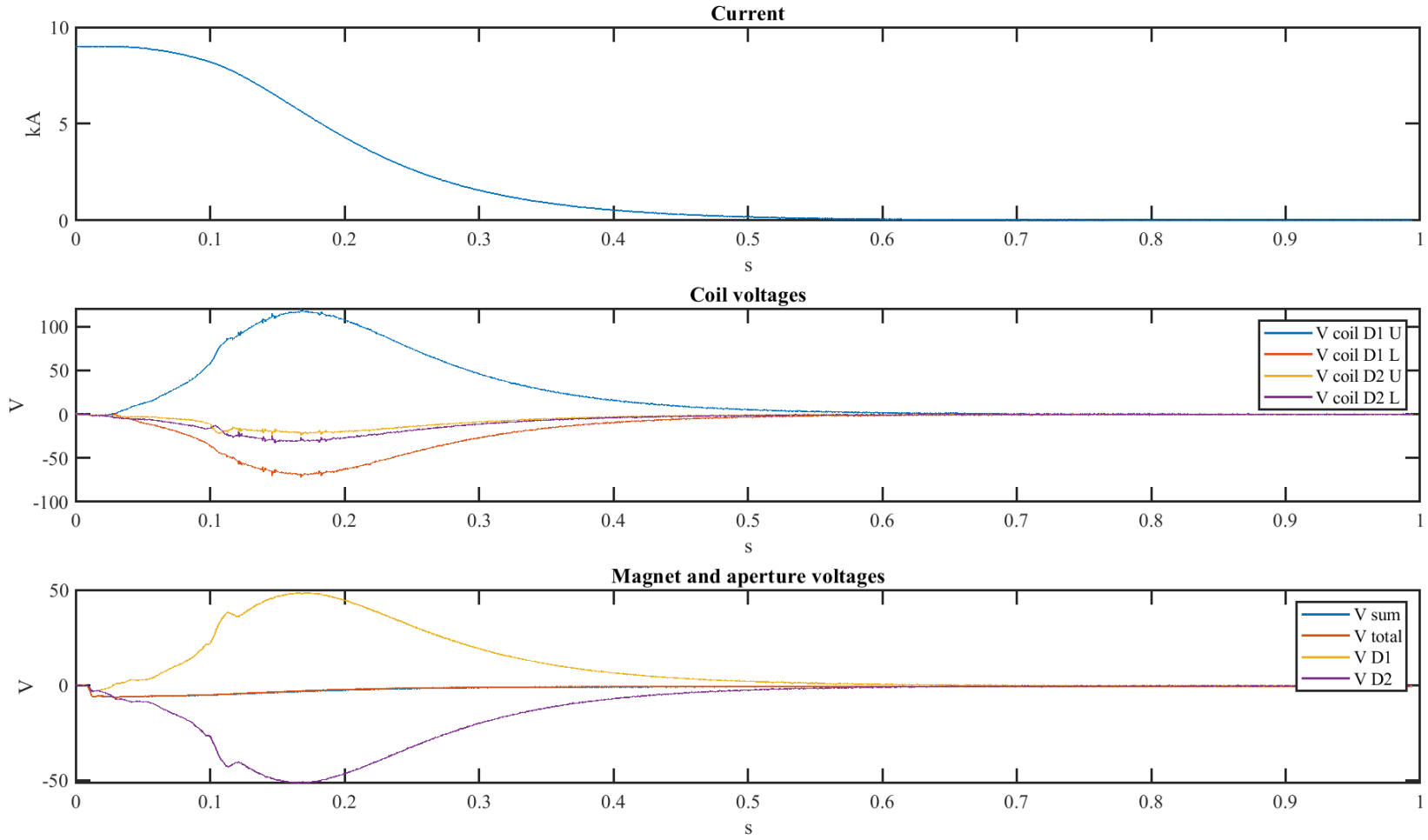
Wavelet analysis

Signals from quench antennas

Previously tested magnets

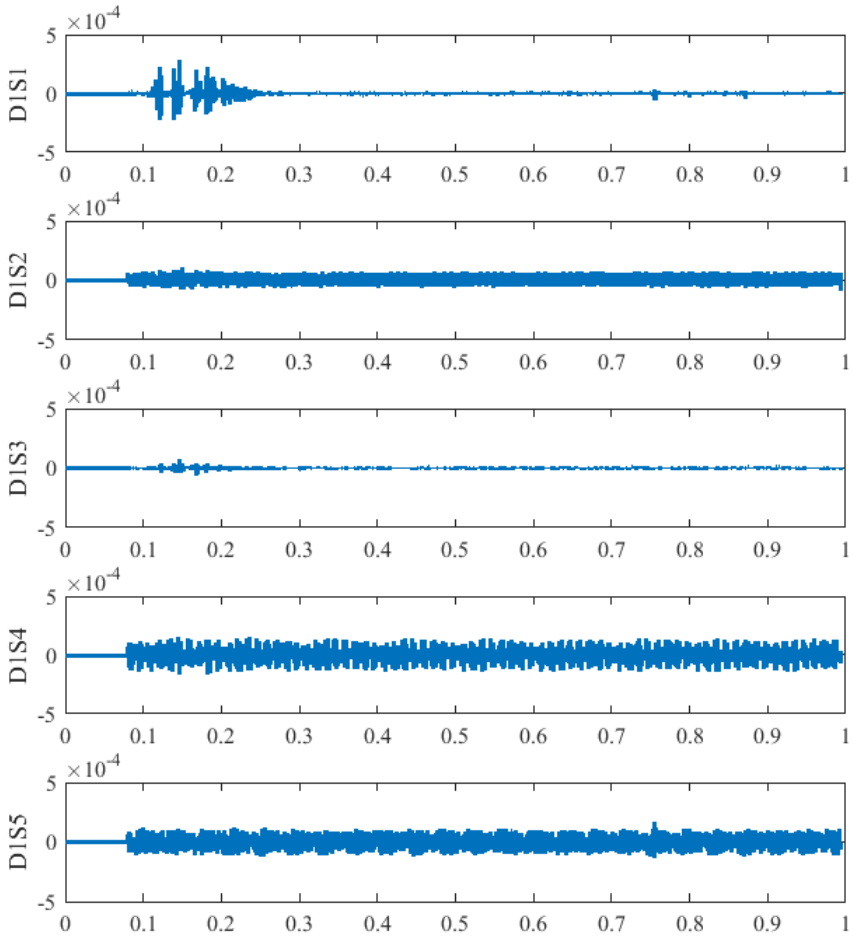
Quench antennas

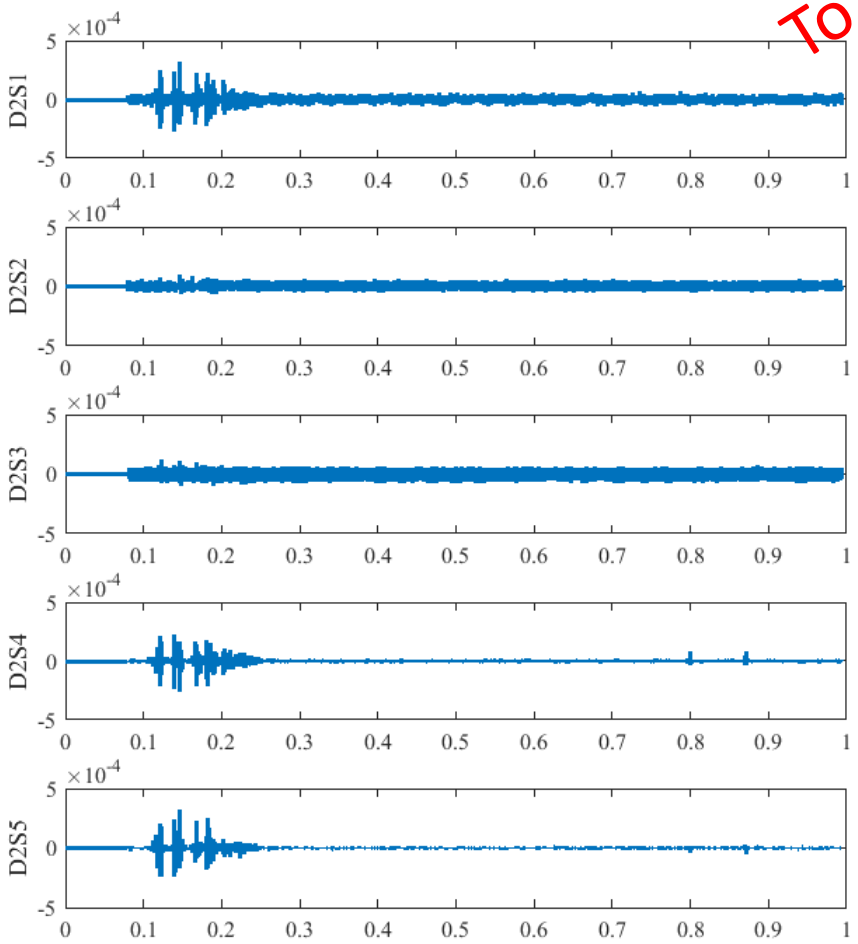


Quench antennas

s1	s2	s3	s4	s5
CFB				MRB

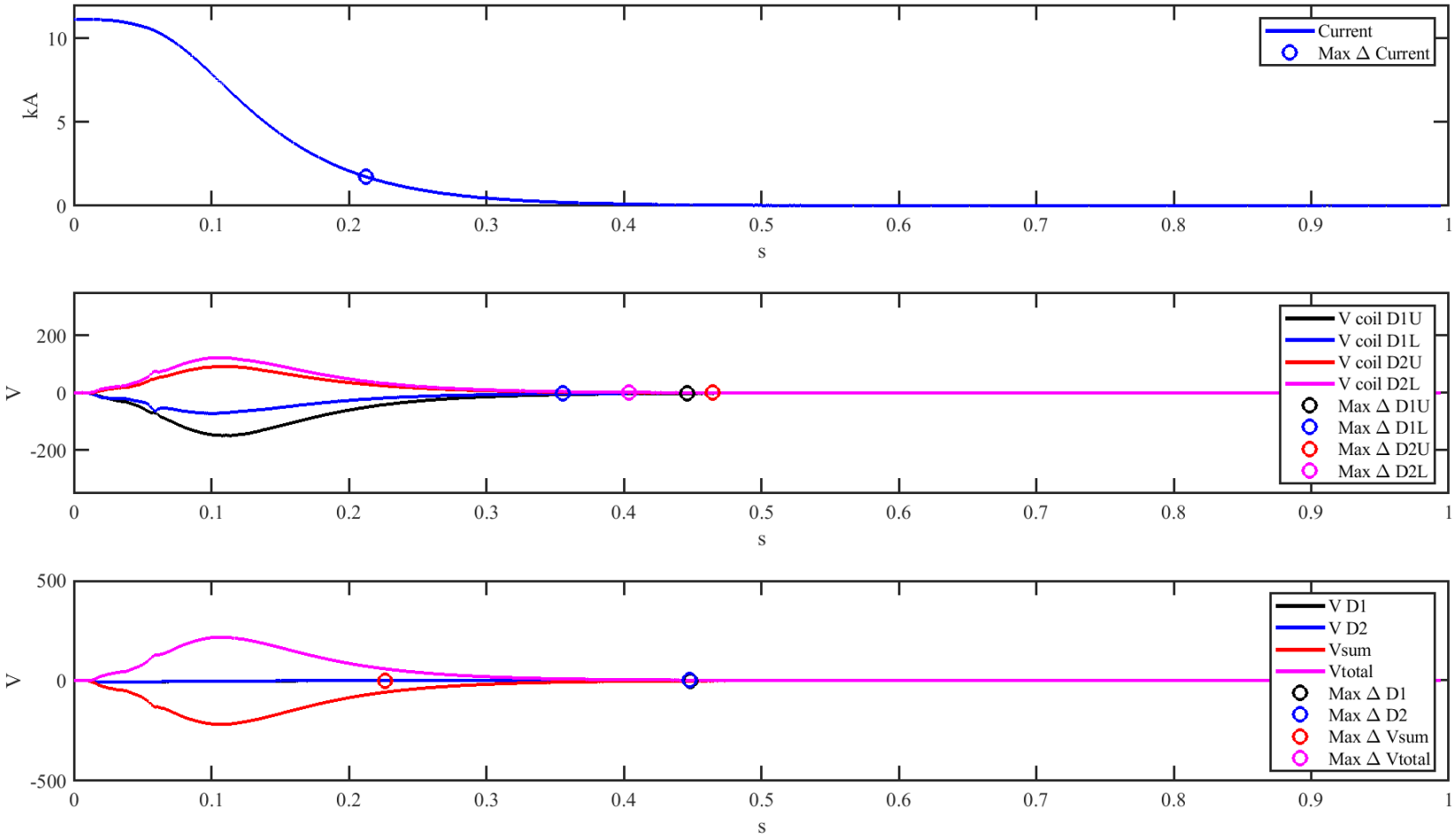
To be checked!



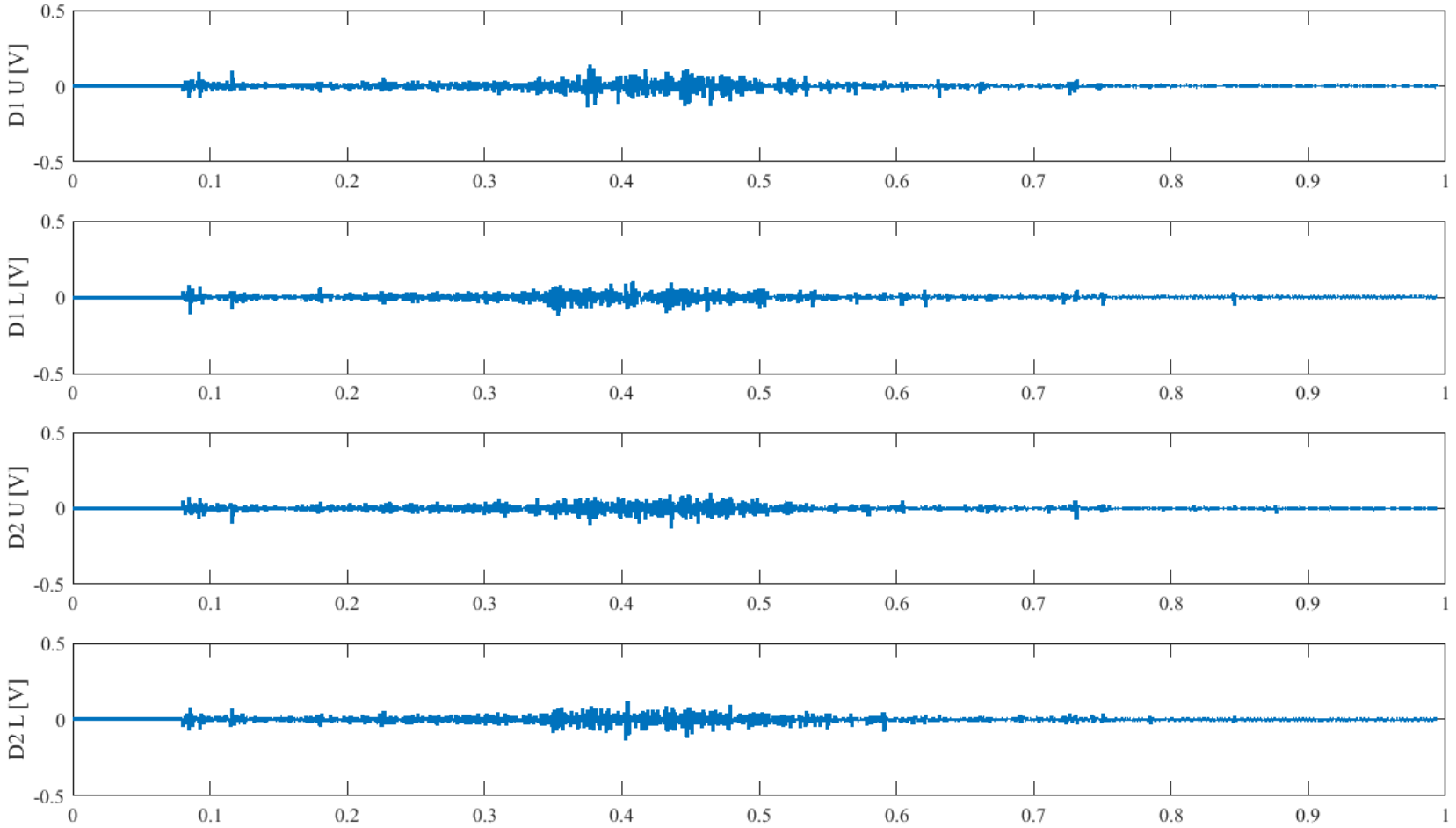


- Discharge at 9 kA
- Same post-processing as coil voltages
- Some segments show noise with similar pattern as on coil voltages
- Some signals seem to be corrupted

Previously tested magnets: MBHB-002

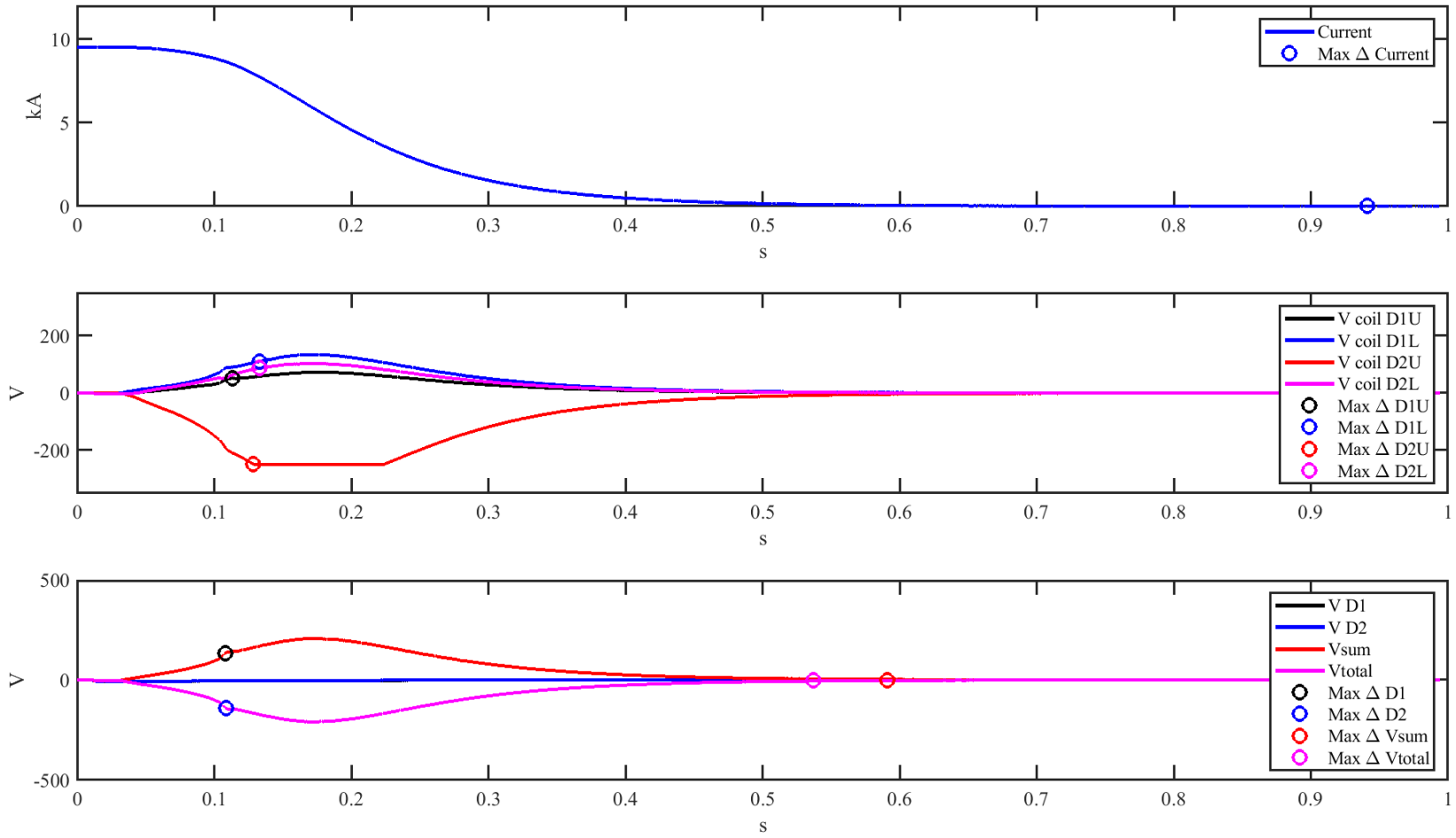


Previously tested magnets: MBHB-002

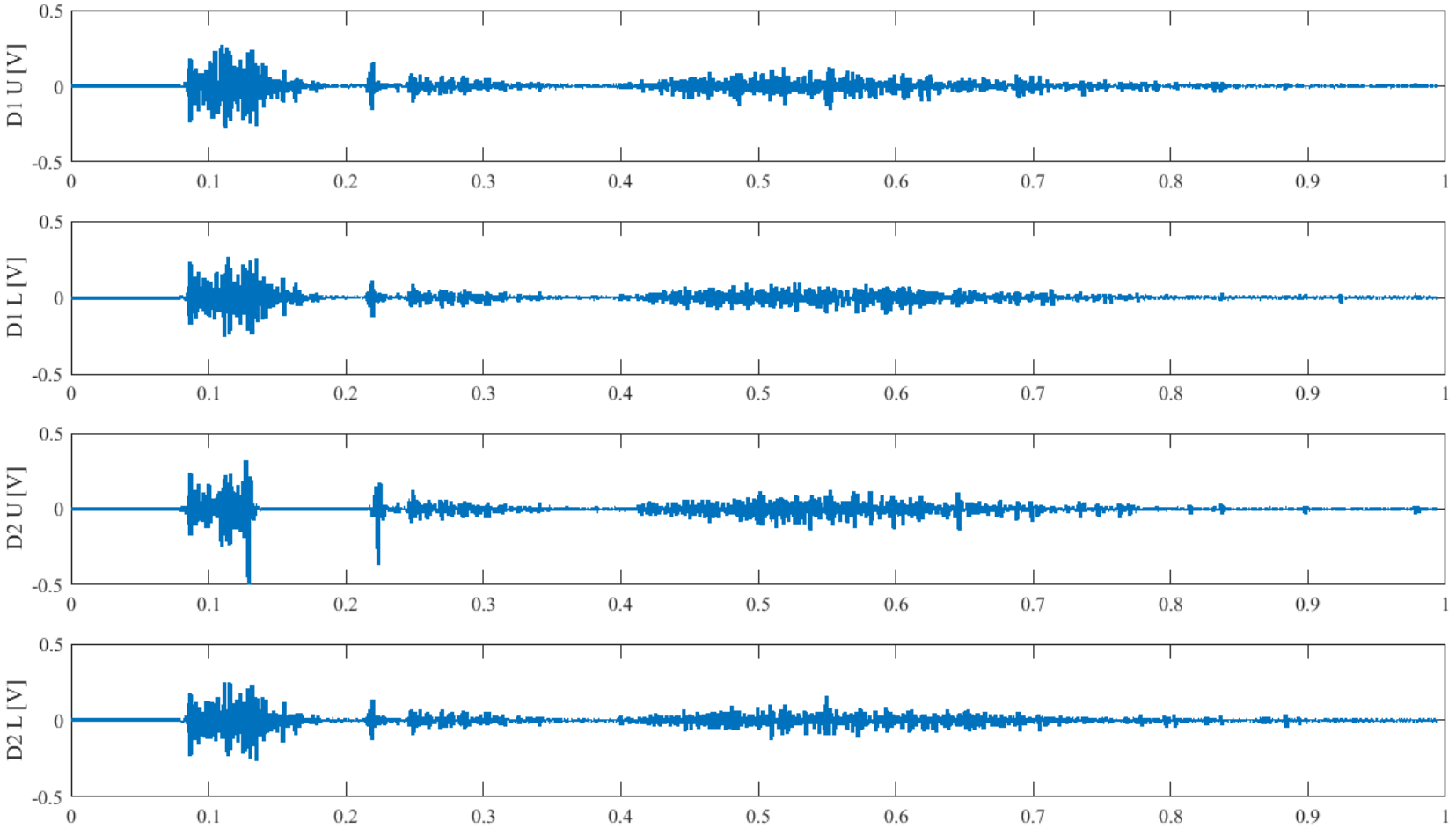


- Discharge from 11.85 kA
- 10x magnification for the plots
- Noise with a ~100 times smaller amplitude

Previously tested magnets: MBHA-002



Previously tested magnets: MBHA-002



- Discharge from 9 kA
- 10x magnification for the plots
- Noise with a ~10 times smaller amplitude
- Very similar signature

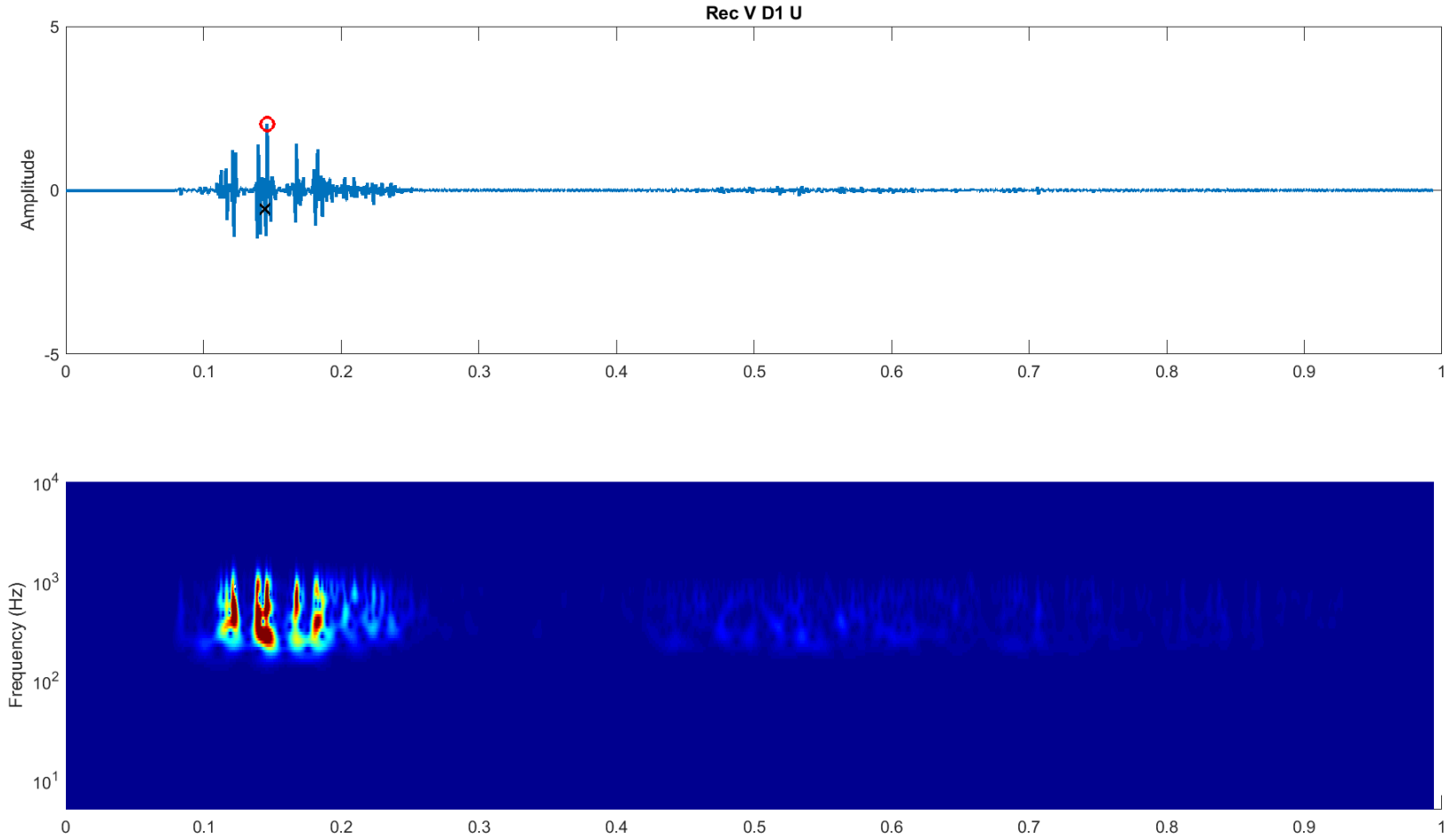
Conclusions

- Quench antennas
  - Noise with similar patter as the spikes on some signals
    - On s1 of both apertures – CFB side (to be checked!)
    - On s5 only for AP2 – MRB side (to be checked!)
  - Some signals are corrupted by large noise

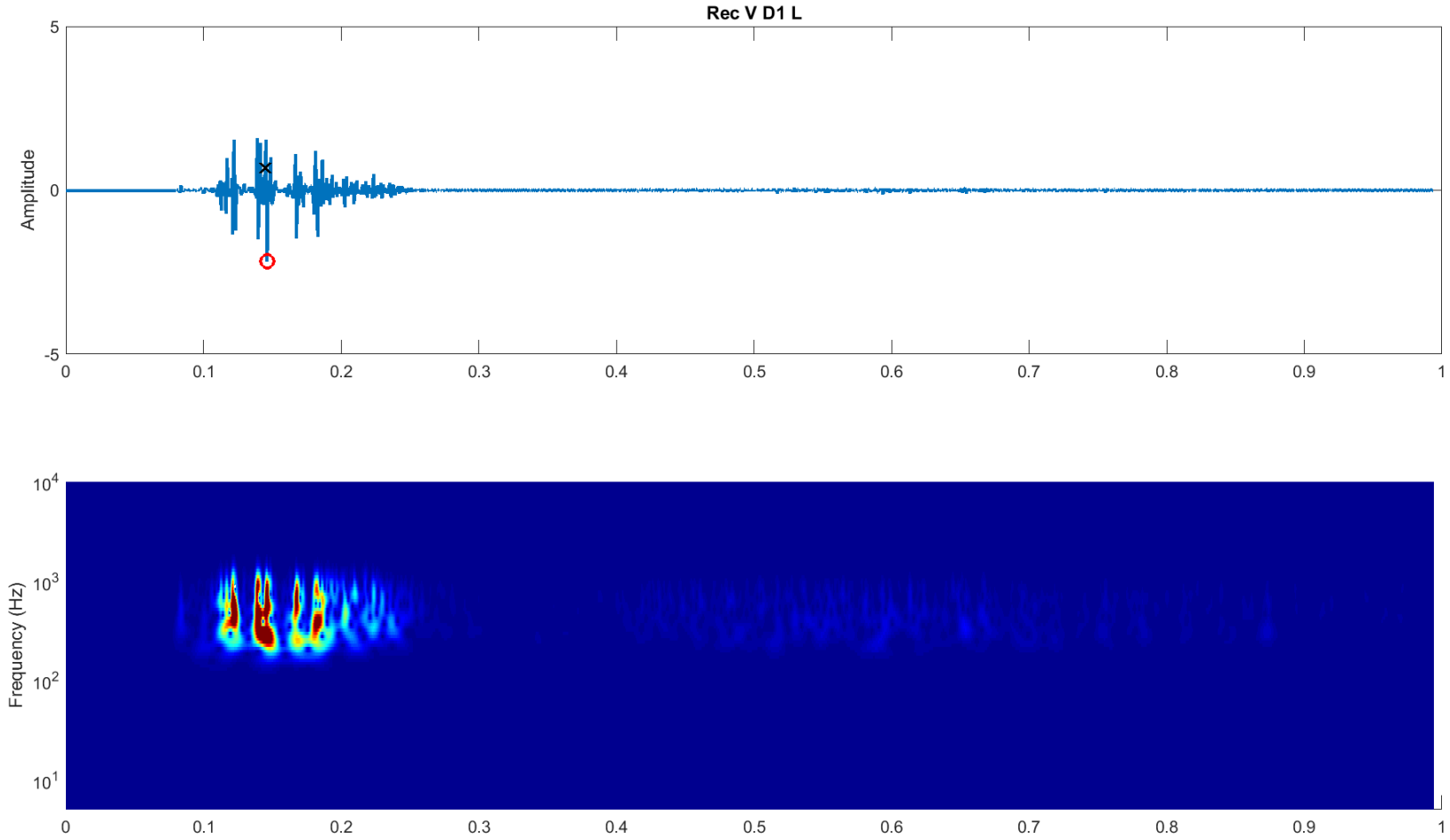
- Previously tested magnets
  - In the region of interest
    - On MBHB-002 the noise is 100 times smaller
    - On MBHA-002 the noise is 10 times smaller and with a similar pattern as on MBHA-001

Annexes

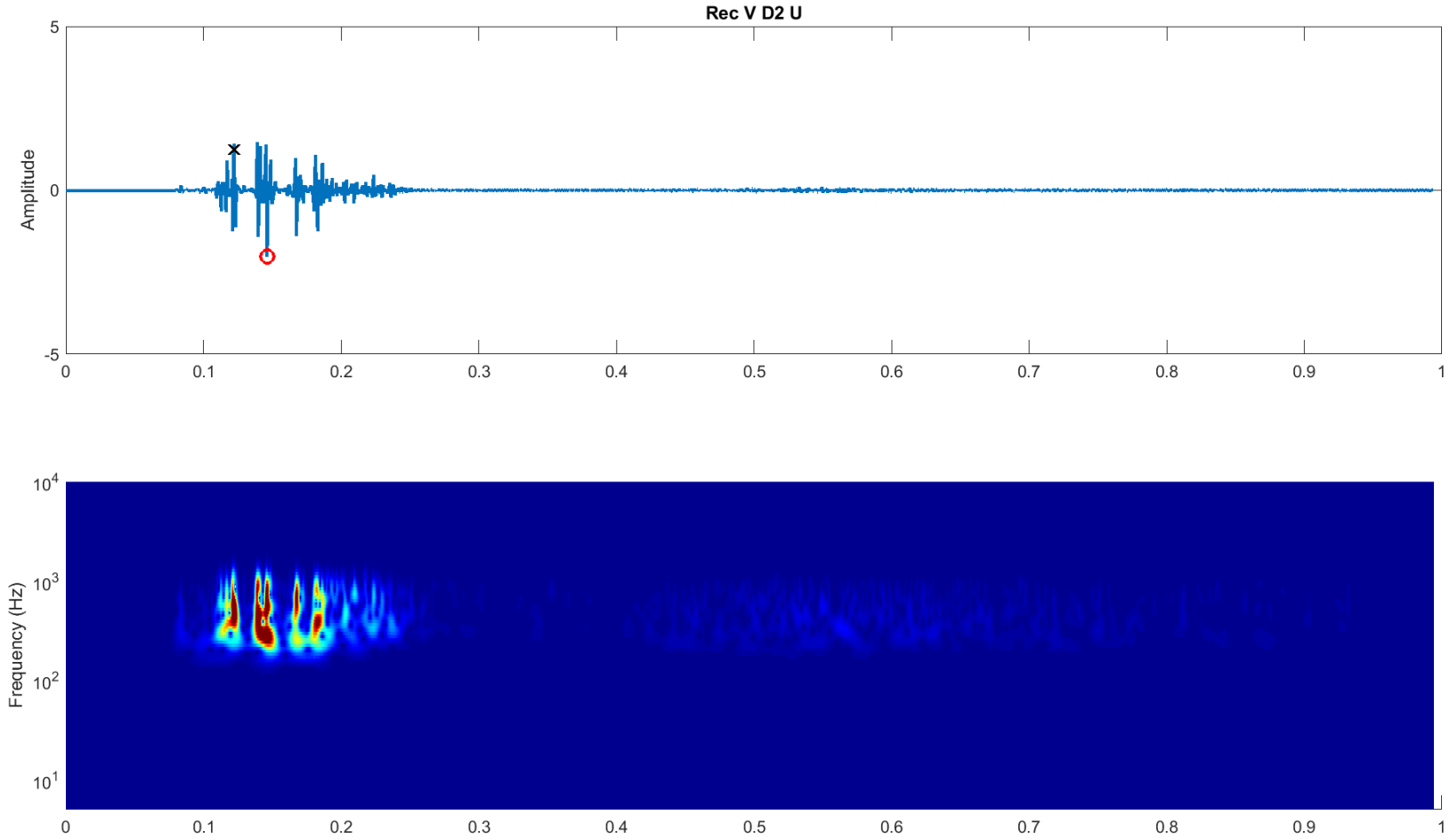
MBHA-001


Rec V D1 U
Amplitude
5
0
-5
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
Frequency (Hz)
10^4
10^3
10^2
10^1

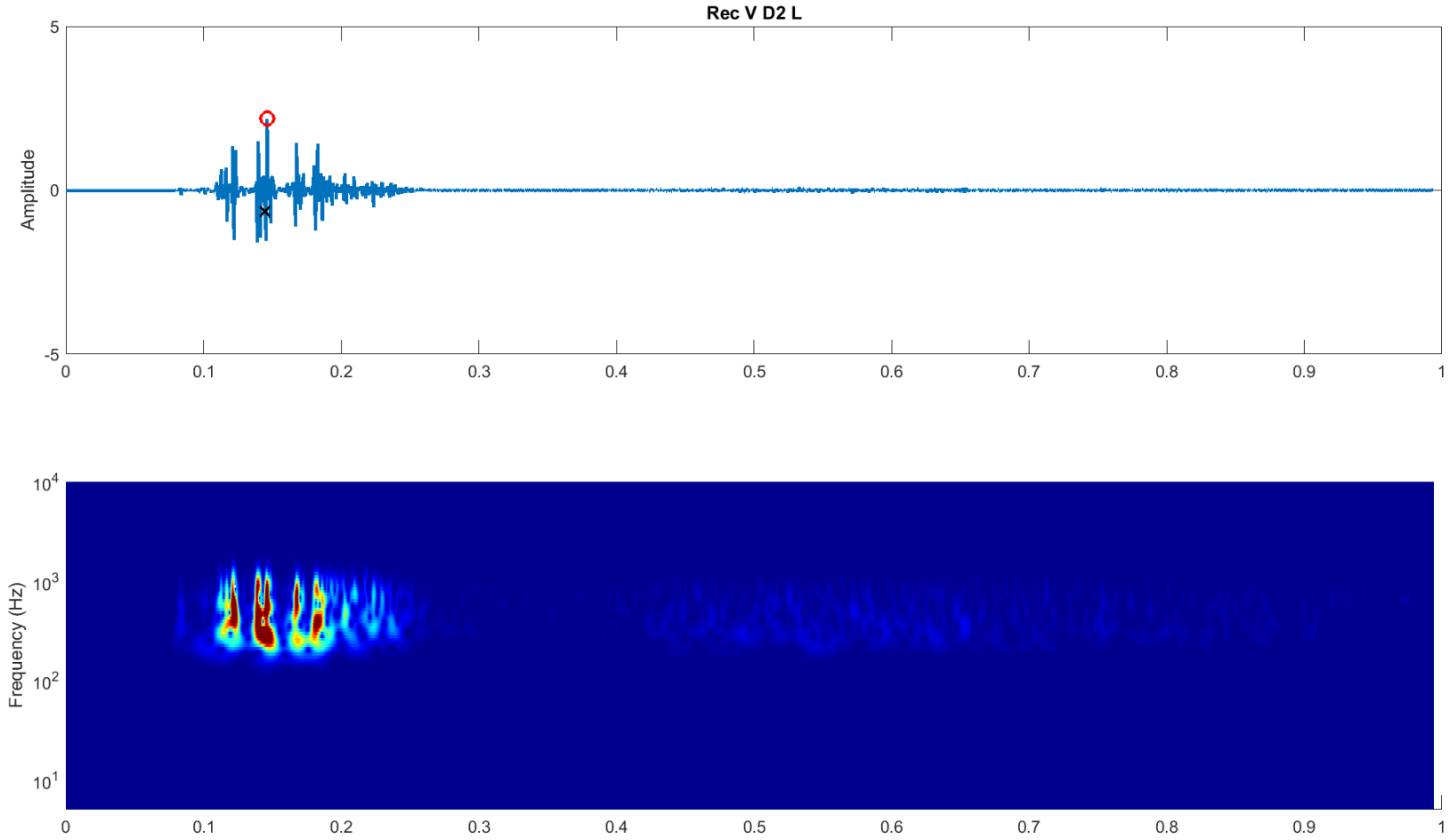
MBHA-001


Rec V D1 L
Amplitude
5
0
-5
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
Frequency (Hz)
10^4
10^3
10^2
10^1

MBHA-001


Rec V D2 U
Amplitude
5
0
-5
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
Frequency (Hz)
10^4
10^3
10^2
10^1

MBHA-001


Rec V D2 L
Amplitude
5
0
-5
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
Frequency (Hz)
10^4
10^3
10^2
10^1