



Where I work Cristina Sans Coll

Photographed by
Esther Horvath.

As a scientific-instruments engineer, I work on aircraft used by the Alfred Wegener Institute for Polar and Marine Research for research flights at the North and South poles. They are modernized aeroplanes from the 1940s, with converted cabins that can power science equipment and capture data on sea ice and other climate-related phenomena.

In my hangar crew, we handle logistics for the research, fitting equipment into the science cabin and making sure that we have enough power for it. We all have to be able to do everything, from installing and operating instruments, such as ice-penetrating radars and trace-gas sensors, to coding the data acquisition to troubleshooting the systems in case of failure. We calculate whether we'll have room for the equipment, how heavy it will be and how far we can fly in one flight.

The IceBird project records the thickness of the Arctic sea ice. The pilots have to fly 61 metres above the ice while towing the 'bird' sensor just 15 metres above it. The bird

measures the overall thickness of snow and ice beneath the flight path. We also document the ice with a camera in the plane's belly.

IceBird flights are very intense. We're often flying low over open water, so here you see me in my bright orange survival suit in case we have to crash-land in the water. Only the pilots and the bird operator talk until we are finished and climb higher. If anything happens to the bird, the operator has to cut the cable and let it go.

Because of climate change, polar regions are warming roughly three times as fast as the rest of the world. Scientists need more data – and that's what we are trying to provide.

On board, it can be exhausting, with loud vibrations, and it's dry and cold. But when we're leaving one of our base airports in Longyearbyen, Norway, it's so beautiful with the fjords below.

Cristina Sans Coll is a scientific-instruments engineer for the Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research in Bremen, Germany. **Interview by Kendall Powell.**