Appendix F - Spectrograms for Mir SAMS TSH B (10 Hz)

SAMS TSH B data collected on Mir during docked operations with the STS-89 mission were used to generate the spectrogram plots in this appendix. These data were collected at a rate of 50 samples per second with a lowpass filter cutoff frequency of 10 Hz. The cutoff frequency was used as the upper limit on the frequency axis of these plots. 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 20.48 seconds, and the frequency resolution was 0.0244 Hz. The time axis is shown in terms of STS-89 MET, while the data were collected with DMT times. To convert from DMT to STS-89 MET the following time was subtracted from the DMT recorded times: 023/05:48:15. The converted time is what is shown on the spectrograms' time axis. 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.

Appendix F - Spectrograms for Mir SMAS TSH B (10 Hz) F-1
Appendix F - Table of Contents F-2
Figure F-1 ..... F-3
Figure F-2 ..... F-4
Figure F-3 ..... F-5
Figure F-4 ..... F-6
Figure F-5 ..... F-7

Figure F−1: Mir Inc. #6, TSH B (fc=10 Hz)

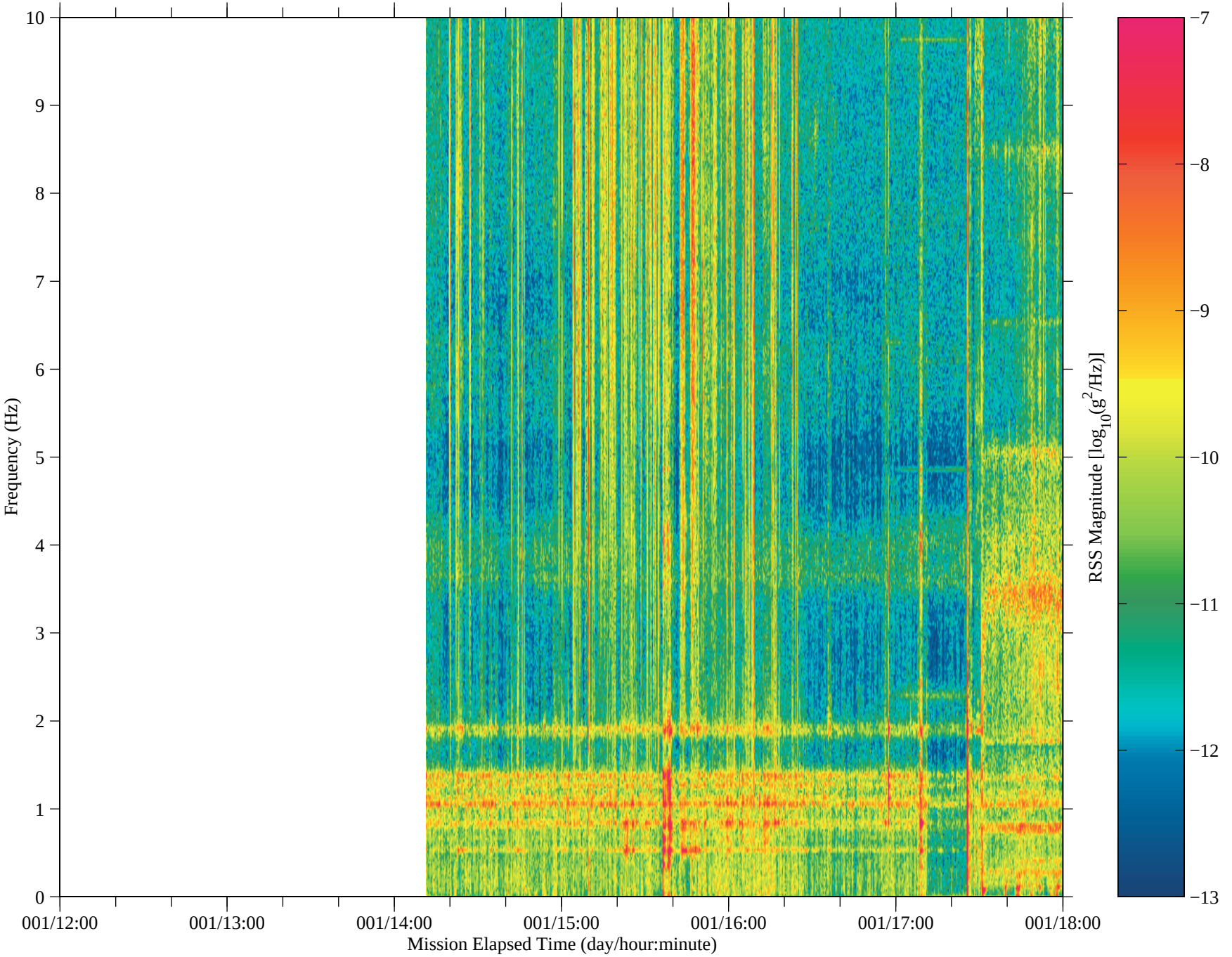

Figure F−2: Mir Inc. #6, TSH B (fc=10 Hz)

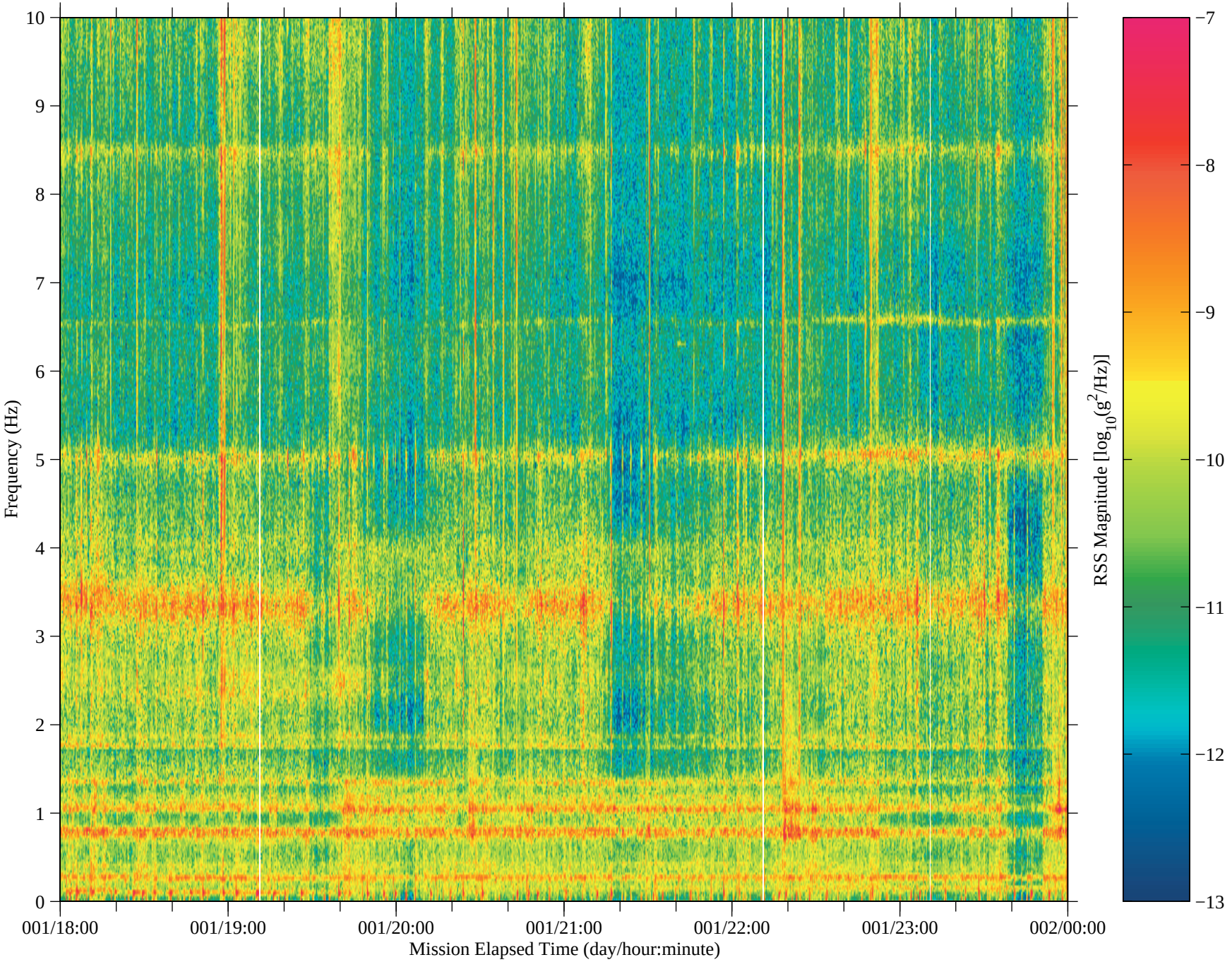

Figure F−3: Mir Inc. #6, TSH B (fc=10 Hz)

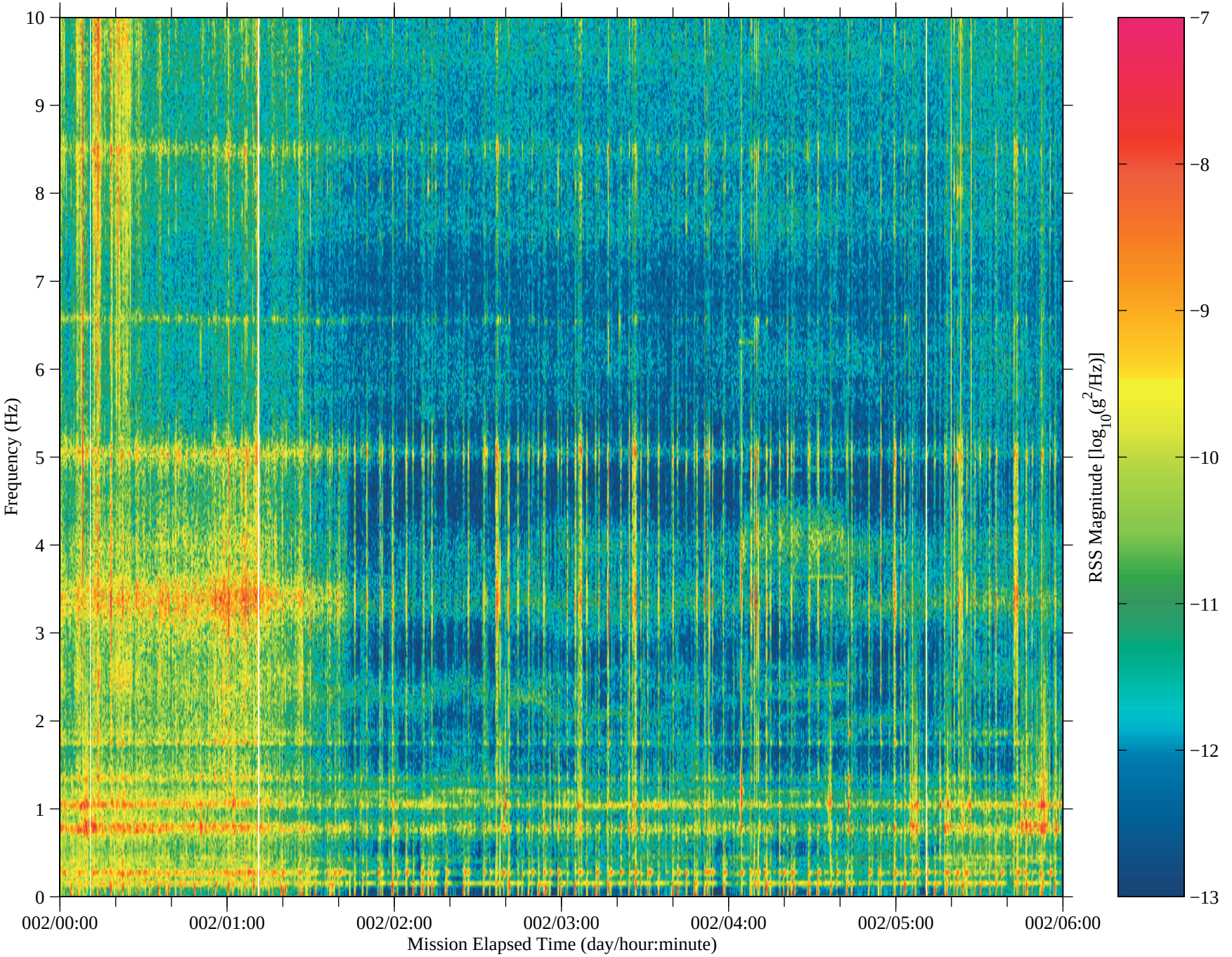

Figure F−4: Mir Inc. #6, TSH B (fc=10 Hz)

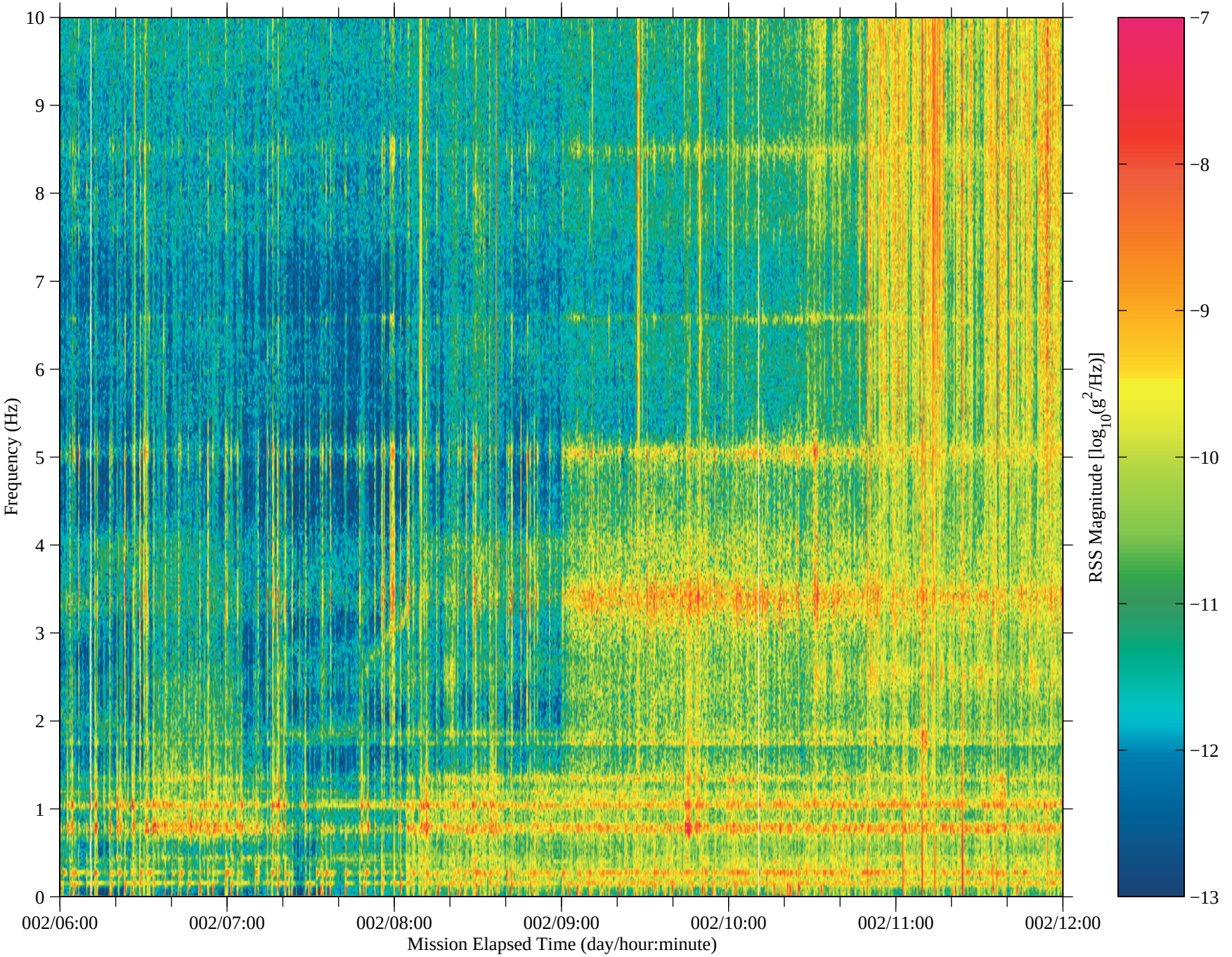
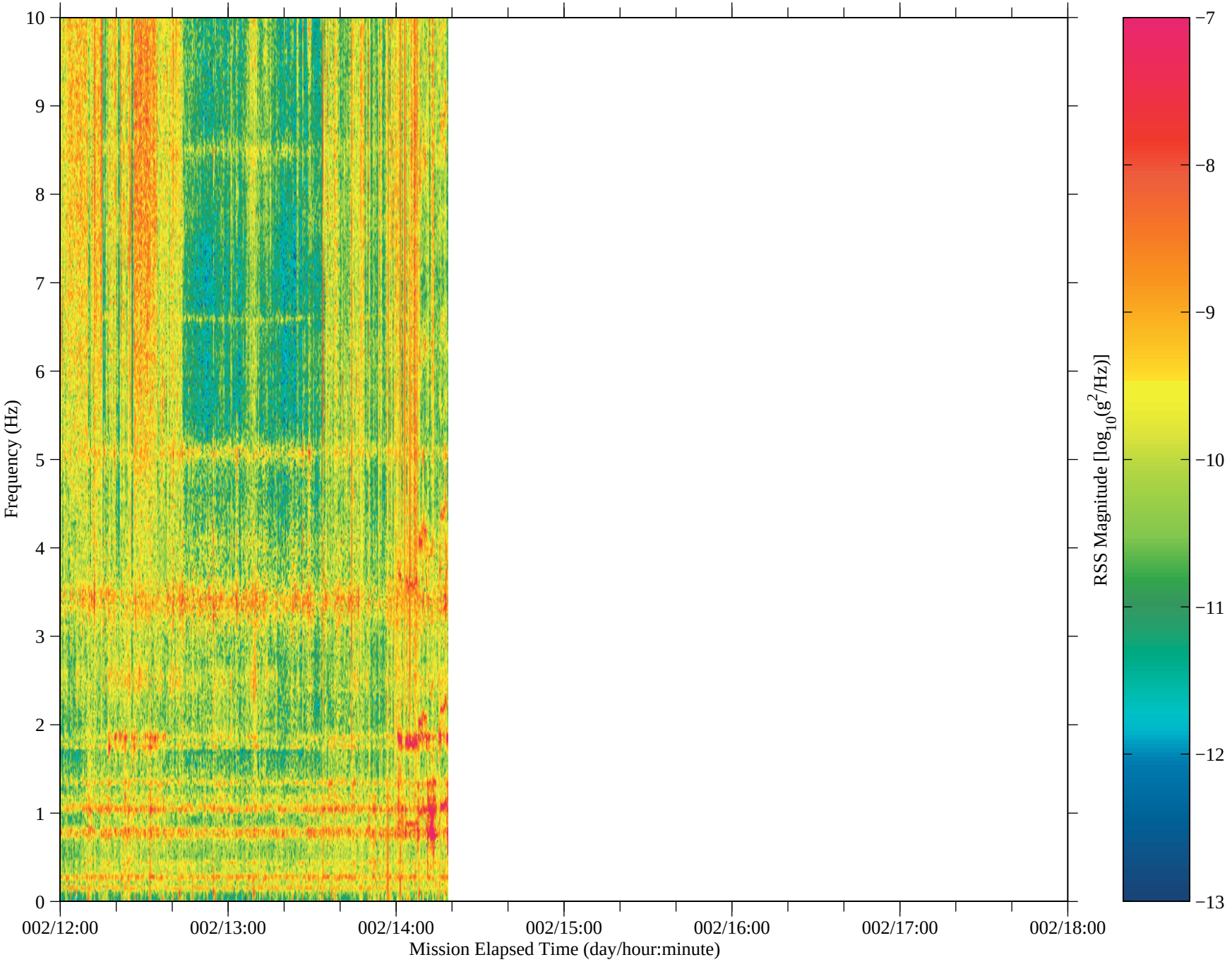
Figure F−5: Mir Inc. #6, TSH B (fc=10 Hz)