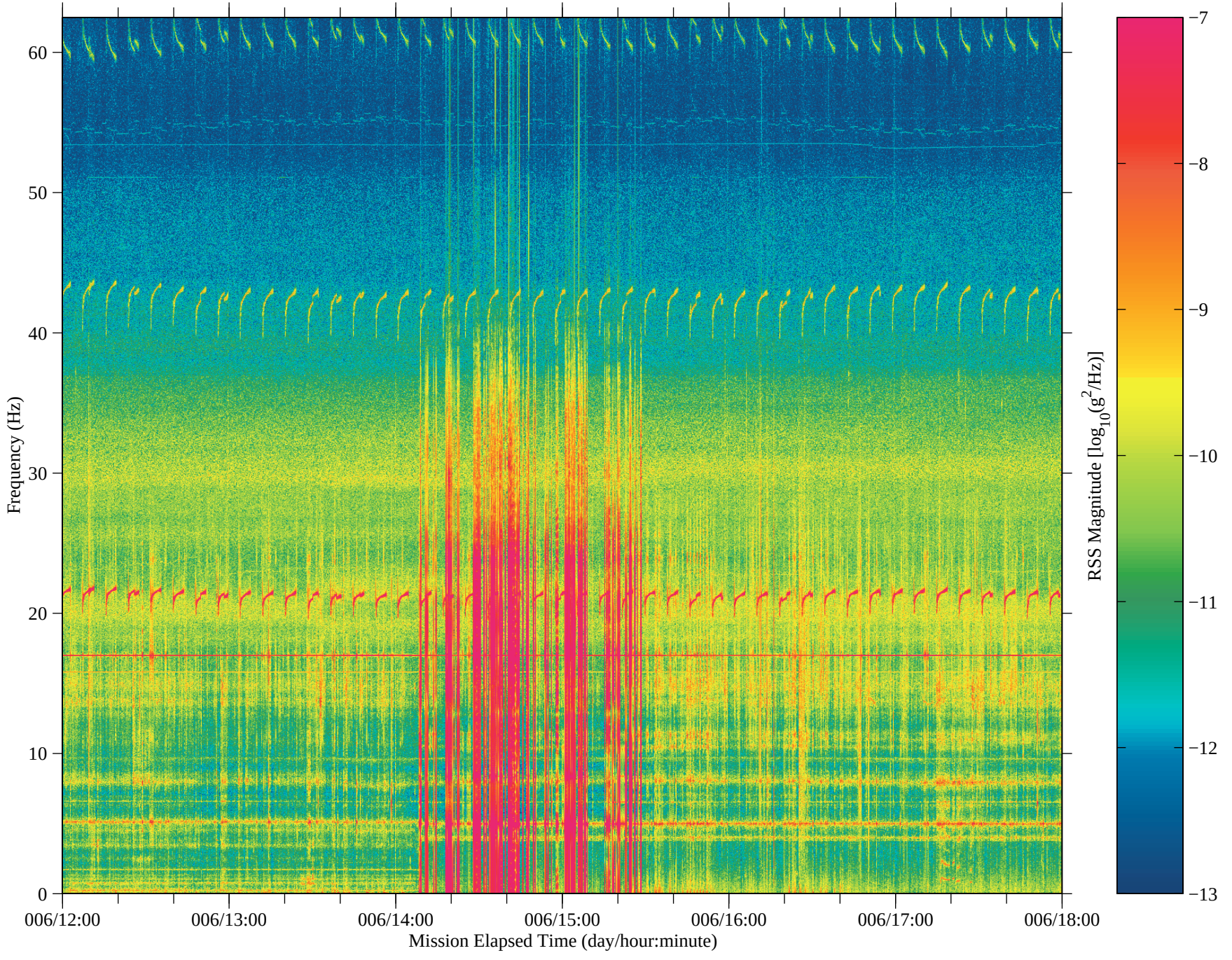

Figure C−25: STS−89, TSH A (fc=25 Hz)

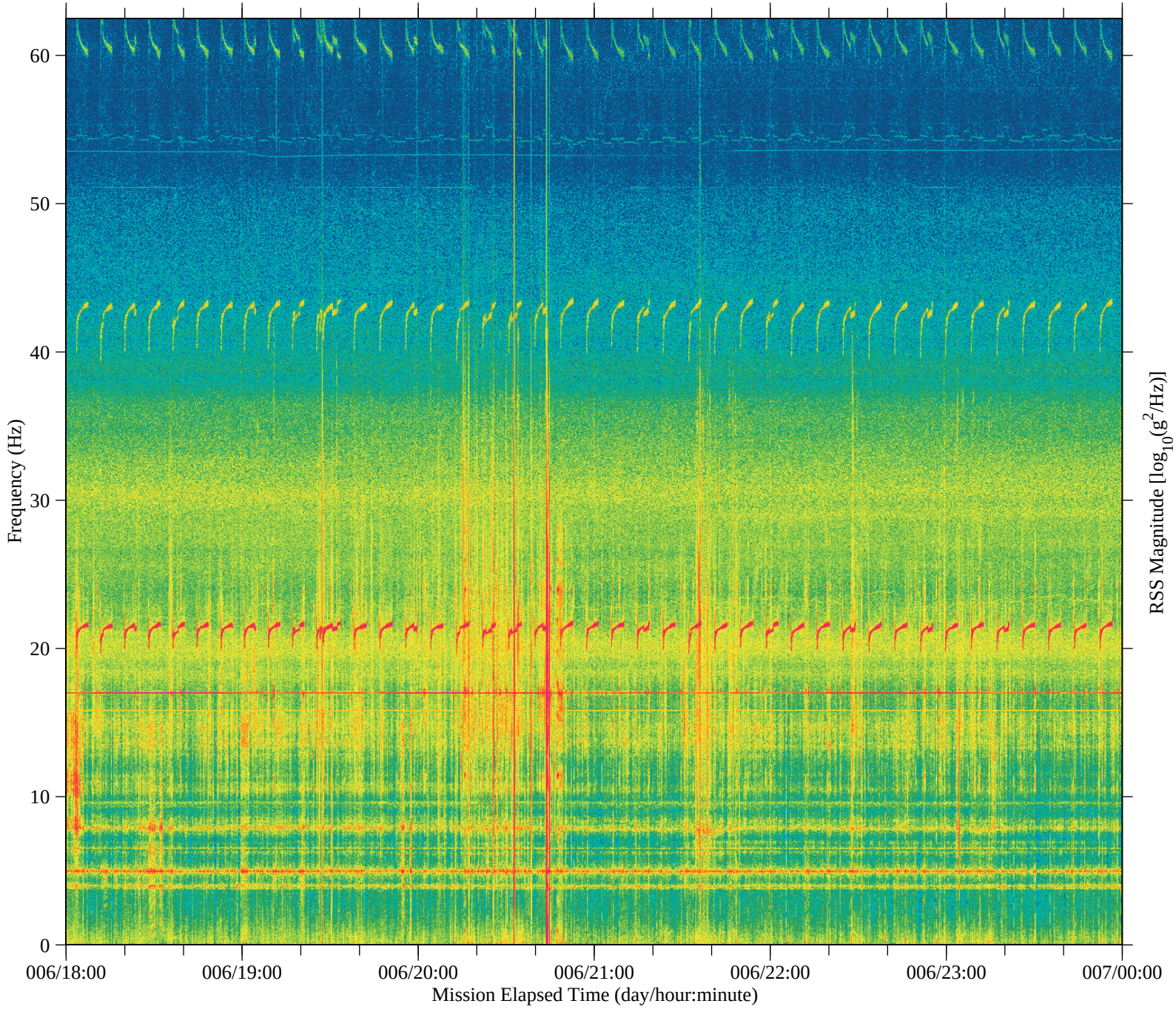

Figure C−26: STS−89, TSH A (fc=25 Hz)

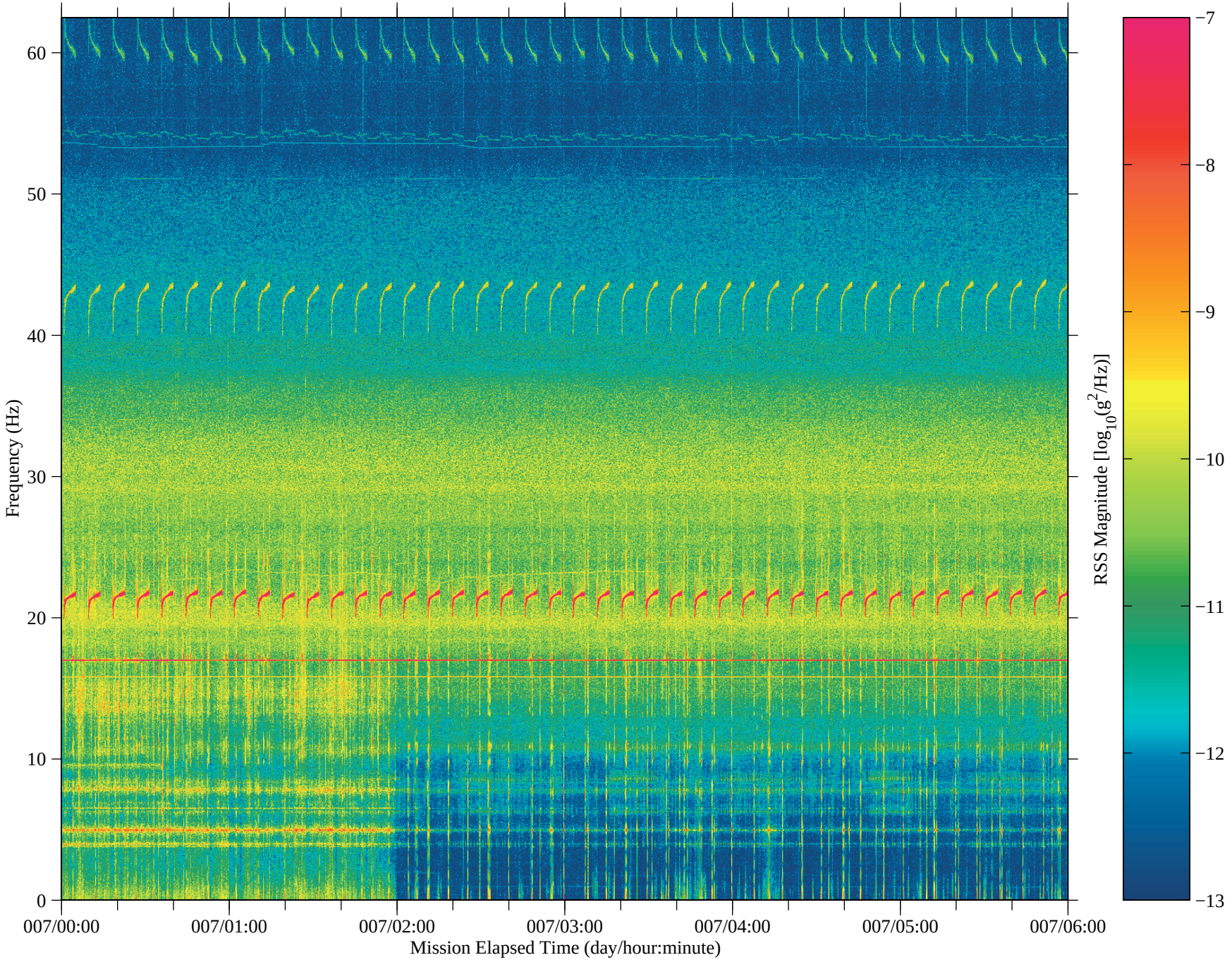

Figure C−27: STS−89, TSH A (fc=25 Hz)

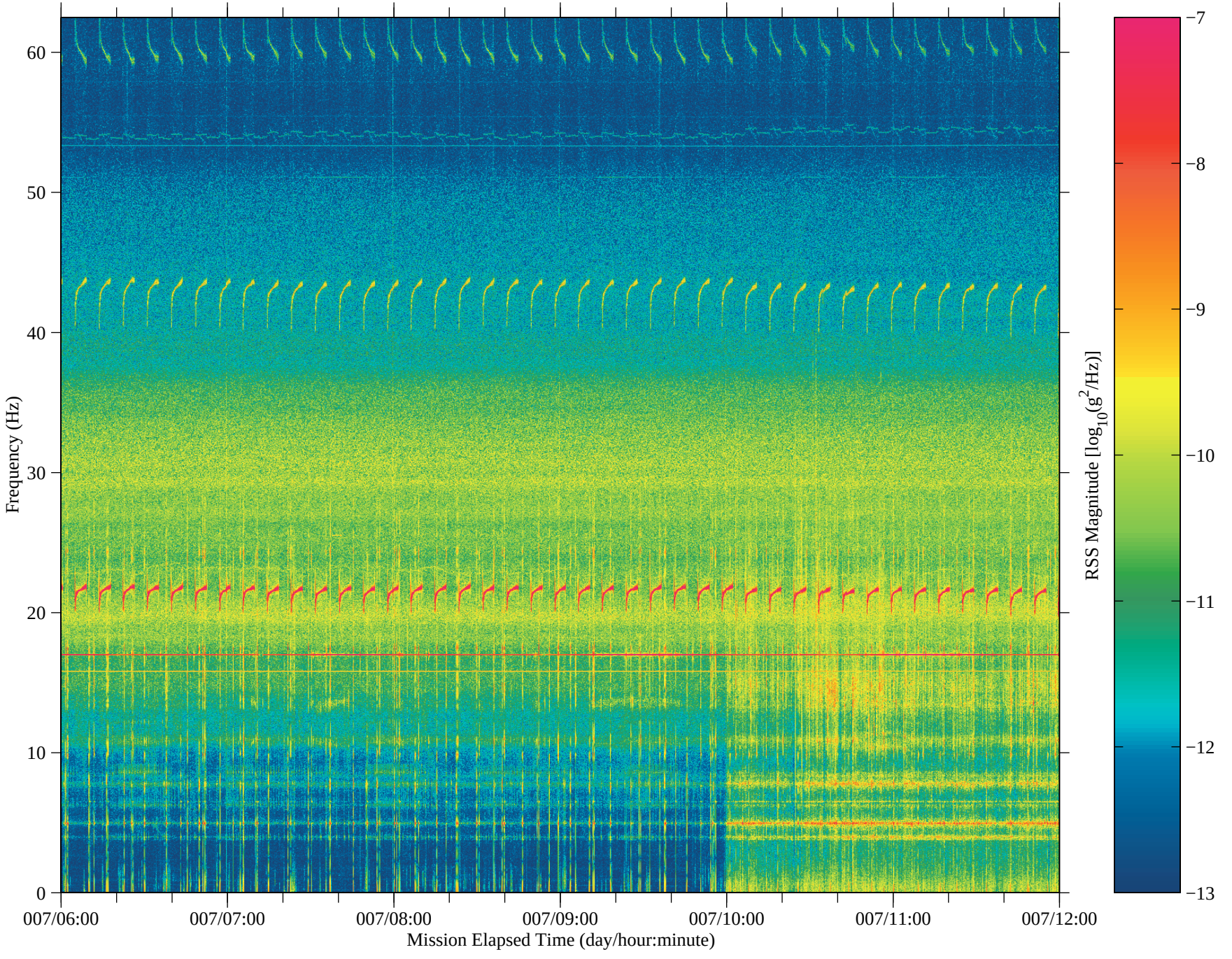

Figure C−28: STS−89, TSH A (fc=25 Hz)

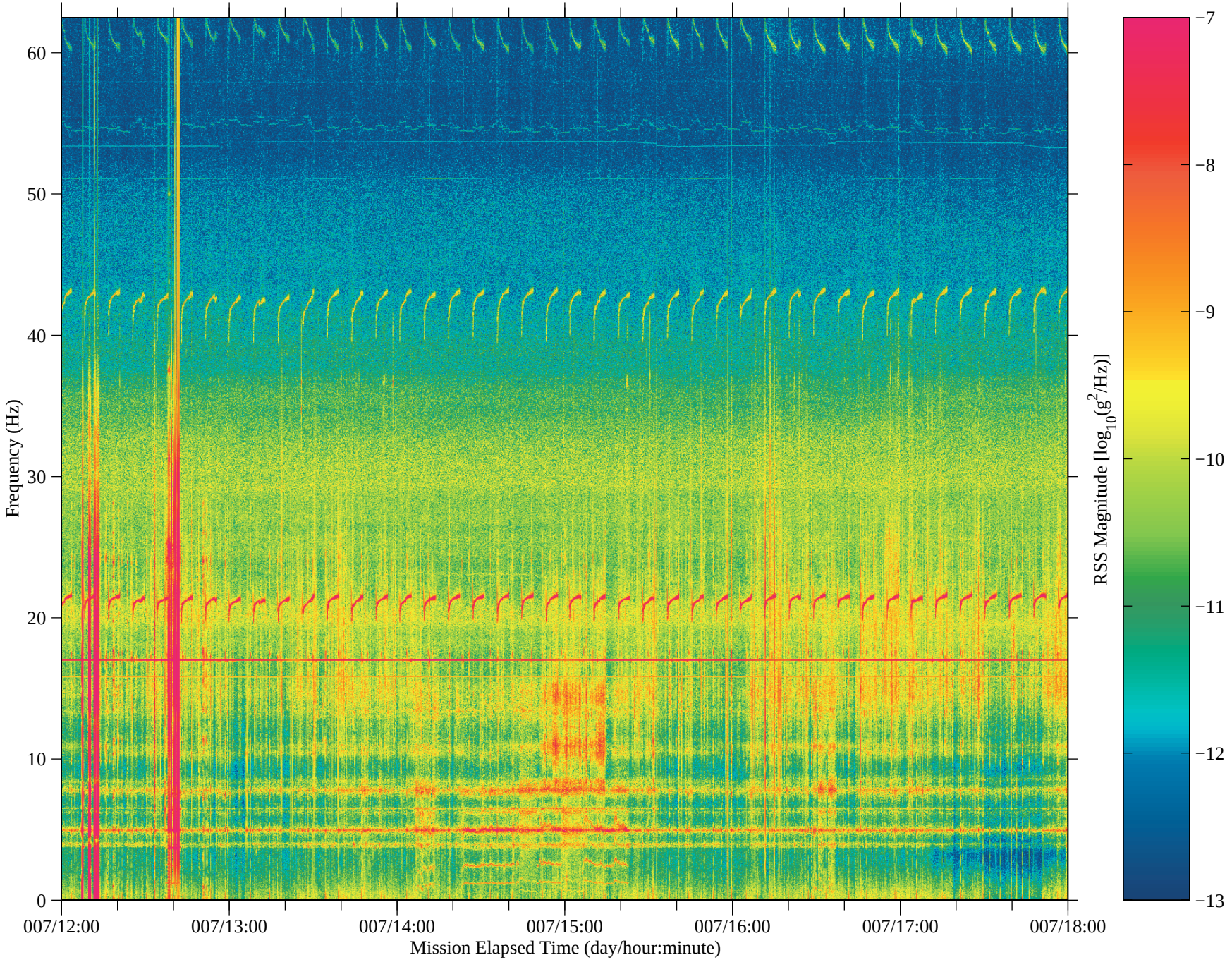
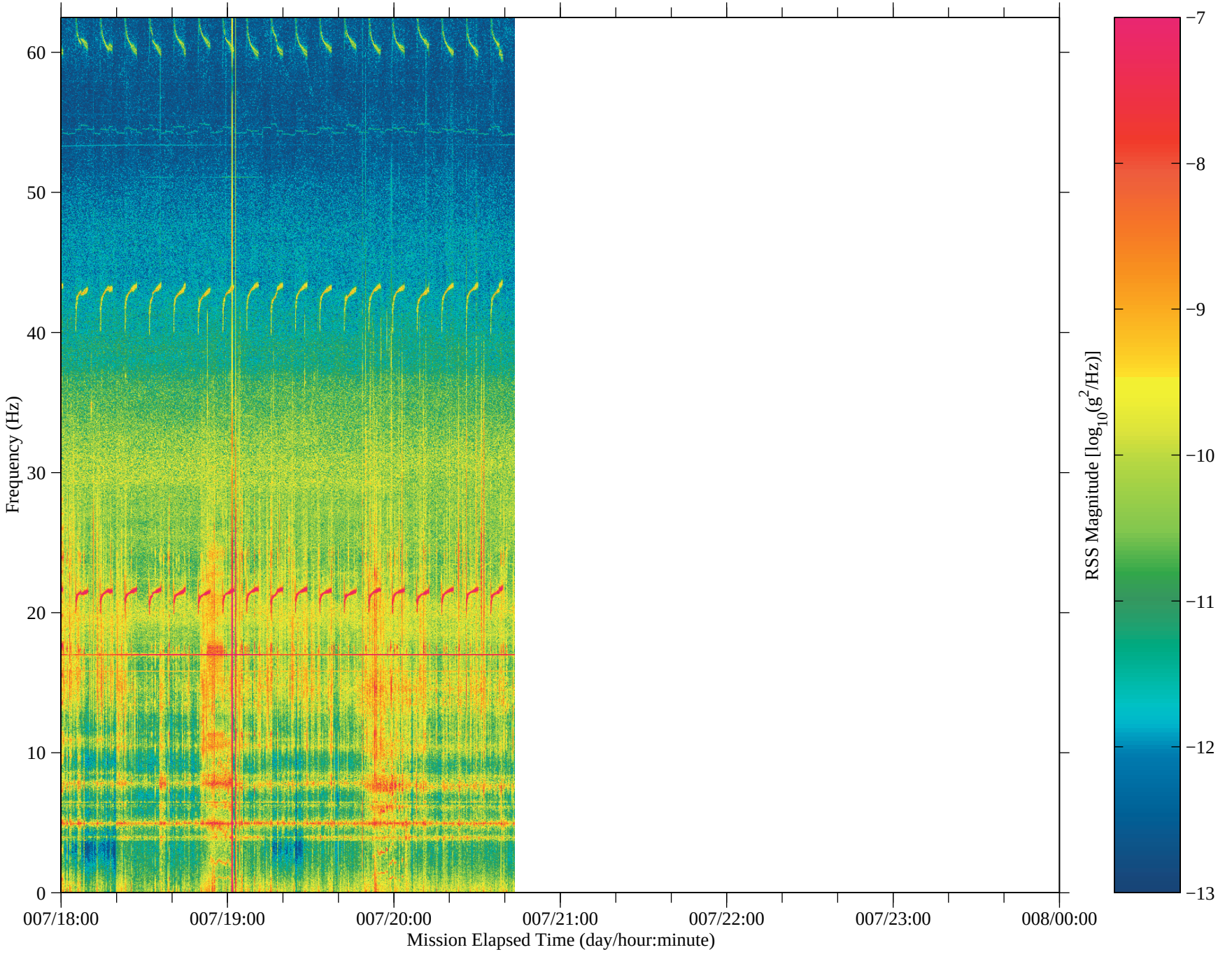
Figure C−29: STS−89, TSH A (fc=25 Hz)