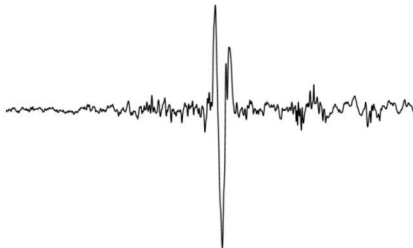


DAG 2 Infrasound Q SAND2019-1745PE

Daniel Bowman Phil Blom Keehoon Kim

February 2019



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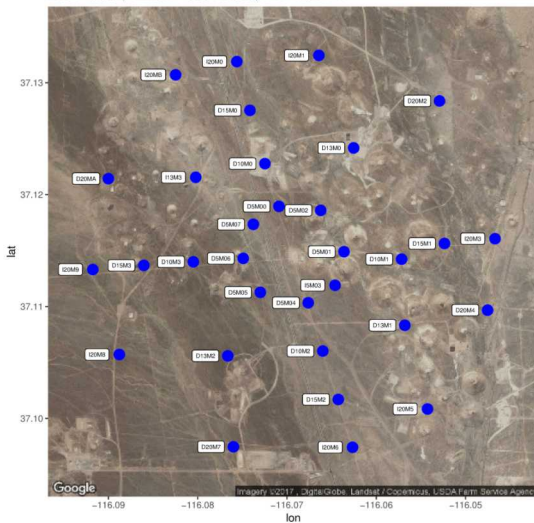


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Network Status for DAG II

DAG Infrasound Status: 2018-12-19

BLUE = GOOD, YELLOW = SUSPICIOUS, RED = NO DATA



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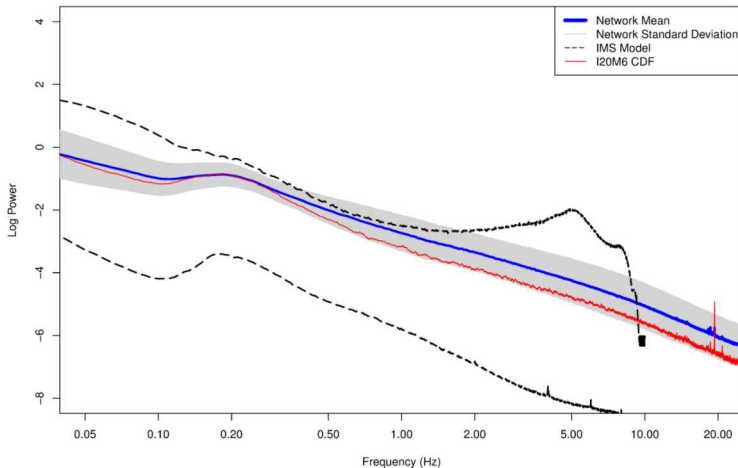
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Noise Levels: 0600-1200 UTC

I20M6: 2018-12-19 06:00:00



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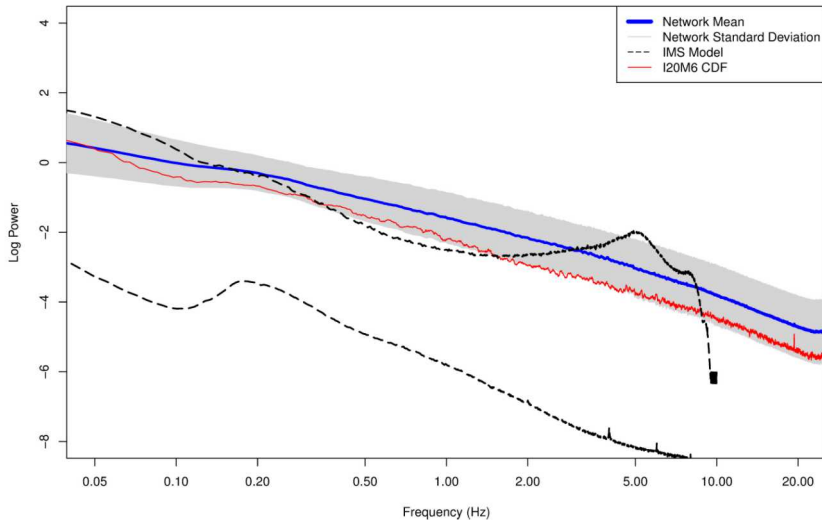
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Noise Levels: 1200-1800 UTC

I20M6: 2018-12-19 12:00:00



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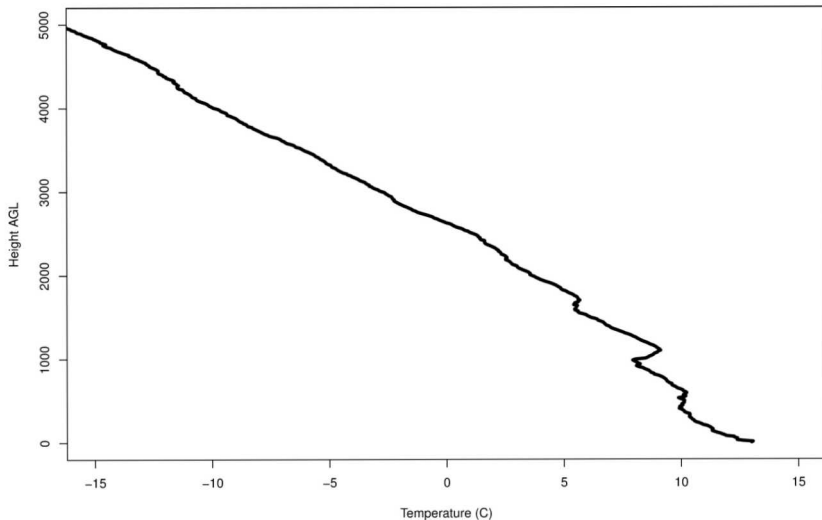


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Temperature profile



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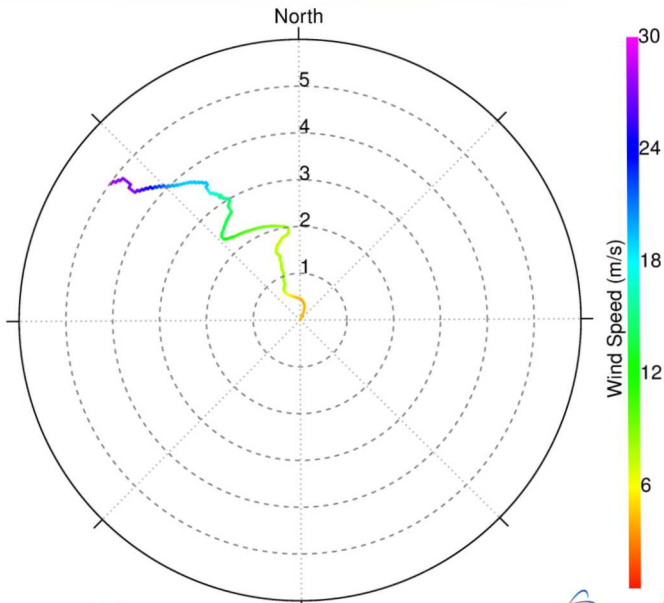
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Wind profile



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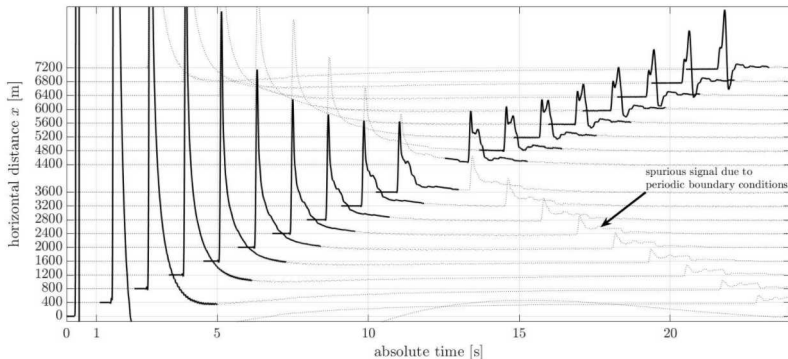


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Effect of atmospheric structure

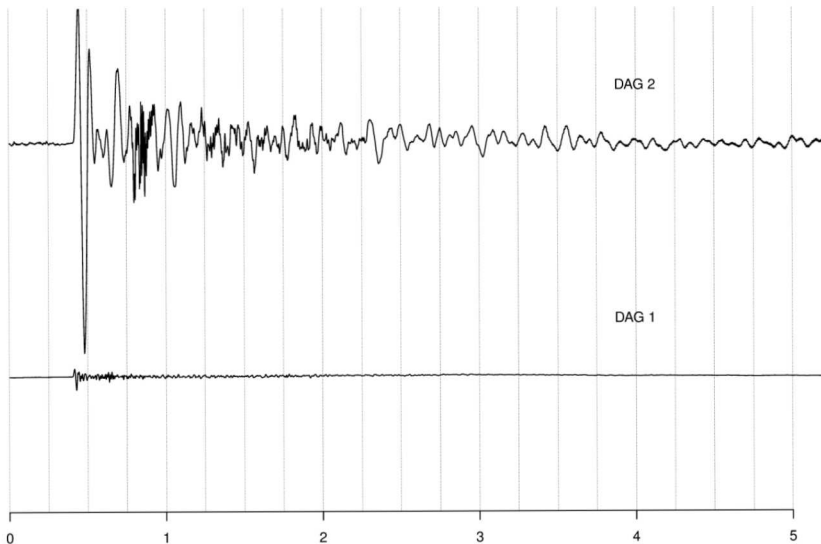


Courtesy Léo Martire, ISAE-SUPAERO

No atmospheric effect < 3 km from GZ

DAG 1 vs. DAG 2

D5M00 CDF ACTUAL SCALE



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Time since Shot (s)

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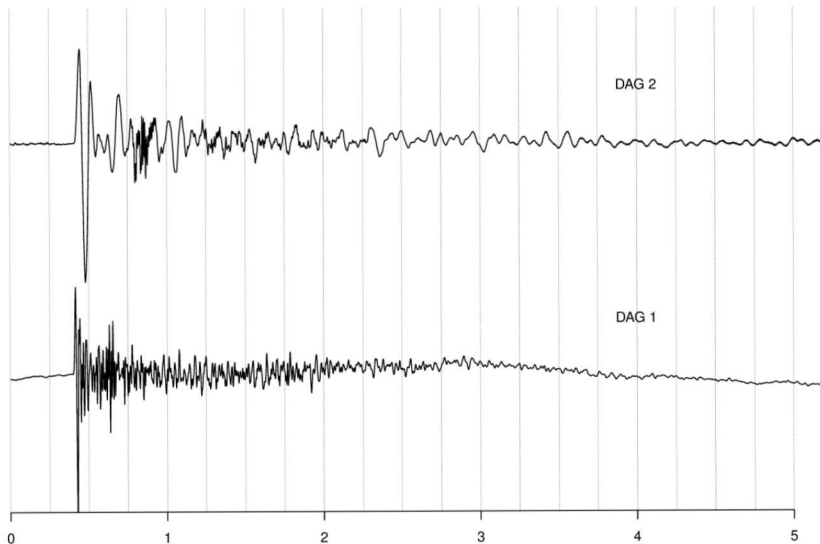
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DAG 1 vs. DAG 2

D5M00 CDF SELF SCALE



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Time since Shot (s)

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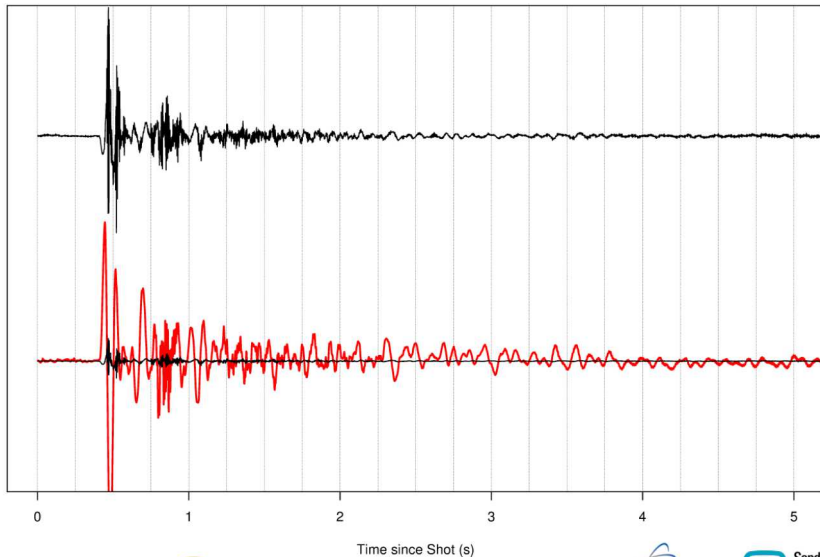
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Active vs. Null Channels

D5M00 CDF/CYF



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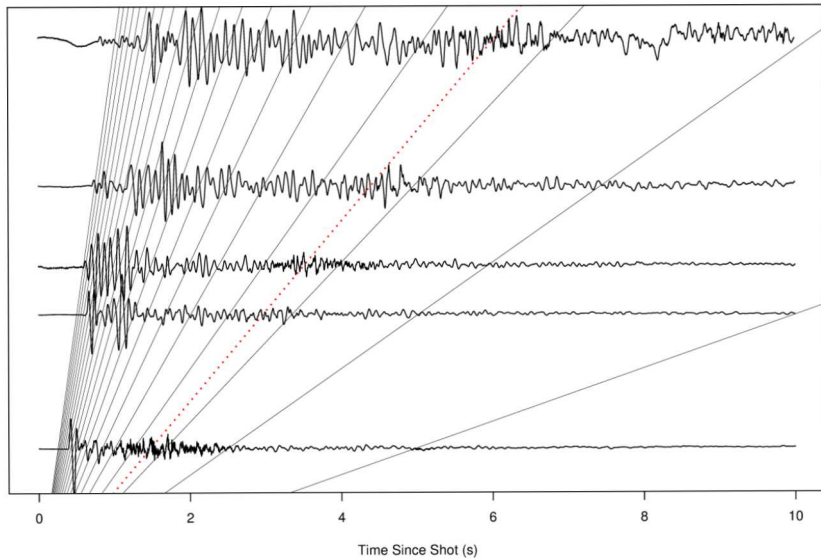


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Signal Moveout (unfiltered)



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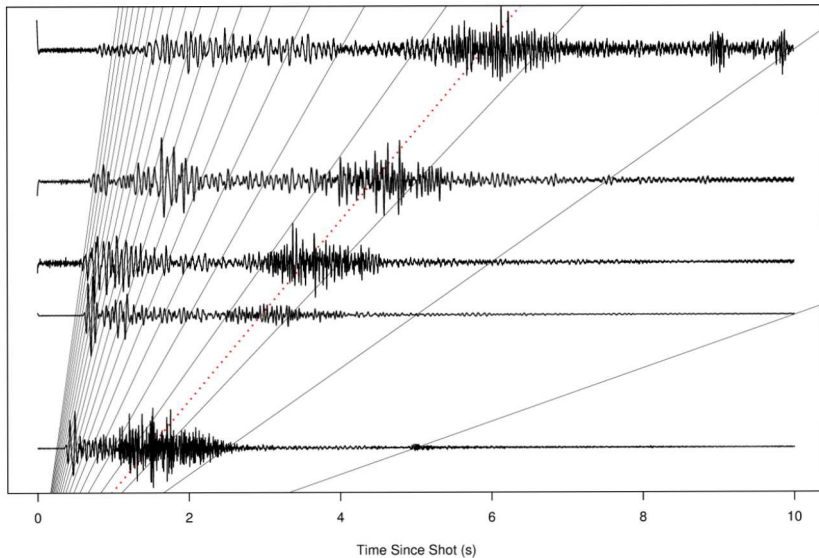


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Signal Moveout (audio range)



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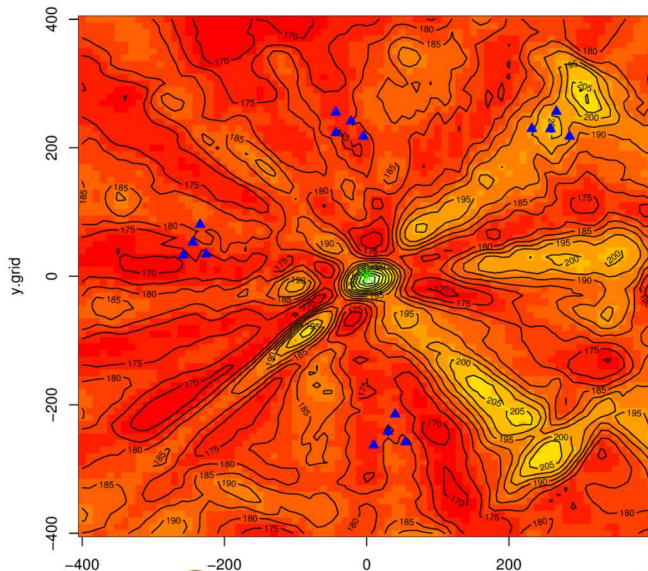
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Semblance: SPE 6

IS14 IS43 1.80 2.80



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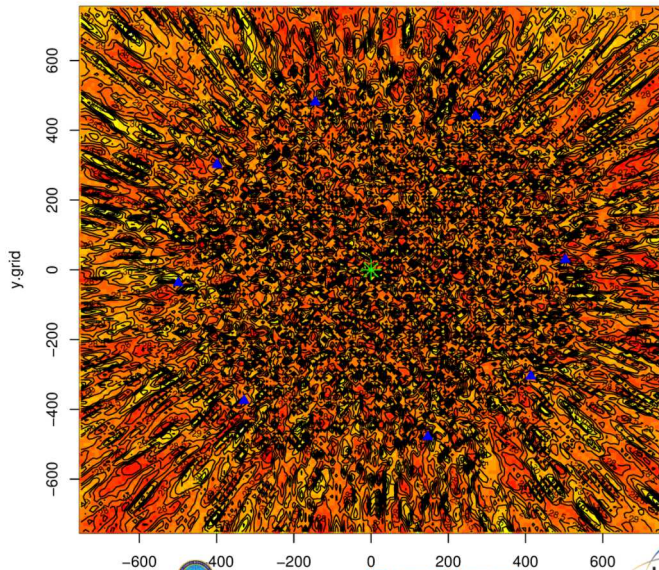
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Semblance: DAG 2

D5M07 I5M03 1.80 2.80



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Conclusions

0.1 Hz



1.0 Hz

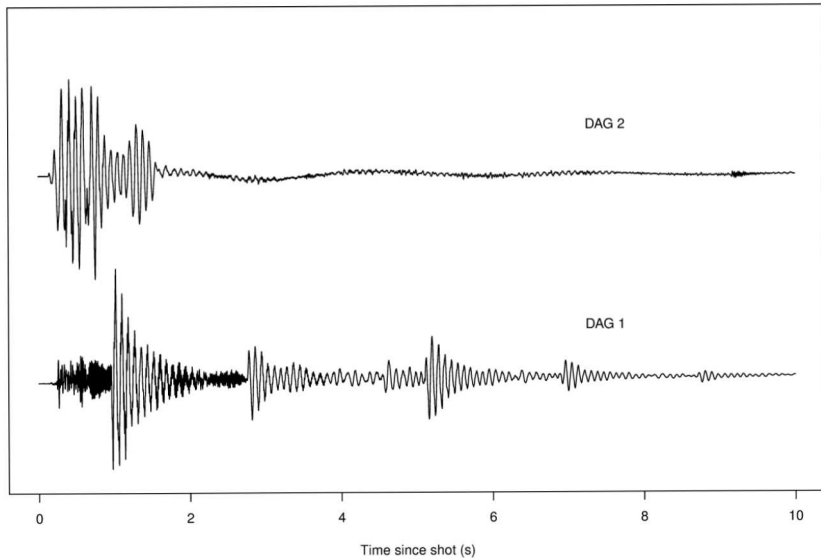


10 Hz



- ▶ No propagating infrasound
- ▶ Some propagating audio
- ▶ Epicentral infrasound directed upwards
- ▶ Audio generated by local irregularities

Downhole microphone



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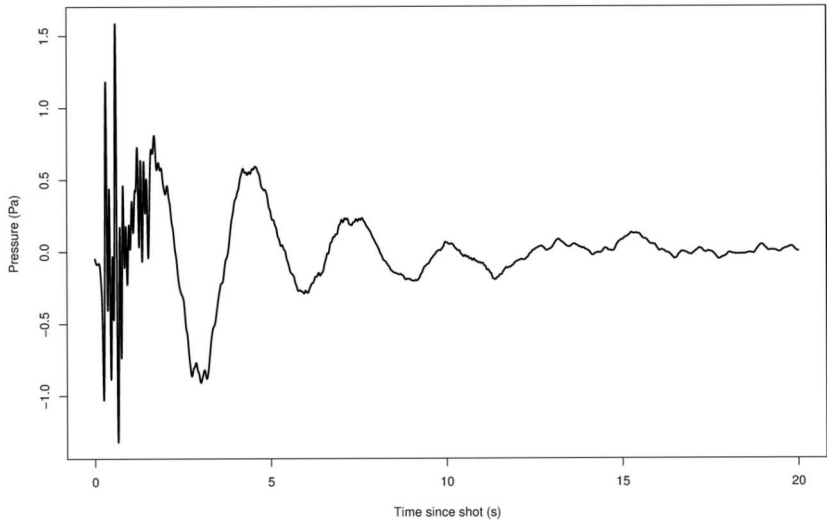
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Low frequency oscillations

Downhole Microphone: 20 seconds to 5 Hz BP



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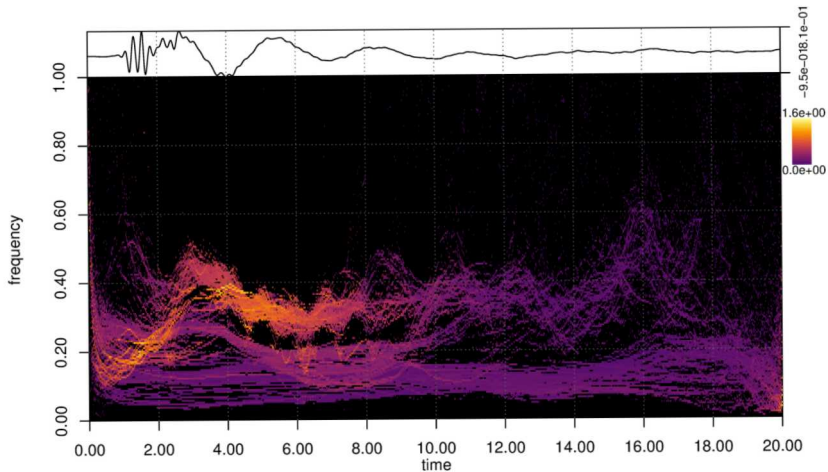
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Ensemble Hilbert spectrogram



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