

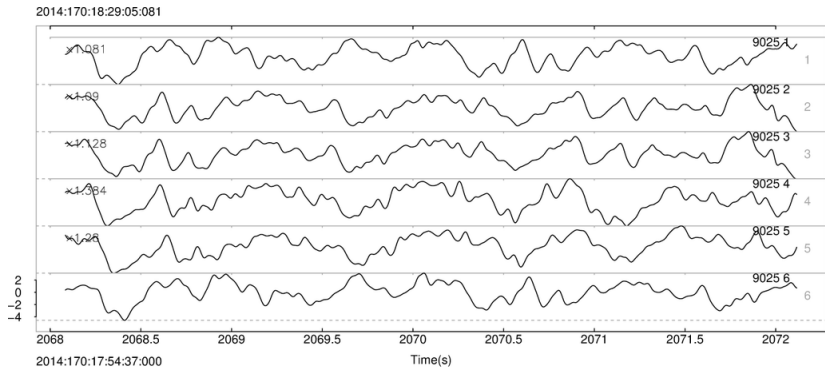
Developing a Next Generation Geoacoustic Sensor

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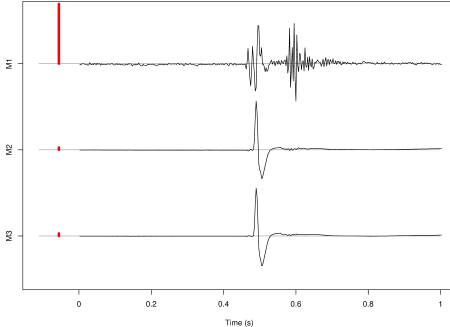
Sandia National Laboratories

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The atmosphere is filled with **sounds we cannot hear**, but by sensing them we can detect events across the planet:

- ▶ Remote volcanic eruptions
- ▶ Intense convective storms
- ▶ Clandestine nuclear explosions



A Next Generation Sensor

Your task is to develop a lightweight, cheap geoacoustic sensor/digitizer combo:

- ▶ 0.1 to 20 Hz passband sampled at 100 Hz
- ▶ Range: 100 Pa, resolution: 0.001 Pa
- ▶ *weigh* < 250 g and cost < \$200

It's **not as hard as you think** and it will be sensitive enough to **hear ocean waves off the coast of Greenland.**