

A month in the deep North: the challenges of the ice cores extraction

Holtedahlfonna's Ice Field

300 km² | largest ice field on north-western Spitsbergen
-11°C | average annual air temperature (1992-2020)
+4/5°C | temperature increase during the last 40-50 years
2005 | previous ice core drilling

Drilling site
 1100m altitude
 -25°C to -5°C range of temperature on the site
 4 hours by snowmobile
 12h of drilling per day



8 researchers
 1 driller
 1 mountain guide

Ice Cores

2 expected | **1** for analysis & **1** for long term conservation
125m | length expected
300 | years of climate and environmental history
105mm | diameter

1 month: expected duration of the operation from drilling to storage

Journey of the ice cores

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 • Ny-Alesund to Longyearbyen - Norway
 • Longyearbyen to Brest - Norway to France
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 • Brest to Grenoble - France
 • Grenoble to Venice - France to Italy
- Shipping to Antarctica in 2024-2025

Headquarters in Ny-Ålesund station
 Storage of the ice cores
 in a refrigerated container
 until transport to Europe