

## Ice Ghosts: At the intersection of art, snow seismology, and public imagination

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It is often assumed that science and art pursue fundamentally different objectives, with the first aiming to explain and model natural phenomena through the lens of empirical correctness, and the second a more intractable, creative commentary on ourselves and the universe around us. It is often the case however that the two are linked, with one leading to the other in something of an imaginative loop (Einstein for instance recognized that “the greatest scientists are artists as well.”) Here, we showcase how cutting-edge observational seismology featuring snow and firn trapped waves has led to multi-faceted ongoing audiovisual art and music collaborations that allow for creative perspectives on the sounds of the natural world. We will begin by scientifically describing Antarctic firn resonances (here dubbed the “ice ghosts” by Steven Colbert), their pervasive manifestation, temporal variability, and sensitivity in the context of dynamic cryoseismic media. We then go on to present various strategies and approaches related to the sonification of such seismic signals, and how this mapping into our own auditory range in return creates novel visualization and experiential opportunities, which sometimes feed back into new scientific pushes. Preliminary works by Canadian audiovisual artist Sandra Volny and LA-based composer Lucas Cantor will be shown and tied into the public perception of scientific works.

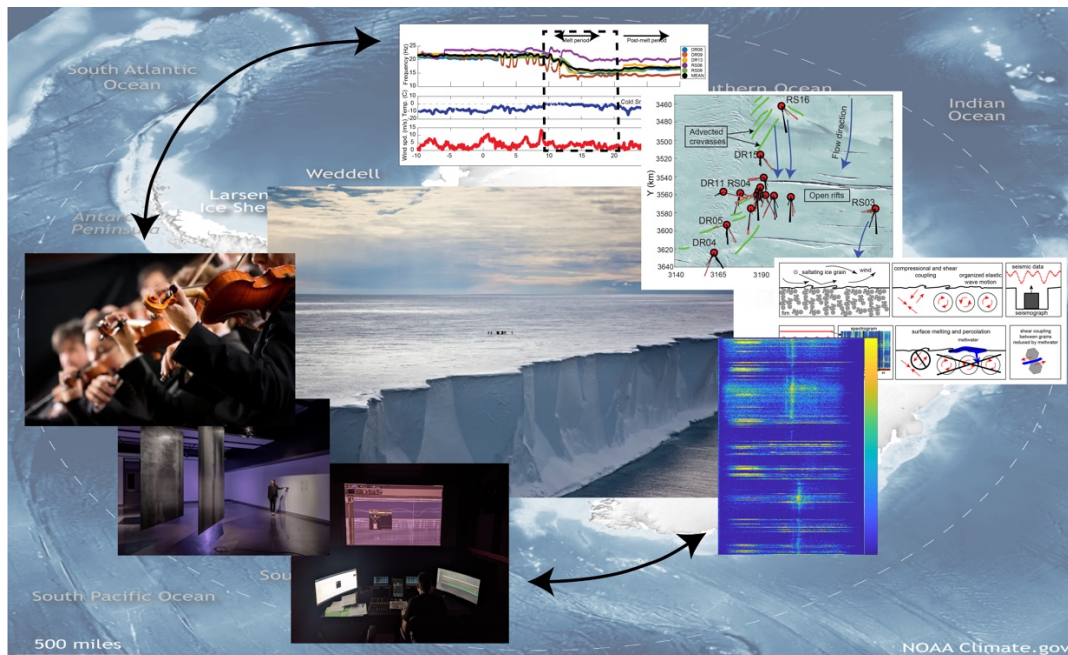


Figure 1: Panorama of initiatives, both scientific and artistic, related to Antarctic activities on the Ross Ice Shelf and other locales.

