

PRESS RELEASE 28th September 2025

A new international expedition attempts to reveal and preserve the ice memory from the iconic Pamir glaciers in Central Asia, Tajikistan.



On the 24rd of September, an international team of scientists launched a new ice coring expedition on the Pamir Mountains - Tajikistan, part of the often called « Roof of the World ». At an altitude of 5.800m, on the Kon Chukurbashi ice cap, 13 scientists led by the Swiss-funded PAMIR Project and a team of Tajik partners are attempting the extraction of the first ever deep ice cores from the Pamirs.

Sampling the entire depth from the surface to the bedrock - +/- 105 m - is crucial as this region hosts some of the highest and oldest glaciers in the Northern Hemisphere. These silent giants located nearby the famous Fedchenko, have been storing, layer upon layer of snow, a unique climate archive from one of the world's most vulnerable and data-scarce regions.

One of the two ice cores will be added to the Ice Memory heritage, enabling future generations of scientists to produce new knowledge after the disappearance of the glaciers.

The Ice Memory Sanctuary will be located in Antarctica, at the French-Italian Concordia station, jointly managed by PNRA and IPEV. The Ice Memory sanctuary sheltering these precious archives is a major milestone for the founders of the Ice Memory Foundation : CNRS, IRD, University Grenoble Alpes, Ca'Foscari University of Venice, CNR and PSI.

This expedition will provide a crucial contribution to the United Nations Decade of Action for Cryospheric Sciences.



The Pamirs remain to date one of the last major high-altitude regions where no deep ice core has ever been retrieved

If many glaciers in the Pamir Mountains of Tajikistan still seem resilient in the face of global warming, scientists do not know how long this will last.

Past efforts to extract ice cores have been inhibited by challenging site access, complicated logistics. Scientists, through the PAMIR Project - funded by the Swiss Polar Institute - has overcome these obstacles through the identification of the site and progressive collaborations with Tajik institutions such as the Academy of Sciences of Tajikistan.

In 2024, as part of the PAMIR Project, they identified a promising candidate site: the Kon Chukurbashi ice cap, located at an altitude of 5,800 meters in the Murghab region. Collecting an ice core from this specific glacier now means securing what could be Asia's first deep, high-elevation ice archive, at a time when such opportunities are becoming increasingly rare. While the glaciers of the Pamirs may still appear untouched, the signals they hold are already at risk.

The two ice cores are expected to reach a length of more than 100 meters

This drilling expedition, led by the Swiss-funded PAMIR Project in collaboration with a broad network of scientific institutions, is conducted at over 5,800 meters altitude under the leadership of the University of Fribourg (Switzerland), together with the Tajik Academy of Sciences and partner universities from Switzerland, Japan, and the United States.

In order to work safely at the site, the team must acclimatize slowly, taking extra time on the drive and while establishing the base camp and high camp in order to have a healthy team at high altitude. In the end, the team will be at **extreme altitudes for two weeks** to establish the camps and extract the two ice cores.

If the team succeeds, the two first deep ice cores to analyze and preserve the environmental and climatic history of this remote and vulnerable region should reach the bed rock after **105 m**.

A treasure to analyse today and to save for future generations of scientists

Ice cores such as this contain **unique environmental information** preserved in air bubbles and chemical trace concentrations and isotopes, as well as particles and possibly organisms trapped in the ice. They are an invaluable direct archive of **ancient atmospheres** of this region.

“This ice holds hundreds and possibly even thousands of years of physical records of snowfall, temperature, dust, and atmospheric chemistry,” says the leader of this ice coring expedition **Dr. Evan Miles** - from the University of Fribourg, the University of Zurich, and the Swiss Federal Institute for Forest, Snow, and Landscape Research WSL

“We are racing against time to retrieve it before climate-change induced melt damages these natural archives forever.”

One ice core will be analyzed as part of the research conducted by the PAMIR Project, involving an **international team** from the University of Fribourg and the University of Zurich (CH), the National Academy of Science of Tajikistan (TJ), the Univ. of Nagoya and Univ. of Hokkaido (JP), and Ohio State University (US), along with key technical support from the University of Bern (CH).

The collection and analysis of these ice cores build on tremendous recent collaborative advances to investigate glaciers in the Pamir region, including researchers from the National Academy of Sciences of Tajikistan and Swiss scientists through the PAMIR project, along with researchers from IRD in France and the Bavarian Academy of Sciences in Germany through RECAP, a project focused on Fedchenko Glacier (now Vanj-yakh).

Together, these studies provide crucial information for **the current and future response of glaciers and streamflow in the region**. The Pamir ice core will play a vital role to contextualize this within the climate and glacier fluctuations over the past decades, centuries, and millennia.

The second core - thanks to the commitment of the PAMIR Project scientific team - this key climatic boundary of Central Asia and part of the so-called Third Pole should join **the global archive of ice cores heritage**. It will be added to the **Ice Memory heritage** collection **in Antarctica** for centuries to come. These samples will provide precious insights to help **anticipate the future of our climate** and **inform policy decisions** of generations to come worldwide.

*“We are thrilled to count on this irreplaceable archive from the Pamir and include it into the Ice Memory Sanctuary,” said **Prof. Dr. Thomas F. Stocker**, Chairman of Ice Memory Foundation from the Oeschger Centre for Climate Change Research at the University of Bern, Switzerland. “Today more than ever, we must protect the data that enables us to make science-based decisions—to better guide our societies, adapt to the global changes affecting our planet, and ensure that future generations are able to anticipate the profound transformations underway. This is a responsibility we all share”, said Thomas Stocker.*

A strong symbol of international scientific cooperation, marking the launch of the United Nations’ Cryospheric Decade in 2025

The preservation of ice memory from the **Pamir glaciers** and the permanent storage of this ice core heritage at **the French-Italian Concordia Station in Antarctica** is a **powerful symbol of international scientific cooperation**.

*“We can all be proud — France and Tajikistan together — that at the launch of this UN Decade of Action for Cryospheric Sciences, such an emblematic cooperation is taking shape,” said **Olivier Poivre d’Arvor**, French Ambassador for the Poles and Maritime Issues. “This operation marks a true flagship initiative and a milestone at the launch of the Decade”.*



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PHOTOS & VIDEOS

About the drilling operation in the Pamir Region

- Location: Kon Chukurbashi Ice Cap, Tajikistan (5800 m a.s.l.)
- Date: September 2025 to early October (5 weeks)
- Partners: University of Fribourg, Tajikistan Academy of Sciences, University of Zurich, Nagoya University, Hokkaido University, Ohio State University, University of Bern.
- Funding: Swiss Polar Institute, Ice Memory Foundation
- Outputs: Full-depth expected ~105 m - the first ice cores to be analyzed and archived; the second ice core to be sent to the Ice Memory Sanctuary in Antarctica.



University of
Zurich^{UZH}



About Ice Memory Foundation

- The Ice Memory Foundation aims to collect, save, and manage ice cores from selected glaciers currently in danger of degradation or disappearance, with a view to preserving the information they contain for decades and centuries to come.
- **The Ice Memory Foundation has been created by 6 major French, Italian, and Swiss scientific institutions: University Grenoble Alpes, CNRS, Institut de Recherche pour le Développement - IRD, Ca' Foscari University of Venice,**

CNR in Italy, Paul Scherrer Institute in Switzerland and is sheltered by the University Grenoble Alpes Foundation.

- The Foundation's governance is international, with members from France, Italy, Switzerland, China, and the United States, including two former IPCC Vice Presidents.



Founders of the Ice Memory Initiative



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About the PAMIR Project and the Swiss Polar Institute Flagship Initiatives

- Swiss Polar Institute granted CHF 1.5 million to the PAMIR programme. The research programme's full title is *PAMIR - From ice to microorganisms and humans: Toward an interdisciplinary understanding of climate change impacts on the Third Pole*.
- The ice coring at the Kon Chukurbashi Glacier will be performed by PAMIR's Climate and Environmental History Research Cluster, during their field campaign, Sept. Oct. 2025.
- The programme research consortium is led by University of Fribourg and comprises 6 research clusters.
- As Swiss Polar Institute's largest funding instrument, the SPI Flagship Initiatives are multi-annual programmes combining science and technology projects from different disciplines and different groups/institutions in Switzerland around a polar or remote high-altitude region.
- The funding is focused on field campaigns (logistics, safety, etc.), data management, outreach, and programme coordination, thus providing temporary infrastructure for a Swiss-led polar research programme.
- The PAMIR programme is one of the first two SPI Flagship Initiatives running from 2022 until 2026. PAMIR is a multi-disciplinary research programme with

focus on the current state of the Pamir cryosphere, as well as its impacts on ecosystems, hazards and water resources.



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