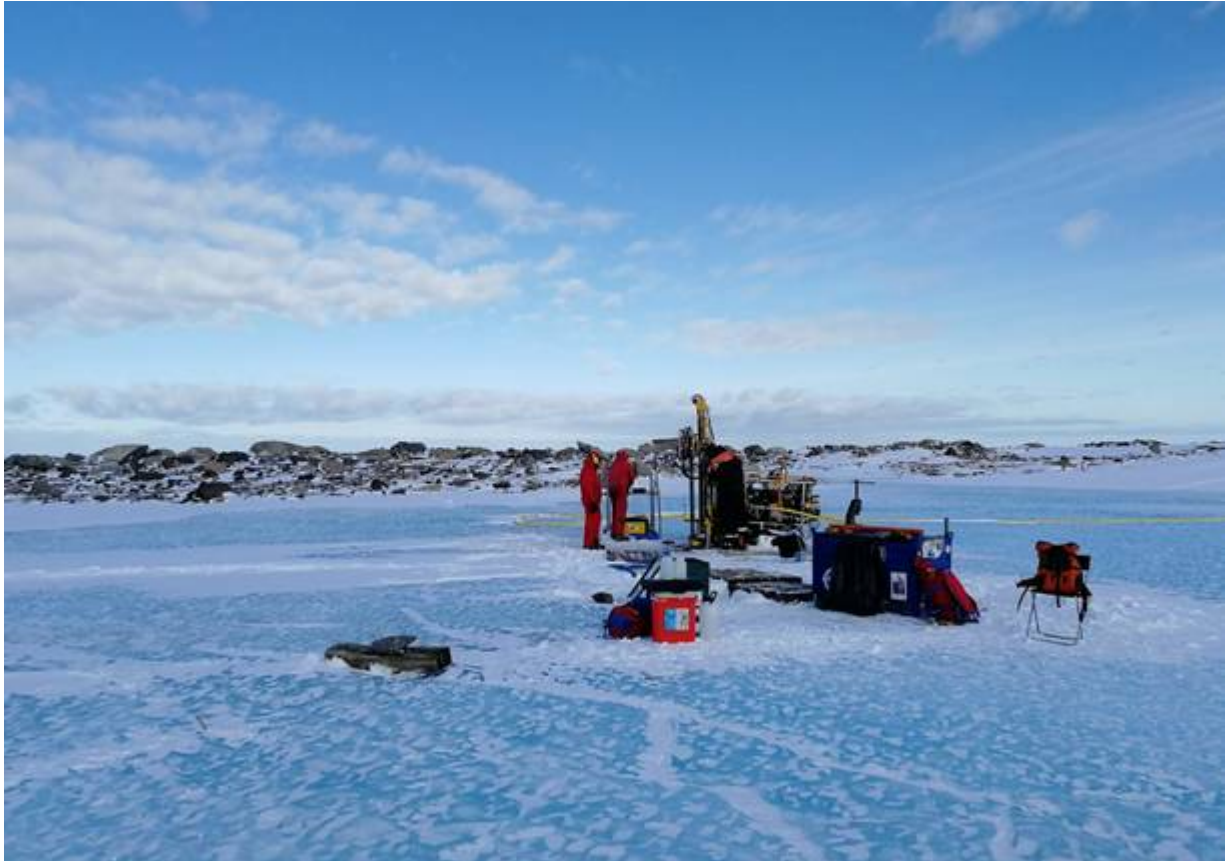


In the South Pole, looking for leads on signs of life on Mars

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From the glaciers of the Alps to the ones of the Antarctic.

Since a few weeks ago, the post-doc researcher Mauro Guglielmin, lecturer at the University of Insubria, is among the glaciers in the South Pole. He was accompanied by **his colleague Stefano Ponti** to study climate change. In his team of researchers there are also **Maurizio Azzaro** who is part of the National Research Council in Messina, Science Polar Institute, and **Ulrich Neumann**, a German drilling technician.

The four people were **in the north of Terra Vittoria**, in an area of lakes that are perpetually frozen, such as the Tarn Flat lake, from which there might be **leads to look for life forms on Mars**. In fact, the frosts of lakes, that are sediments of ice on the ground, **are very salty** and despite the extreme environment, they contain a lot of **bacteria** which are able to receive energy to survive also with no light and at very low temperatures, **taking advantage of carbon in the environment** and producing methane.

“We carried out different drillings in order to find some frosts for the salt mines, which are like the frosts on Mars. We found different types with **a salinity that was five times bigger than the one in the water of the sea**. These frosts will be taken to the laboratory of the National Research Council in Messina and of the University in Perugia for the microbiological analysis.“, explains Guglielmin by Whatsapp, that is the only “link” with Italy.

Currently, the Italian base in the Antarctic **has 25 researchers and 90 people of support, in addition to the group of the University of Insubria, who will be back in Italy the 13th December**, after about a month of stay.

It is a month of hard work, 7 days on 7, from 8 a.m. to 8 p.m., without a stable connection to Internet, playing table tennis in the evening and a short chat among researchers, as the only diversion. The data that are picked up during the day are in fact registered, studied and re-elaborated, the rest of the time is used for resting.

After coming back to Italy, the two lecturers of the University of Insubria will particularly take care of understanding **where frosts, such as the ones of the lakes in the Antarctic can exist** and they will analyze the sections of Permafrost that have been collected during the mission.

di Translated by Dario Germano (Reviewed by Prof. Robert Clarke)