

ICE MEMORY: full success of the expedition on Illimani glacier in Bolivia

Press release | June 20th, 2017

The second expedition of the **ICE MEMORY** project, took place on the Illimani glacier (Bolivia) from May 22nd until June 18th, 2017. It just ended with full success! The international team at work has successfully extracted two ice cores down to bedrock, at more than 6,300 m above sea level, despite extreme climatic conditions. One of the ice cores will be analyzed while the other one will join the first world heritage vault of ice cores (in Antarctica) obtained from glaciers under threat due to global warming.

A successful drilling under extreme conditions

Starting from La Paz on May 22nd after several days of acclimatizing to the high altitude, the international research team (France, Bolivia, Russia, Brazil) including 15 researchers and about thirty mountain guides and porters from Bolivia had to face extreme climatic conditions as soon as reaching the base camp at 4500 m above sea level. Heavy snowfall and strong winds considerably slowed down the project over more than one week, and notably the equipment transportation (drilling system, 75 ice core boxes, camp...) up to the summit.

Thanks to a short window in the middle of bad weather conditions, the team finally reached the summit to start the drilling. Two ice cores were recovered, within only 10 days, down to bedrock: the first one reached a length of 137 m, while the second was slightly shorter at 134 m of length. Drilling of a third core, initially hoped for, could not take place in the



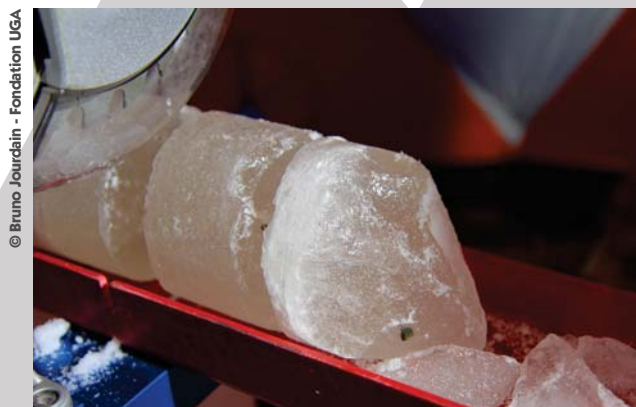
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end, due to lack of time and in order to keep the whole team under safe conditions.

"This second expedition is a fantastic team accomplishment", highlights Patrick Ginot (IRD), coordinator of the **ICE MEMORY** field expeditions. "The ice core analyzes, which will be mainly conducted at the *Institut des géosciences de l'environnement* (IGE) of Grenoble, will allow us to track climate and environmental conditions back to 18,000 years before present".

An international initiative

These ice cores will soon join those drilled in 2016 during the first **ICE MEMORY** expedition nearby the *Mont Blanc* summit in the French Alps. They will contribute to the first World heritage vault of ice cores, which will be built at Concordia Station in Antarctica, for further use by scientists of future generations.



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"**ICEMEMORY** is a fantastic adventure mixing collaboration and confidence between nations, scientists and private donors, who face their responsibilities in the climate change context", says with enthusiasm Anne-Catherine Ohlmann, the Director of the UGA Foundation who coordinates the donation part of the project. "We hope that **ICEMEMORY** will contribute to raise awareness on climate challenges of this century, and that it will push policymakers as well as citizens to engage themselves in preserving our environment and to carry the required transformations of our societies".

"We hope for a snowball effect of our first two drilling operations conducted by our team during the initial phase of the **ICEMEMORY** project", says Jérôme Chappellaz (CNRS), the scientific coordinator of the

project. "The Bolivian expedition, including a strong international dimension, will help our colleagues and partners to setup their own contribution to the world heritage ice core vault. It is time now to work on the long-term international governance of this unique heritage vault, involving both UNESCO and the logistic agencies in Antarctica".

Available resources!

Transportation of the equipment up to the summit, camp setup, drilling, handling and transfer of the ice cores toward the base camp, everyday life of the team : enjoy a selection of pictures and videos available on the following platform:

<http://fuga-media-stock.univ-grenoble-alpes.fr/>

Team Composition

Patrick Ginot (expedition's leader, IRD, France), **Romain Biron** (IRD, France), **Pierre Vincent** (IRD, France), **Thomas Condom** (IRD, France), **Bruno Jourdain** (UGA, France), **Christian Vincent** (CNRS, France), **Nicolas Caillon** (CNRS, France), **Luc Piard** (CNRS, France), **Xavier Faïn** (CNRS, France), **Joël Savarino** (CNRS, France), **Vladimir Mikhalenko** (Institute of Geography, Russia), **Stanislav Kutuzov** (Institute of Geography, Russia), **Filipe Gaudie Ley Lindau** (Federal University of Rio Grande do Sul, Brazil), **Alvaro Soruco** (Mayor San Andres University in La Paz, Bolivia), **Sarah Del Ben** (Wildtouch film director).



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ICE MEMORY:

an international scientific programme aimed at preserving climate memory

Over the last few decades, glaciologists have observed the effect of increased temperatures on the melting of glaciers, which hold the memory of former climates and environmental conditions, and which help to predict future environmental changes. Faced with this alarming observation, French glaciologists from IGE Grenoble (Institut des géosciences de l'environnement) and their Italian partners decided to take action and launched the ICE MEMORY project in 2015, backed by the Université Grenoble Alpes Foundation and under the patronage of the French and Italian national commissions of UNESCO.

Their primary goal: to create in Antarctica the world's first ice archive sanctuary, relying on glaciers threatened by global warming. These samples will be the property of humanity, with sustainable international governance ensuring their preservation as well as their exceptional and appropriate use, in order to enable future generations of scientists to carry out unprecedented analyses.

The inaugural ICE MEMORY conference, organised in March 2017 in Paris under the patronage of UNESCO, marked the internationalisation of the programme, with the participation of fifteen American, Russian, Chinese, Brazilian, Swedish, Japanese, German, Swiss, Italian and French scientists specialised in ice core studies. The consortium hopes to unite the international community of glaciologists in order to carry out at least another twenty drilling missions on various glaciers around the world, during the next decade.

Backed by the Université Grenoble Alpes Foundation, ICE MEMORY project unites the following partners: CNRS, IRD, Université Grenoble Alpes, National Research Council of Italy, Ca' Foscari University of Venice, as well as IPEV (French Polar Institute) and the Italian Antarctic research programme (PNRA) as regards the Concordia station. The project is equally jointly financed by the provision of human resources and equipment from partner scientific organisations and by private sponsorship, through the Université Grenoble Alpes Foundation.

For further information: [web site](#), [film on the Col du Dôme expedition](#) and [press kit](#).

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To go further

Follow the project on social medias: [@ProtectingIceMemory](https://twitter.com/ProtectingIceMemory)

The Université Grenoble Alpes Foundation deeply thanks the donors who supported **ICE MEMORY**

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