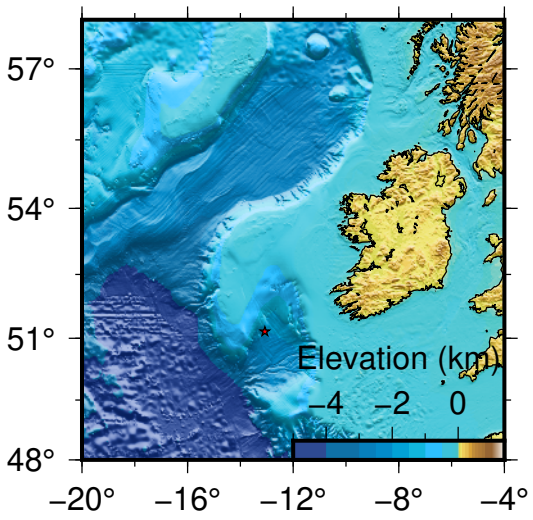

Figure 1: A depiction of bathymetry.

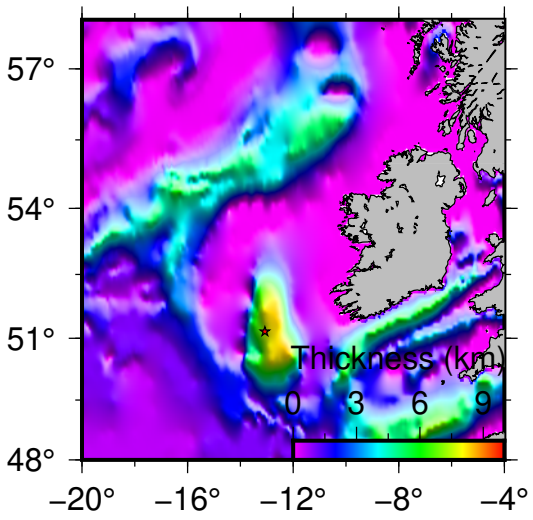

Figure 2: A depiction of sediment thickness.

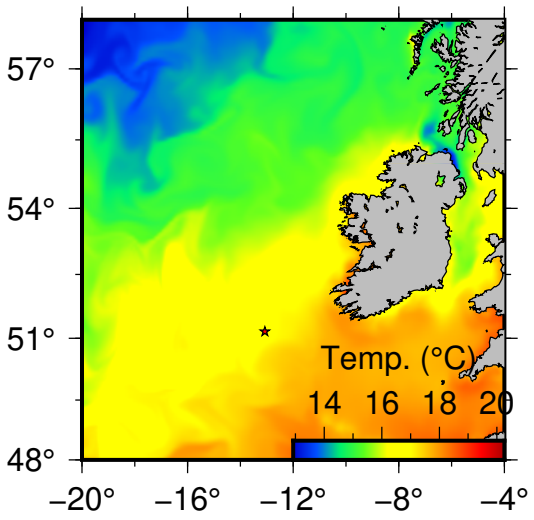

Figure 3: Ocean forecast of temperature on surface.

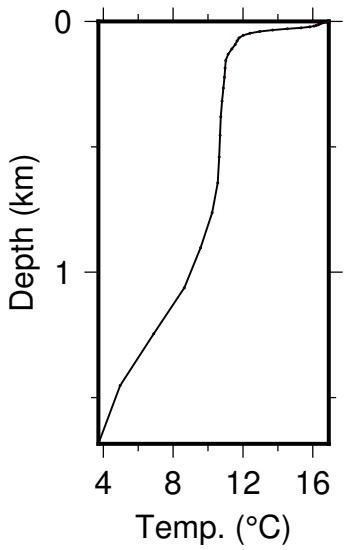

Figure 4: Ocean forecast of temperature in depth at the source position.

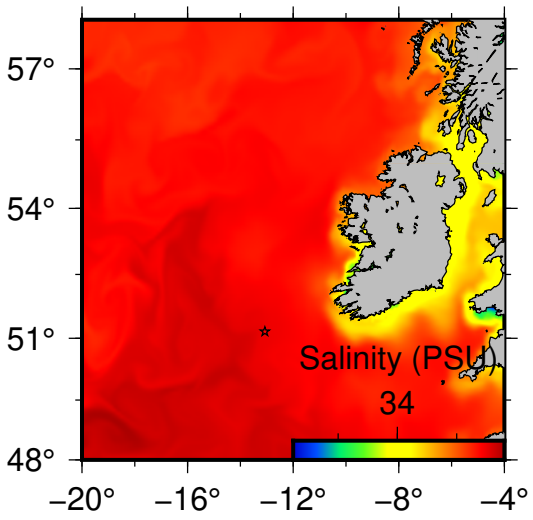

Figure 5: Ocean forecast of salinity on surface.

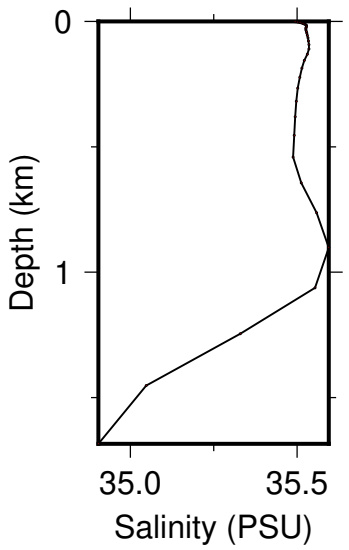

Figure 6: Ocean forecast of salinity in depth at the source position.

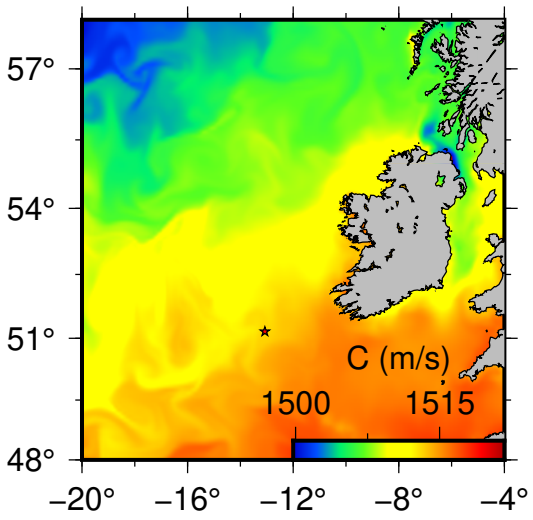

Figure 7: Derived sound speed on surface.

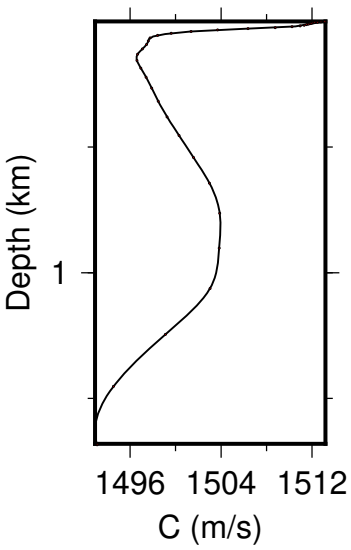

Figure 8: Derived sound speed profile in depth at the source position.

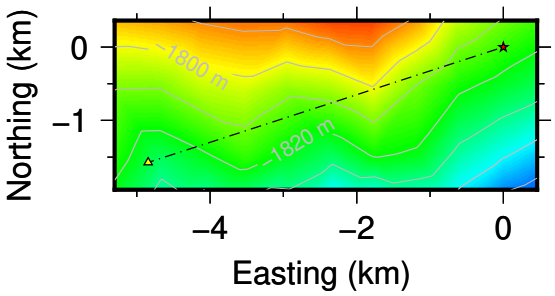

Figure 9: Illustration of the Deployment of 18A experiment. The hydrophone receiver is deployed at depth of 150 meters. A single airgun source is at 10m depth.

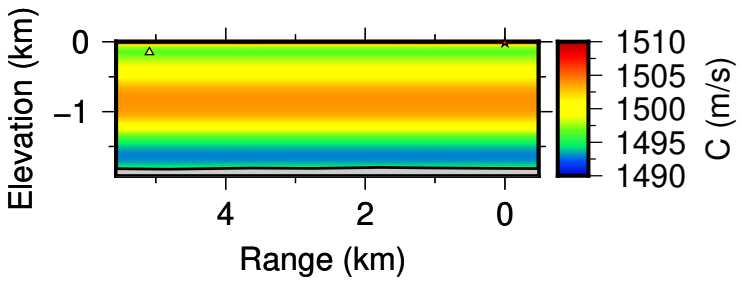

Figure 10: Illustration of the 2D sound speed profile on the vertical source-receiver plane.

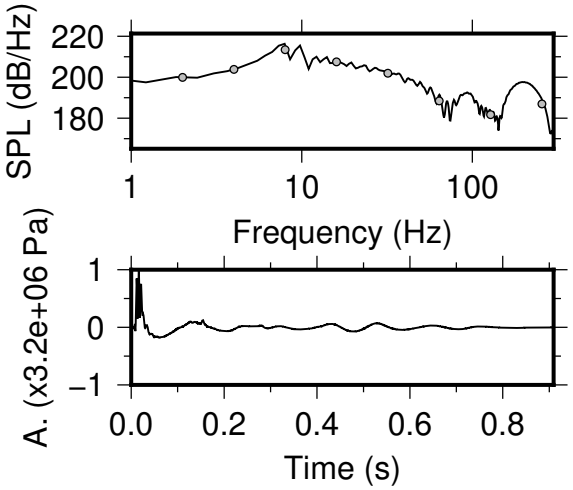

Figure 11: Numerical airgun source signature for simulation. The bottom subfigure is time series and the top subfigure is sound pressure level of the source at 1m, in which the circles are measured at one-third Octave bands centered at 2, 8, 16. . . 256 Hz.

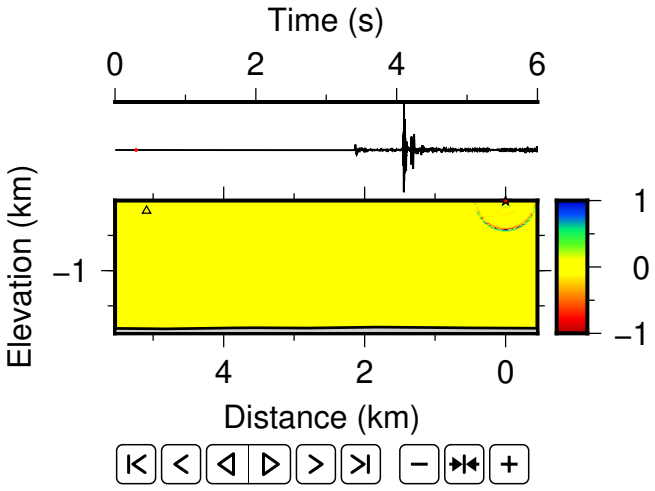

Figure 12: Animation of propagation of sound field on the vertical source-receiver plane. (View with Adobe Acrobat Reader)

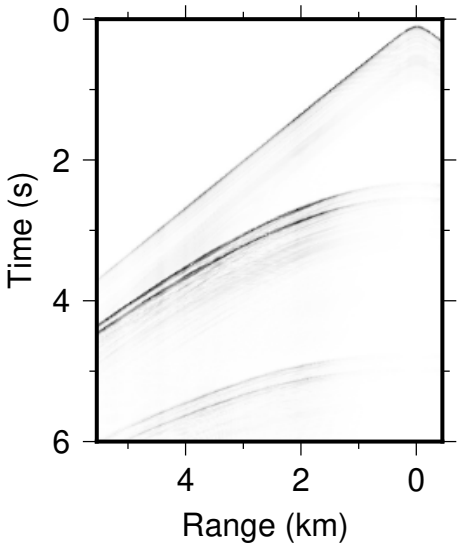

Figure 13: Sound pressure signal traces recorded by a linear array deployed on the source-receiver plane at the depth of 150 m.

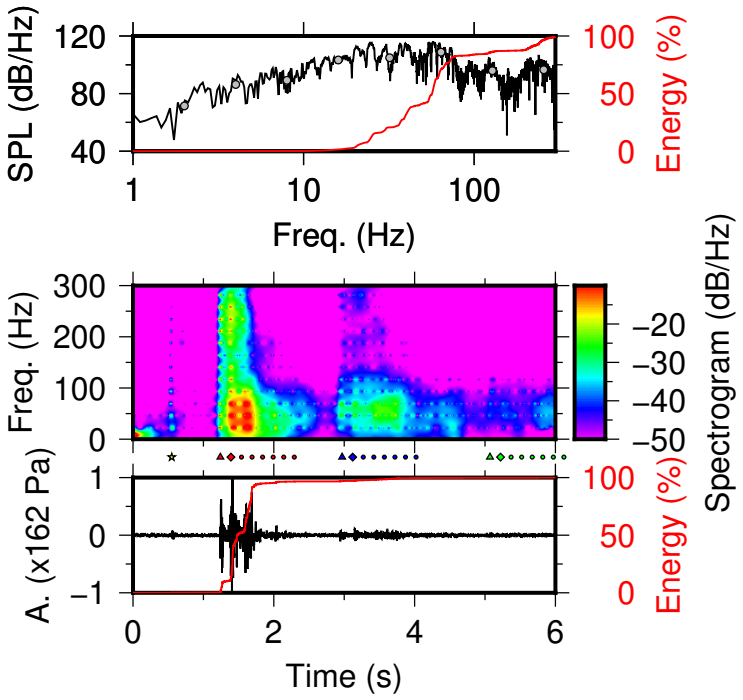

Figure 14: Experimental data recorded by the hydrophone. The bottom subfigure is sound pressure signal, in which the red line denotes the accumulated energy distribution in the time window. The middle subfigure is spectrogram of the signal. The top subfigure is sound pressure level at the recoring place, in which the circles denotes the measurements at one-third Octave bands centered at 2, 8, 16...256 Hz, and the red line denotes the accumulated energy distribution over frequency.

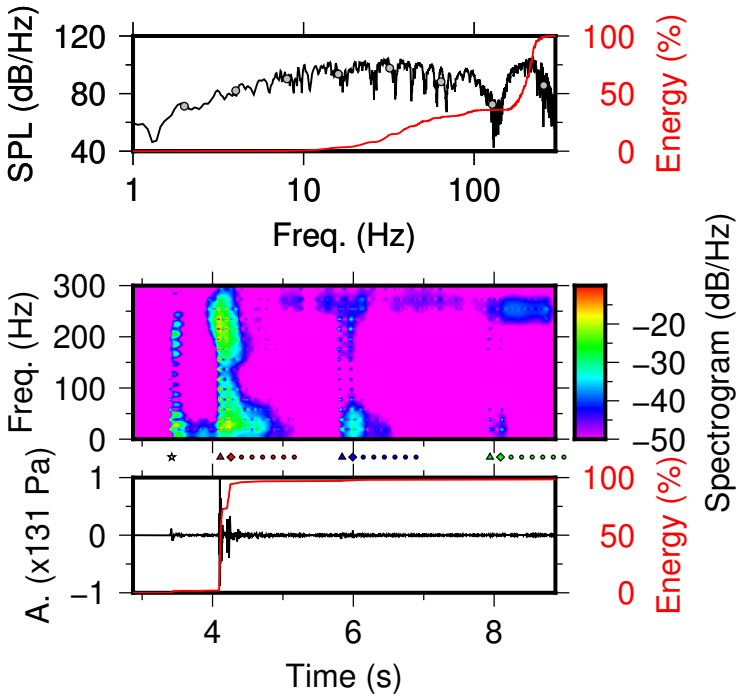

Figure 15: Numerical data of sound pressure signal calculated by SPECFEM3D. The bottom subfigure is sound pressure signal, in which the red line denotes the accumulated energy distribution in the time window. The middle subfigure is spectrogram of the signal. The top subfigure is sound pressure level at the recoring place, in which the circles denotes the measurements at one-third Octave bands centered at 2, 8, 16. . . 256 Hz, and the red line denotes the accumulated energy distribution over frequency.

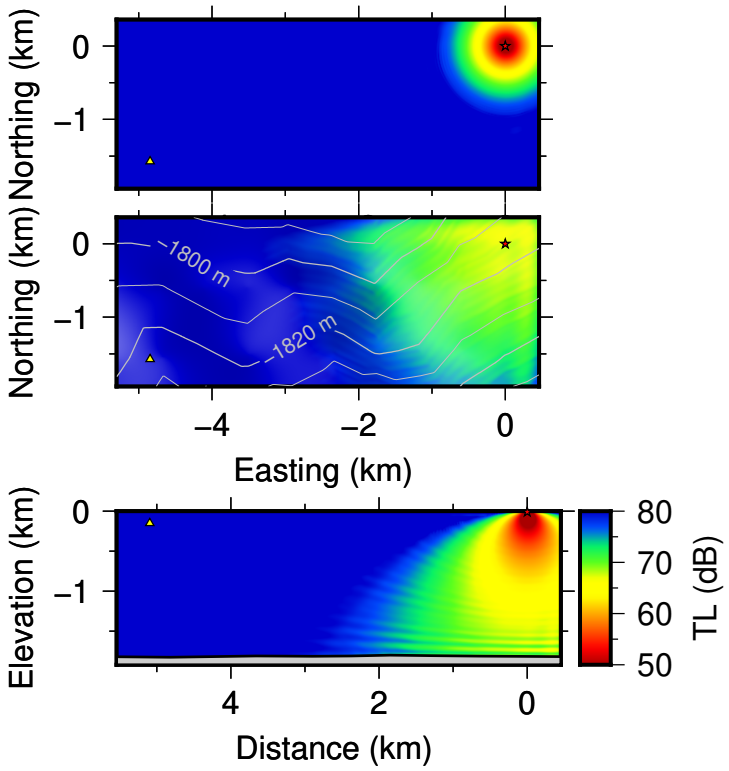

Figure 16: Transmission loss on the vertical source-receiver plane(bottom), sea floor(middle), and the horizontal plane at 150m depth(top), measured over one-third Octave bands centered at 8 Hz.

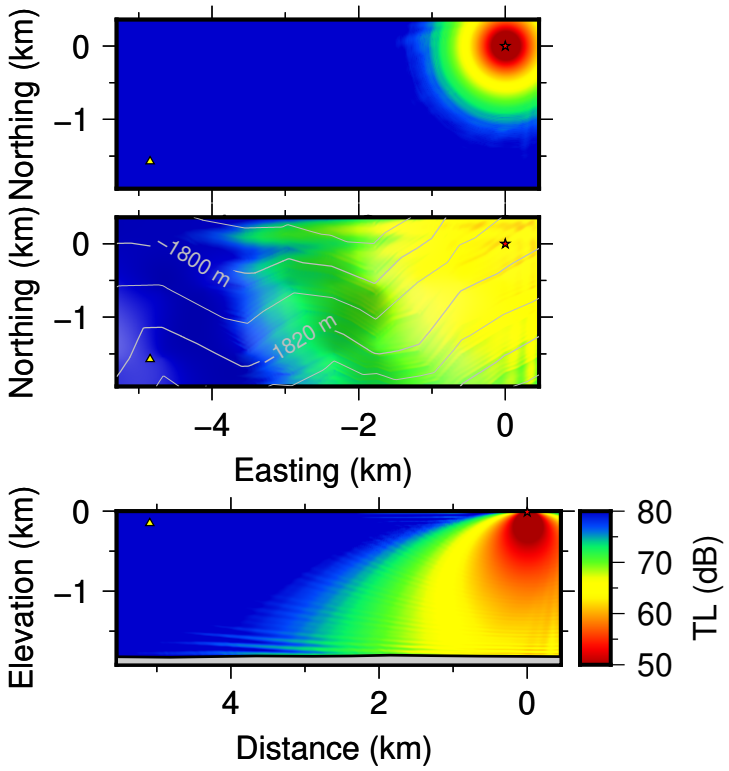

Figure 17: Transmission loss on the vertical source-receiver plane(bottom), sea floor(middle), and the horizontal plane at 150m depth(top), measured over one-third Octave bands centered at 16 Hz.

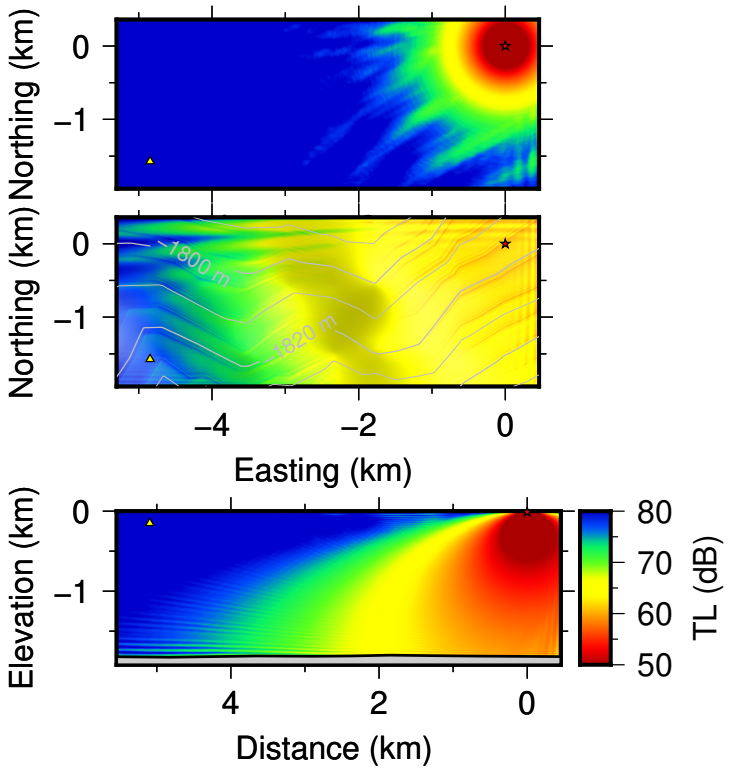

Figure 18: Transmission loss on the vertical source-receiver plane(bottom), sea floor(middle), and the horizontal plane at 150m depth(top), measured over one-third Octave bands centered at 32 Hz.

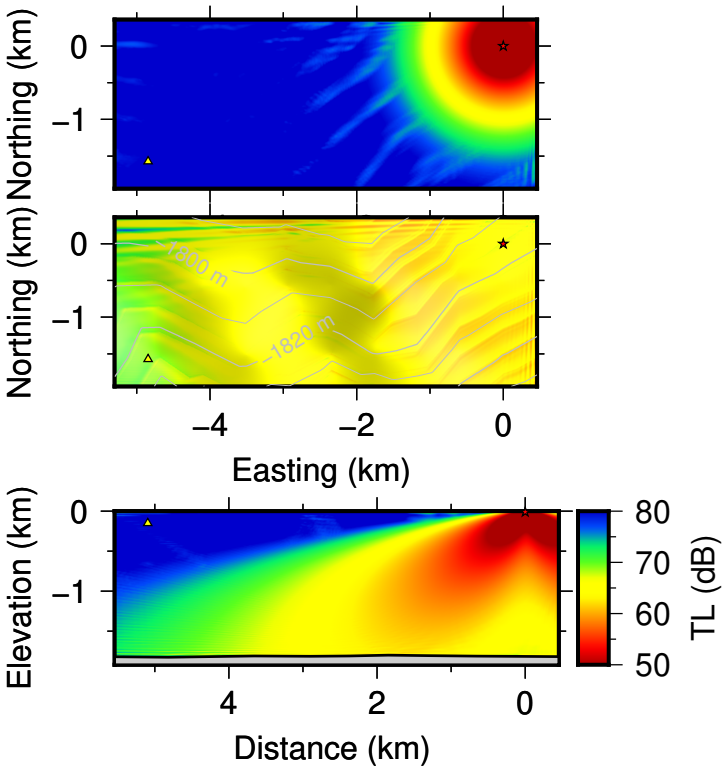

Figure 19: Transmission loss on the vertical source-receiver plane(bottom), sea floor(middle), and the horizontal plane at 150m depth(top), measured over one-third Octave bands centered at 64 Hz.