

Second mission on the Illimani glacier

After recalling the objective and the work presented here by ICE MEMORY, you will explain the importance of glacial evidence and measurements of oxygen isotope ratios in ice cores.

Document 1: Illimani Central Glacier, Cordillera Real, Bolivia



(photo from : cordillera-real-boliwia-atraksje-turystyczne-6.jpg (1024×768) (zielonamapa.pl))

Document 2: ICEMEMORY: second mission on the Illimani glacier

Collecting ice cores from glaciers most at risk from climate change and storing them in Antarctica for future generations of scientists: that is the goal of ICEMEMORY, an international programme aimed at preserving the climate and environmental memory of glaciers. Following the first drilling ¹ in the French Alps in August 2016 and the inaugural ICEMEMORY conference at UNESCO in March 2017, the second mission will take place in Bolivia, on the Illimani glacier (6,400 metres above sea level), from May 22th to June 18th. Post-mission, the container will be transported to the Chilean border, by truck, then by ship to Le Havre (France), before joining Grenoble. One of the three ice cores will be analysed at the IGE laboratory

(Institut des géosciences de l'environnement), in order to identify chemical tracers available with current technologies and to create a database accessible for the whole scientific community, being today or in the future.

Peaking more than 6,400 metres above sea level, the Illimani glacier is located between the wet Amazon basin and the dry Bolivian Altiplano, just above the Bolivian capital, La Paz. Since an initial deep drilling operation conducted in 1999, scientists know that this site records a vast array of information, from various sources: rainfall trends and forest fires (Amazonian side), human-induced emissions and urban pollution (Altiplano side). With a depth of 140 metres and the slow flow of the glacier, the site preserves up to 18,000 years of climatic and environmental archives. Therefore the past environment can be reconstructed, as far back as the last glaciation.

Extracted from: CP_Ice_memory_EN.pdf (csug.fr).

¹ removing of ice cylinders from ice sheets