

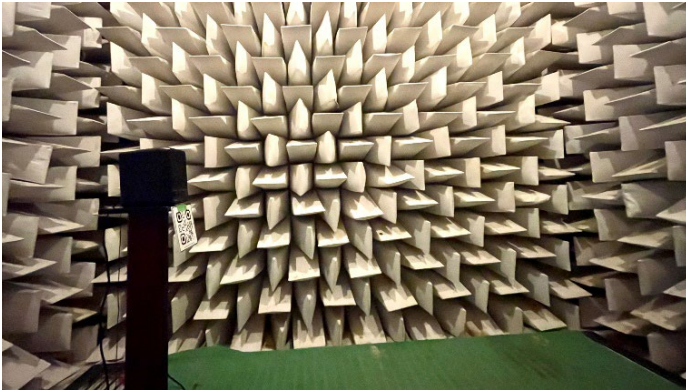
Handy Microphone Array Data

Recommended frequency range

- 5cm : 125~3150 [Hz]
- 2cm : 400~10000 [Hz]



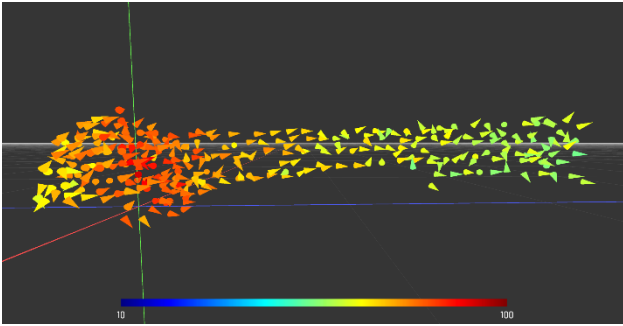
Experiments



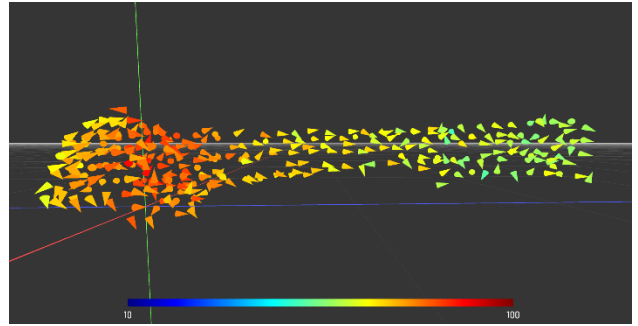
We visualized the sound field around the speaker and in the front direction with each type of microphone.

Place	Anechoic room in Waseda Univ.
Sparker	YAMAHAMS101III
Sound	White noise
Sampling frequency [Hz]	44,100
Analysis length [sample]	4,096
Background noise [dB]	31.0
Sound pressure level (1m in front of speaker) [dB]	94.0
Sound pressure level (2m in front of speaker) [dB]	87.7

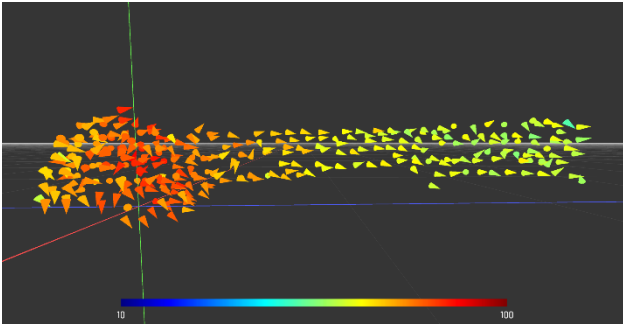
2cm Microphone Array - 1/3 Oct. Band



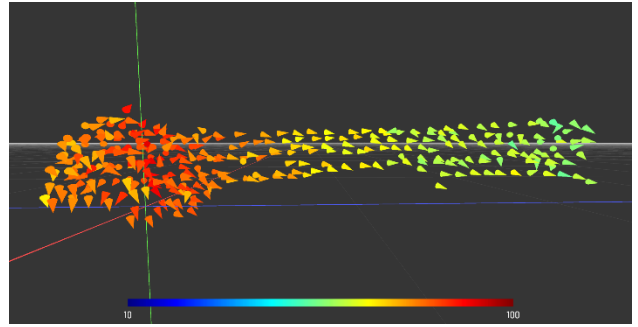
80Hz



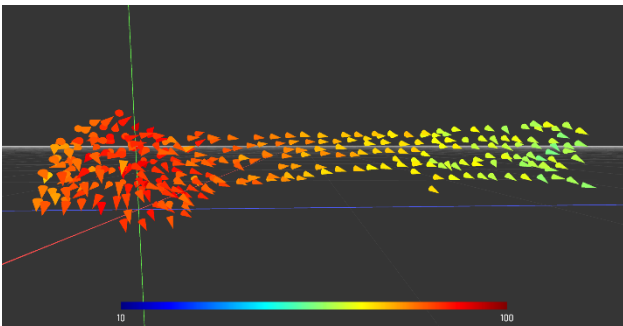
100Hz



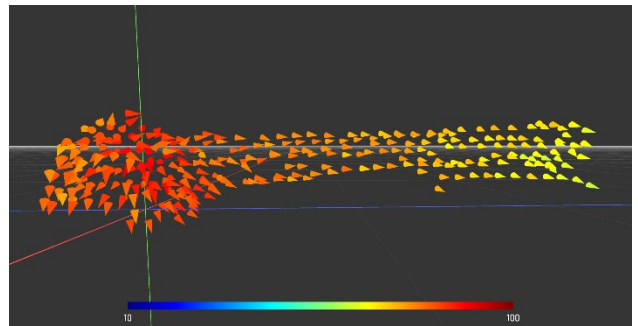
125Hz



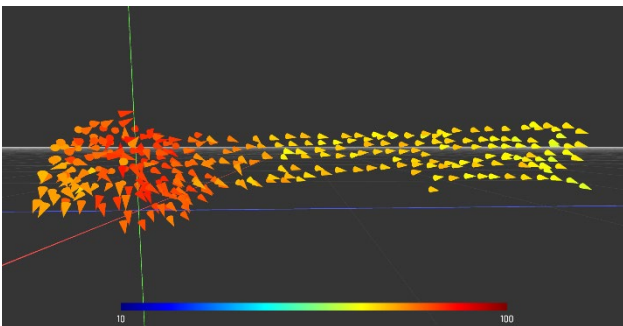
160Hz



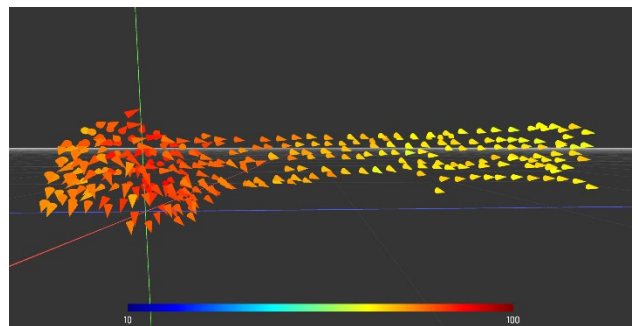
200Hz



250Hz



315Hz



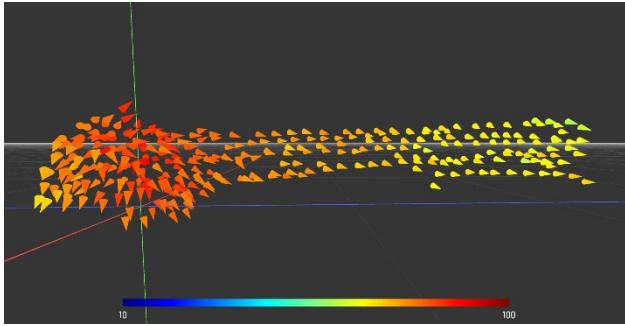
400Hz



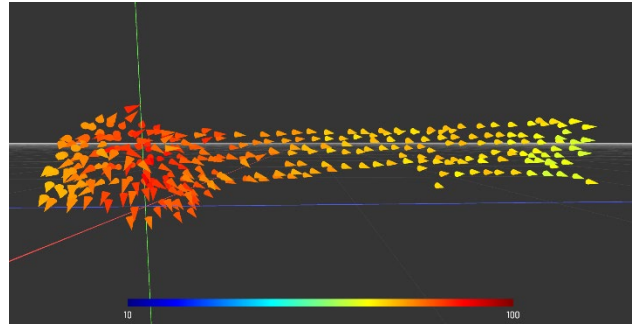
10

100 [dB]

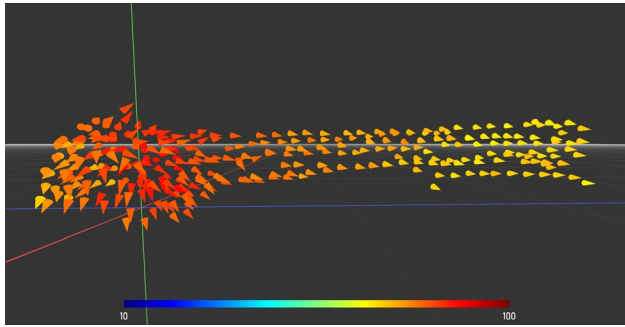
2cm Microphone Array - 1/3 Oct. Band



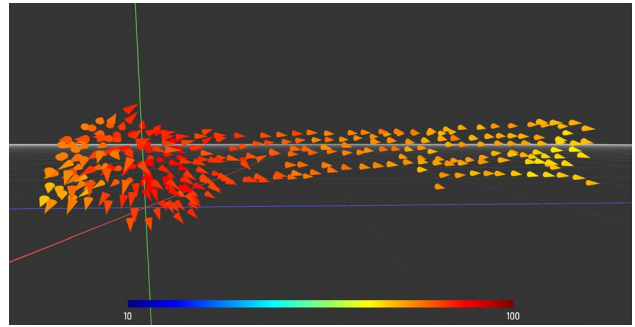
500Hz



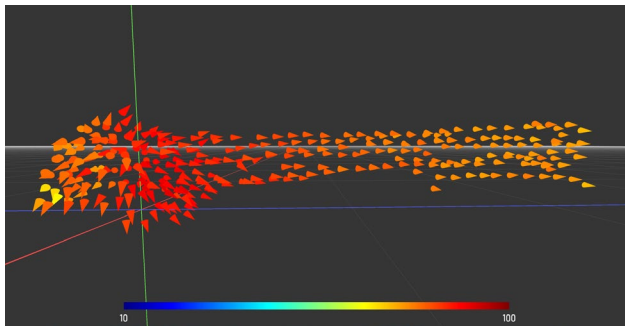
630Hz



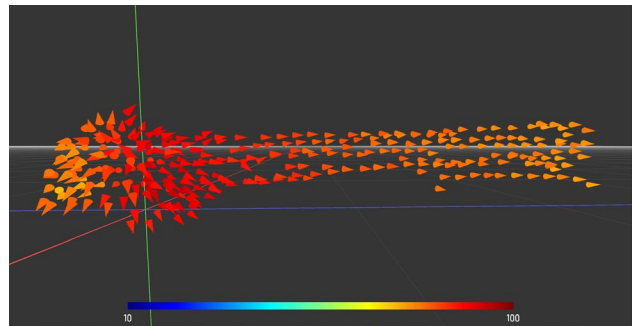
800Hz



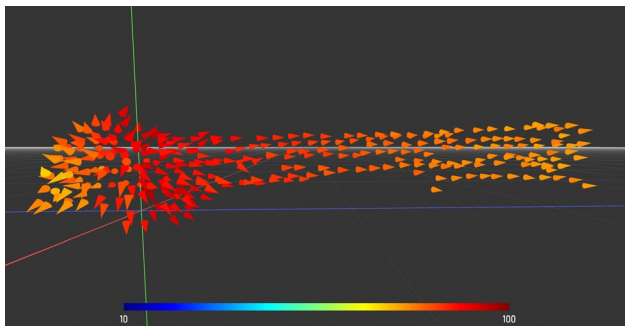
1000Hz



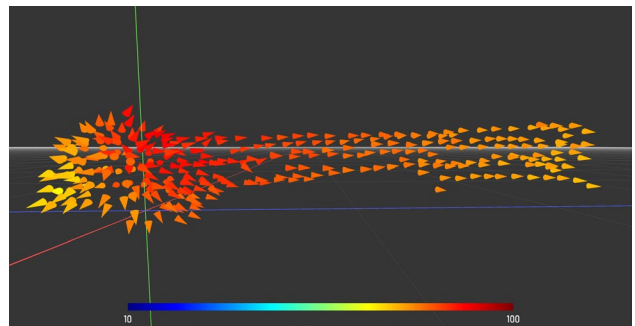
1250Hz



1600Hz



2000Hz



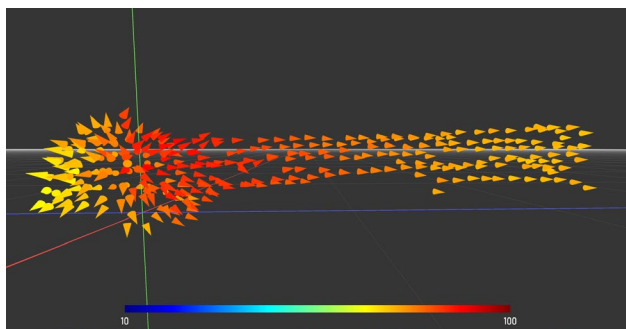
2500Hz



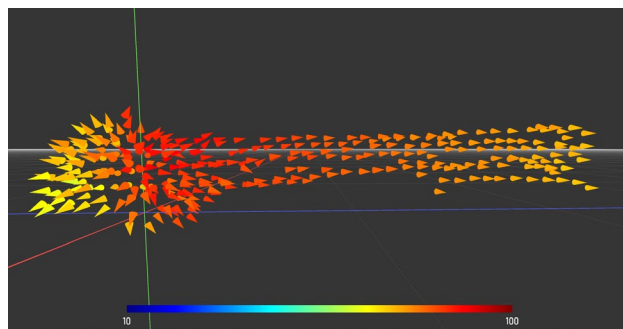
10

100 [dB]

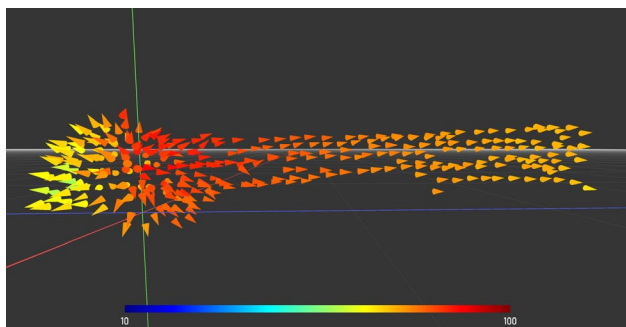
2cm Microphone Array - 1/3 Oct. Band



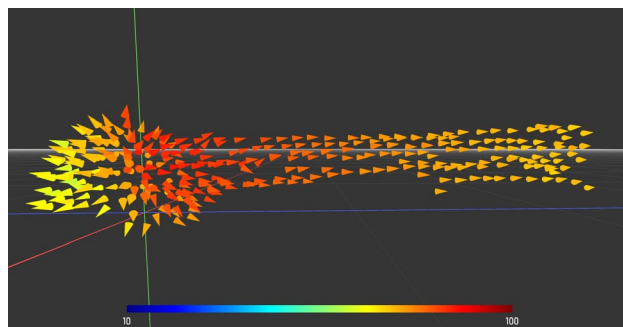
3150Hz



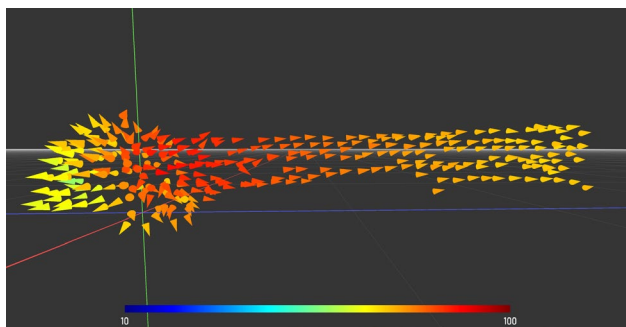
4000Hz



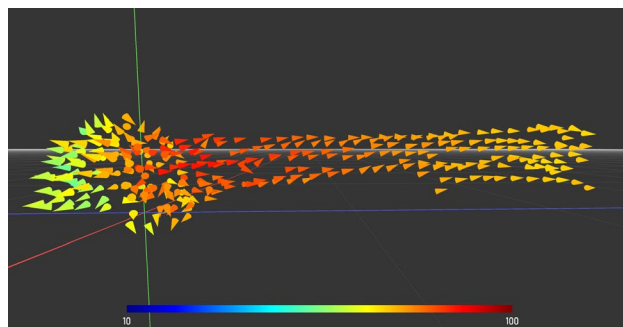
5000Hz



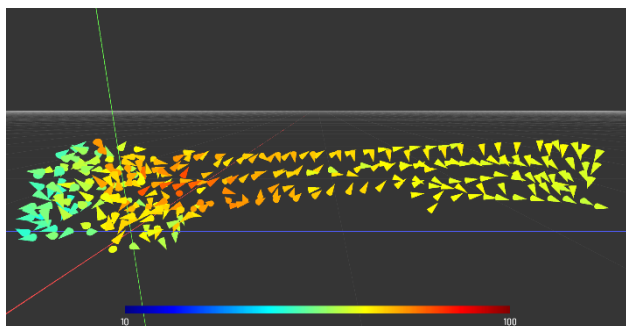
6300Hz



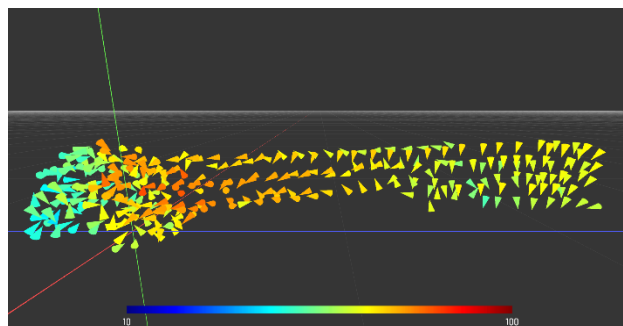
8000Hz



10000Hz



12500Hz



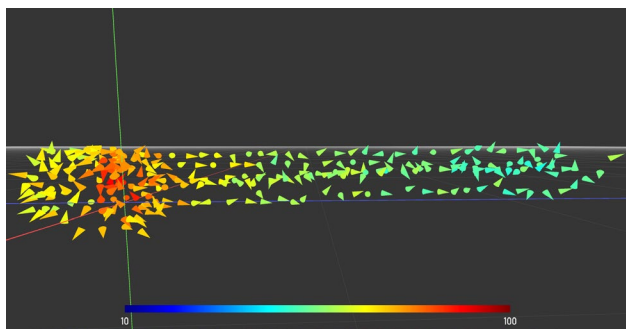
16000Hz



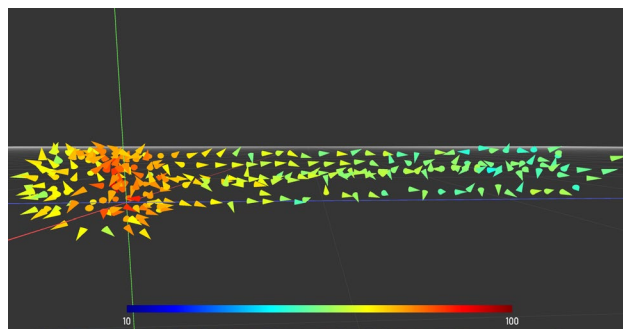
10

100 [dB]

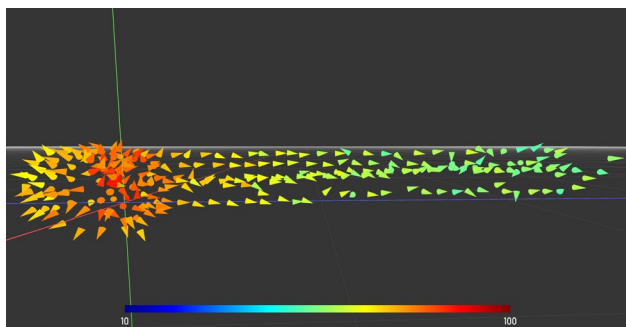
5cm Microphone Array - 1/3 Oct. Band



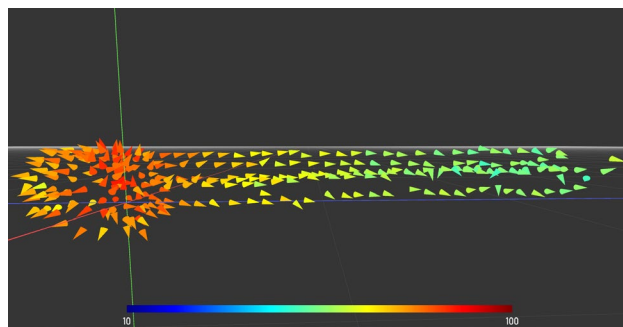
80Hz



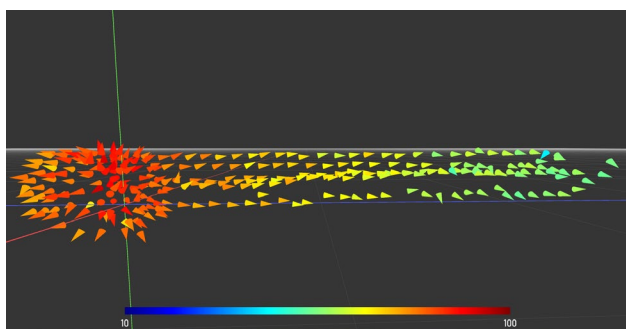
100Hz



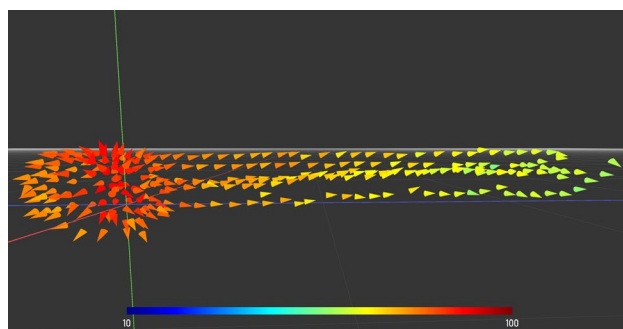
125Hz



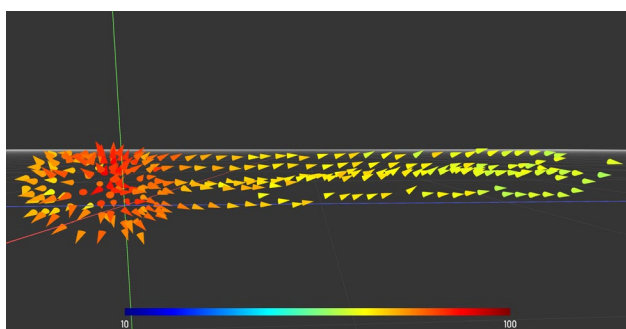
160Hz



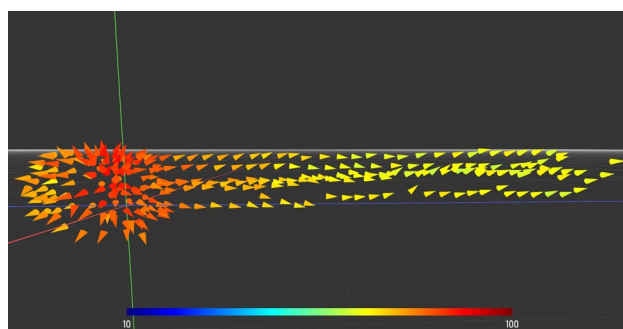
200Hz



250Hz



315Hz



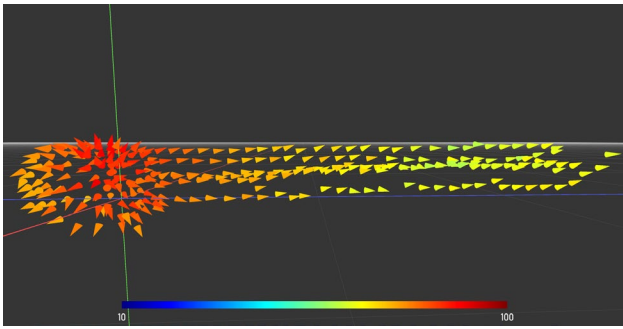
400Hz



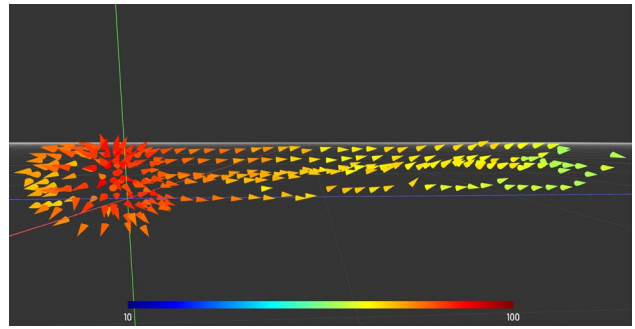
10

100 [dB]

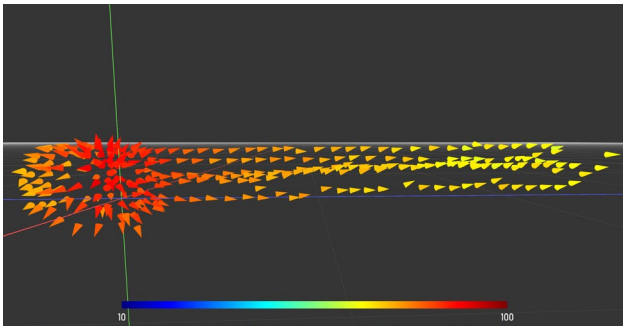
5cm Microphone Array - 1/3 Oct. Band



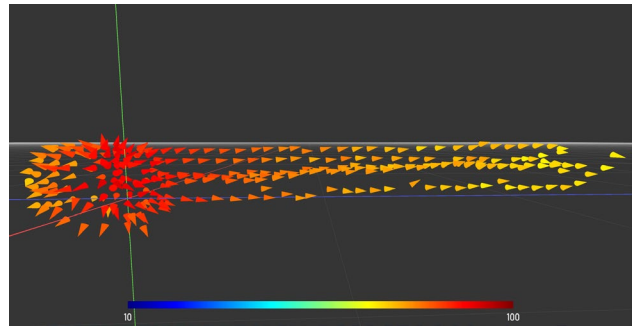
500Hz



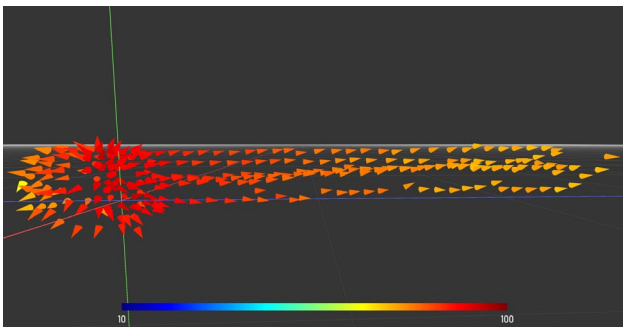
630Hz



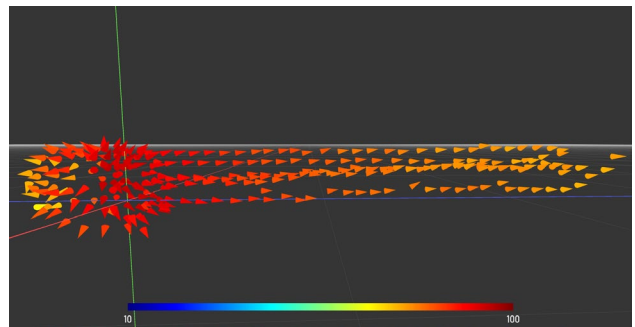
800Hz



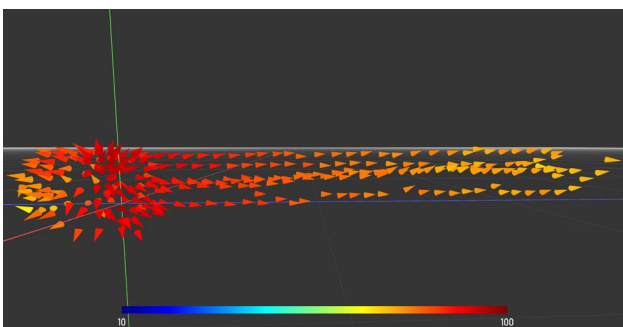
1000Hz



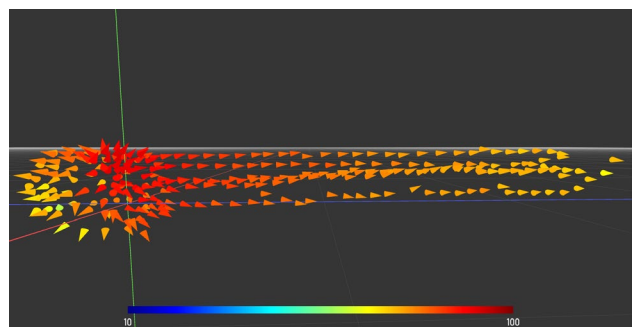
1250Hz



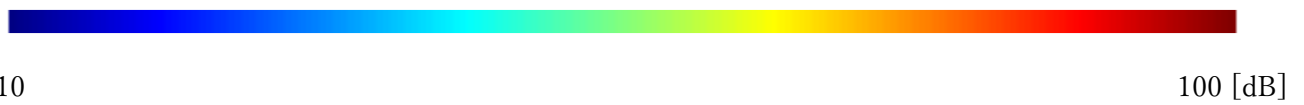
1600Hz



2000Hz



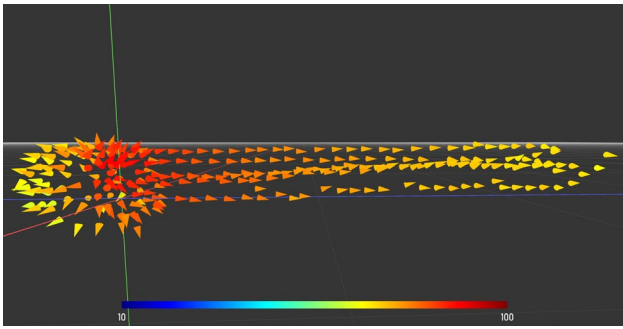
2500Hz



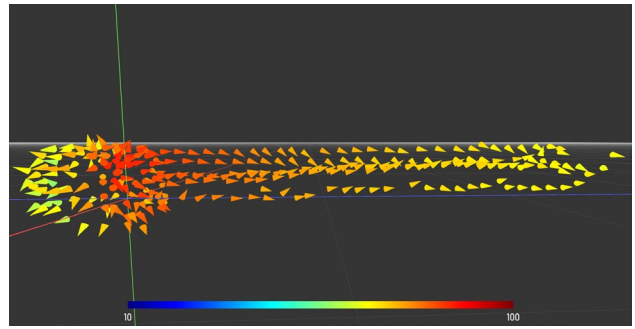
10

100 [dB]

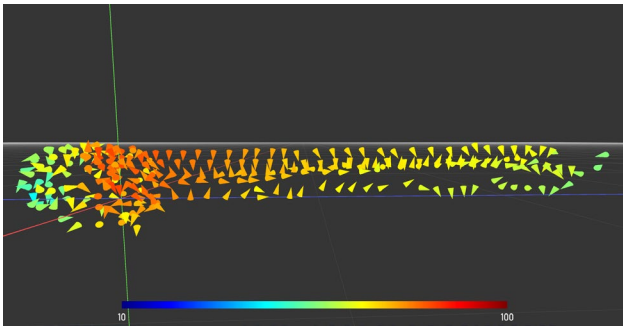
5cm Microphone Array - 1/3 Oct. Band



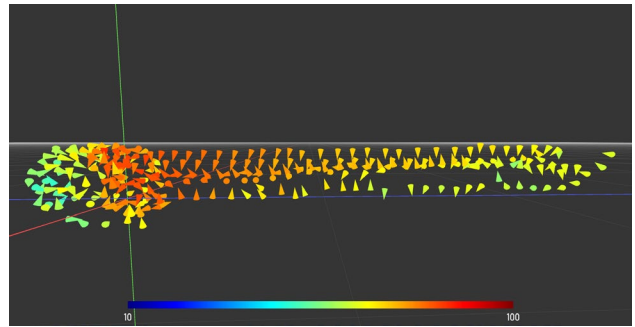
3150Hz



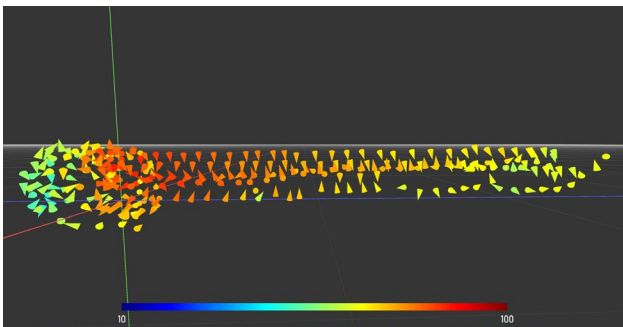
4000Hz



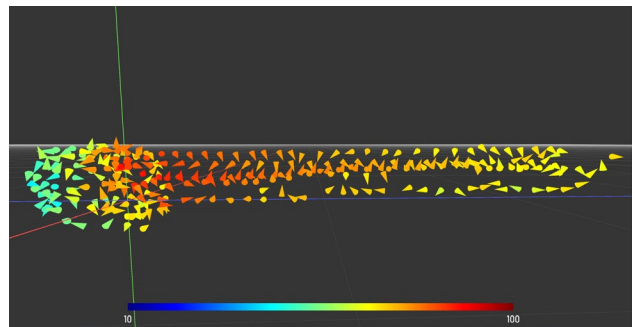
5000Hz



6300Hz



8000Hz



10000Hz



10

100 [dB]