Geophysical Research Abstracts Vol. 21, EGU2019-12257, 2019 EGU General Assembly 2019 © Author(s) 2019. CC Attribution 4.0 license.



A first assessment of observational gaps in the Arctic

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Planning and prioritization of funding for observing systems requires identification of gaps in the current knowledge. Here we perform an assessment and gap analysis of present Arctic observing systems, using a web-based survey supported by model sensitivity studies. The survey represents a first collection of homogeneous and consistent information about in-situ and satellite observations across disciplines in the Arctic, and was carried out under the H2020-project "Integrated Arctic Observation System (INTAROS)". Our synthesis highlights crucial gaps in the observing systems and related datasets, addressing spatial/temporal coverage, resolution, uncertainty, as well as sustainability and data management of the existing in situ observation networks.