SHIP ARRIVES AS PEA WELCOMES ADDITIONAL SCIENTISTS AND CREW

Last weekend the cargo ship finally arrived and the first traverse to bring the containers filled with various equipment and materials to the station took place. There was also a changeover of some scientists and crew at the end of this week.

Ship unloading and team changeover

After finding an ideal location to moor on an ice shelf, the cargo ship was met by the traverse team led by Alain Hubert and assisted by 4 additional members of the IPF crew (Tim, Jann, Jacques, Simeon) on Saturday and Sunday. Unloading of cargo bound for PEA was the first step. When that was completed; the team loaded 31 containers filled with various waste that had accumulated over the past decade at PEA. This mass evacuation of waste is in accordance with the Antarctic Treaty. They will be unloaded in Cape Town, South Africa, where the majority of the waste will be recycled.

The team has completed the first of two traverses to bring the cargo to PEA, stopping at Perseus airstrip to drop off some material, particularly containers filled with insulation material that is needed to complete the building, insulating the living quarters of the hangar from the harsh Antarctic climate. The traverse team arrived back at PEA on Wednesday evening and was welcomed by many of the people at the station. Everyone helped unload the containers, especially those with perishable goods (including fresh fruits and vegetables!) and foods not made for sub-freezing temperatures.

The team had to leave one container at the coast because they didn't have enough sledges to take it with them on the first trip. A smaller traverse team will go back towards the end of January to retrieve it, at the same time as the scientists from PASPARTOUT project will head towards the coast to carry out their snow sampling as well as install an automatic sampler that will collect snow over the course of the coming year.

On Friday morning at 1:30am the DC-3 arrived and brought with it 7 new scientists and crew, including Barbara Weiss, who is trading places with Mathieu Pasquier as the station's doctor, an additional field guide Christophe Berclaz, who will guide scientists from the ExPoSoils project into the field. Dr. Eric Rignot, on a separate expedition, will arrive on the next scheduled flight scheduled for January 19th.

New scientists include Brandon Von Schalk from the Swiss Federal Institute of Technology, Lausanne (EPFL) who will do maintenance on two automatic weather stations near PEA. Valentina Savaglia from the University of Liège and Björn Tytgat from UGent who are working on the ExPoSoils project and are specifically here to sample microbes living on the rocks and exposed soils found on the nunataks in the vicinity of the station.

While the flight brought in new scientists, it will also take a few home when it leaves on Saturday morning at 5am. We have thoroughly enjoyed the presence of Maarten Baes from University of Ghent and the two representatives from the Belgian Defence that were here from the 4SAT project. This initial stage of the project was very successful for the three members of the 4SAT team. With support from field guide Manu Poudelet, they were able to conduct several site surveys using a high-tech drone that produces high resolution 3-D maps of the local topography of potential sites where they would be like to install a satellite monitoring low earth orbiting objects (LEO) in a follow-up campaign. There were a number of suitable sites, including on the granite ridge to which the Princess Elisabeth Antarctica is anchored as well as on a neighbouring nunatak called Teltet, roughly 7 kilometres from the station.

The project will return next season to re-examine some locations and ideally install some cameras that they would like to leave year round that can make observations throughout the Antarctic winter months. The very calm weather the region has been experiencing doesn't necessarily give the most accurate picture of how conditions might be during more unruly times. The aim of the project is to install the telescope in a location with minimal disturbance. Consistent laminar flow within the atmosphere is required to ensure the view of the telescope isn't distorted, allowing them to accurately track low earth orbiting objects, including satellites and space debris that could potentially become hazardous.

Coastward bound

Sibylle Boxho from the Université Libre de Bruxelles (ULB) and Paula Lamprea Pineda from Ghent University, both of whom are working on the PASPARTOUT project will soon head to the coast and be guided by Manu Poudelet. On arrival they will dig a roughly 2 metre deep by 2 metre long trench in the snow with enough elbow room to comfortably manoeuvre and collect snow samples. In addition, they will also install an automatic snow sampler that will remain on-site for the next year. This snow sampler has been specifically designed for this project, and will make a quarter turn every three months to collect snow from a different direction each season. Sibylle is particularly interested in the particles contained within the snow such as the dust. By analysing these particles, she and her colleagues will be able to determine the atmospheric circulation patters that are persistent, and thus the origin of air masses that are driven down to East Antarctica and better understand global circulation patterns.

Although not yet set in stone, it's possible that Simon Steffen and Nicolas Herinckx will accompany the team from PASPARTOUT for part of their trip because one of the five automatic weather stations (AWS) that make up the PEACE (Princess Elisabeth Antarctica Climate Experiment) project is in close proximity

to the site where they will carry out their snow sampling. The weather stations need yearly maintenance and checks to ensure that they are running correctly and measuring accurately. Instruments at times need to be upgraded or replaced.

Next week we'll have more updates on the new water treatment system and provide insight into the first adventures undertaken by the new scientists that have just arrived at the Princess Elisabeth Antarctica!