

Category

OS Ocean, Sea Ice

Session Number

OS-1

Session Title

The acoustic environment of the polar oceans: exploring polar soundscapes

Session Description

The underwater acoustic environment is created by the superposition of sounds from a multitude of sources of natural biotic and abiotic as well as anthropogenic origin. For aquatic life, marine mammals in particular, their perceived soundscape directly impacts their ability to hunt, communicate and possibly navigate these waters. However, for much of the world oceans, and for polar seas in particular, little is known about the diversity of contributions and the diel and seasonal patterns as well as long-term trends of the acoustic environment. This lack of knowledge hampers our ability to predict how anthropogenic change will impact on populations to which these waters form an essential habitat. The impact of anthropogenic activities on the acoustic environment may be direct, by adding noise, or indirect through global climate change, affecting acoustic propagation conditions and habitat usage. To outline the range of polar acoustic environments and the nature of their main contributors, this session aims at bringing together studies addressing these issues through in-situ recordings, methodological advances and numerical modeling.

Keywords: Soundscape, acoustic environment, marine mammals, anthropogenic impact, underwater sound, noise

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