Appendix 2：

ISCORD 2023 Symposium report information (can be copied)

Name of the presenter	Anastasiia Zemlianskova	Position	Junior research scientist
Gender	Female	Nationality	Russian
Organization	St. Petersburg State University, St. Petersburg, Russia		
Sub-topic	Climate change and polar regions		
Report Title	Icing processes and their long-term variability by the example of the giant Anmangynda aufeis field (North-East of Russia)		

Abstract

Aufeis (naled, in Russian) is a specific form of seasonal glaciation that is typical for mountainous permafrost environment. The area of aufeis fields in the North-eastern part of Russia can be measured in tens of square kilometers, and the ice thickness may reach 10–12 m. The development of aufeis processes indicate the relationship between permafrost and hydrological and hydrogeological cycle. They are well identified at remote sensing images and can be used for assessment of geocryological conditions at regional scale. The giant Anmangynda aufeis is located in the river valley of the same name in the Magadan region in northeastern Russia. This is the only aufeis station in the world with a 30-years period of ground-based regime observations (1962–1991). The materials of this term have been supplemented by remote sensing data based on Landsat and Sentinel satellite images for the period 2000–2022, as well as the results of field studies carried out in 2020–2022. The analysis of the long-term variability of the maximum area, volume and average thickness of ice, the dynamics of formation and destruction of aufeis in the cold and warm periods of the year has been carried out. It was revealed that the maximum values of the area and volume of ice before the start of ablation decreased by 25 and 33%, respectively. In 2000–2022, the average values of aufeis characteristics are 4,7 km^2 and 7,1 million m^3, and in 1962–1991 they reached 5,5 km^2 and 8,5 million m^3. The analysis of the intra-annual dynamics showed that the Anmangynda aufeis has changed from the category of perennial to seasonal formations. New research station has been found at the Anmangynda aufeis in 2020 which is important understanding and projection of on-going changes.

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