

Climate Change at the Poles: Research Immersion Experience at Bellingshausen, Antarctica

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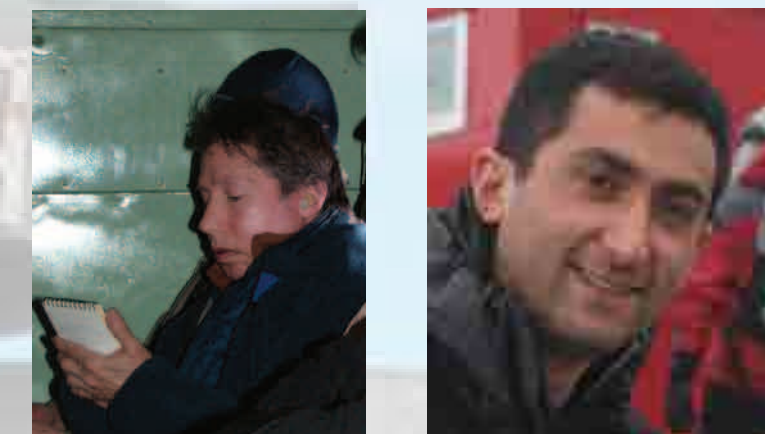
Abstract

We brought a party of 15 scientists, graduate students, and educators to King George Island, the largest of the South Shetland Islands, just off the Antarctic Peninsula, for an international workshop on Antarctica and global climate change in January 2010. Participants included professors, young scientists and graduate students from the Obukhov Institute of Atmospheric Physics, the University of Maryland, the University of Wisconsin, and the Michigan Technological University. Lindsay Bartholomew, an education and outreach specialist at the Museum of Science and Industry in Chicago, connected the workshop via video and Internet with an audience of museum visitors. Scientists living and working at Bellingshausen, including Hans-Ulrich Peter, an eminent ecologist from Jena University (Germany), and Bulat Movlyudov (Institute of Geography, Moscow), a distinguished glaciologist, participated in the workshop. Field trips led by Peter and Movlyudov and others were made by day and lectures were held by night. Professors and graduate students made cutting-edge presentations on such subjects as permafrost, glaciology, and global climate models. Three workshop teams conducted field research projects at the foot of the Bellingshausen Dome icecap - two on carbon cycling and one on permafrost. Major funding sources for the workshop included the Russian Foundation for Basic Research (Russia), Wilderness Research Foundation (USA), NSF, University of Wisconsin at Stevens Point, Alfred Wegener Institute (Germany) and Museum for Science and Industry (Chicago). INACH, the Chilean Antarctic Institute, and IAU, the Uruguayan Antarctic Institute, provided air charter services. On King George Island, our group was billeted at Russia's Bellingshausen science station.

The suspects



J. Baeseman I. Repina V. Alexeev



S. Bart F. Fernandez

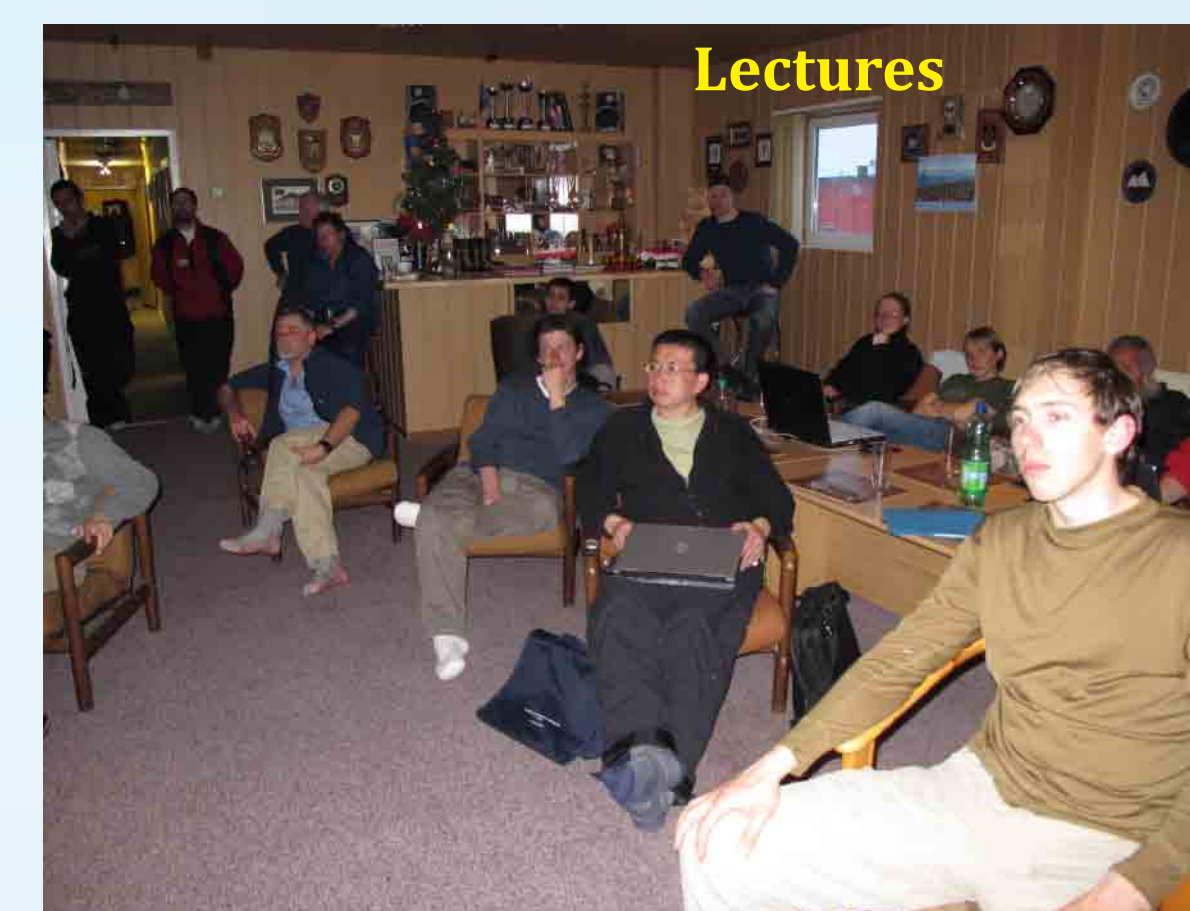
How do you count penguins? 1, 2, 3, 4, ...



Antarctica International



Group photo



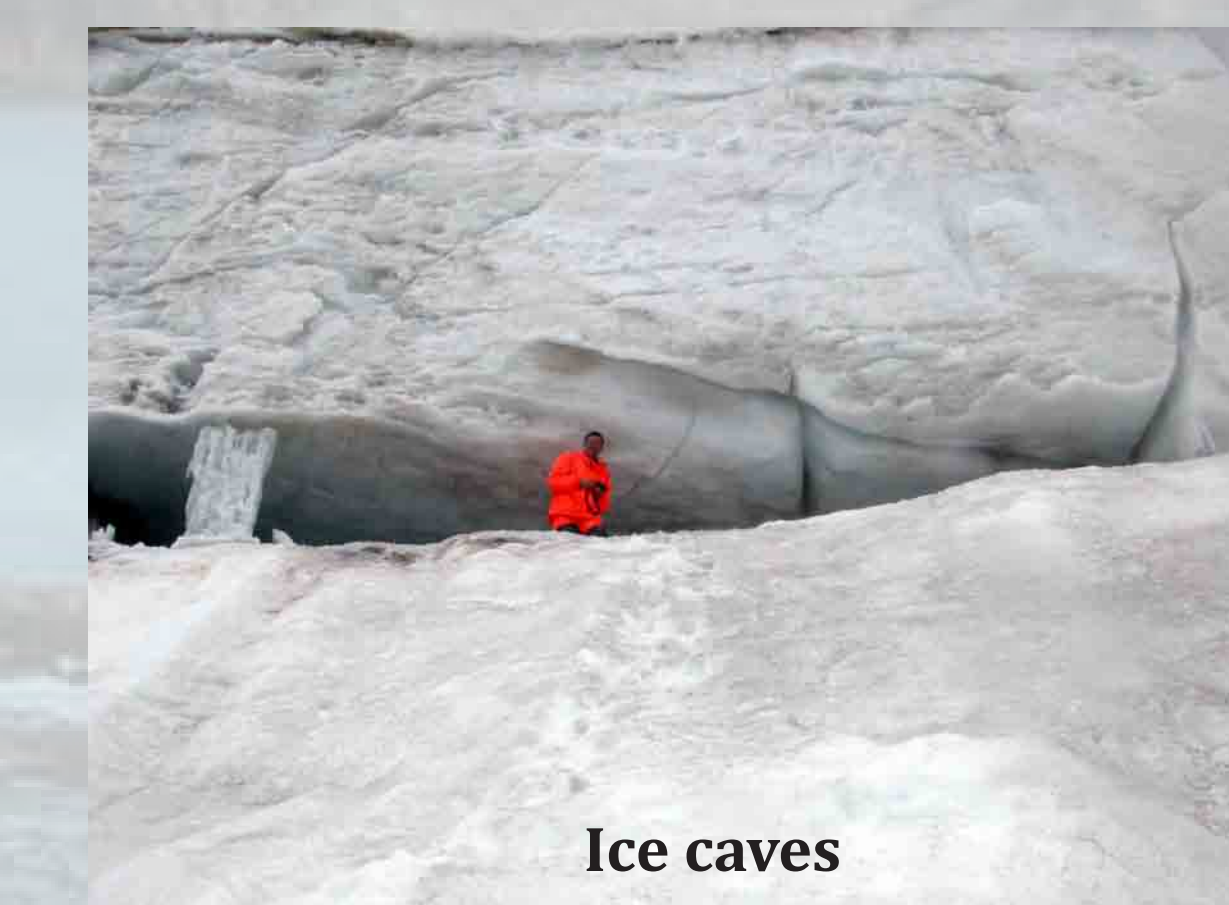
Lectures



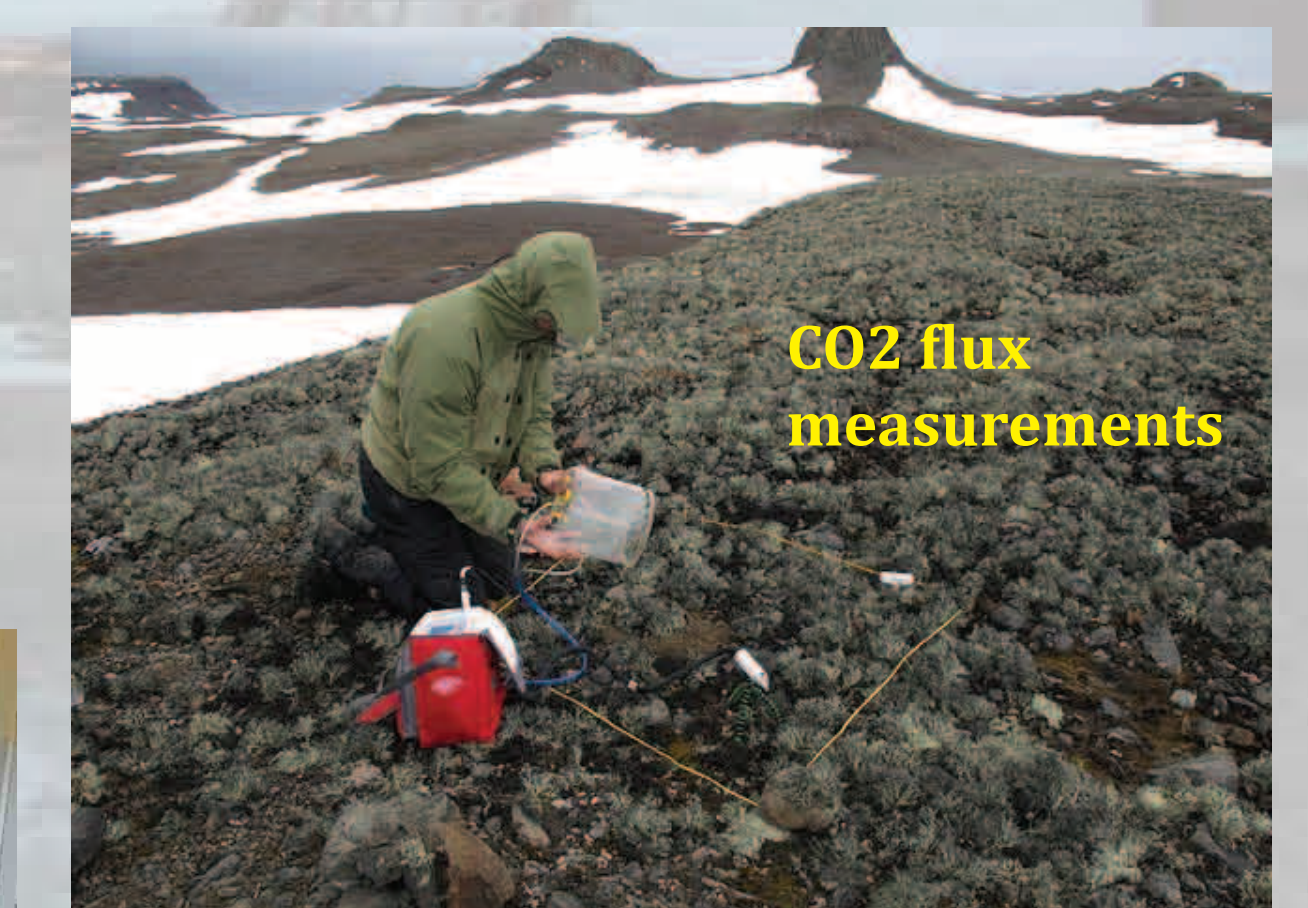
Lesson on the glacier



Ice coring lesson



Ice caves



CO2 flux measurements



Punta Arenas, Hostal Bustamante. Getting ready.

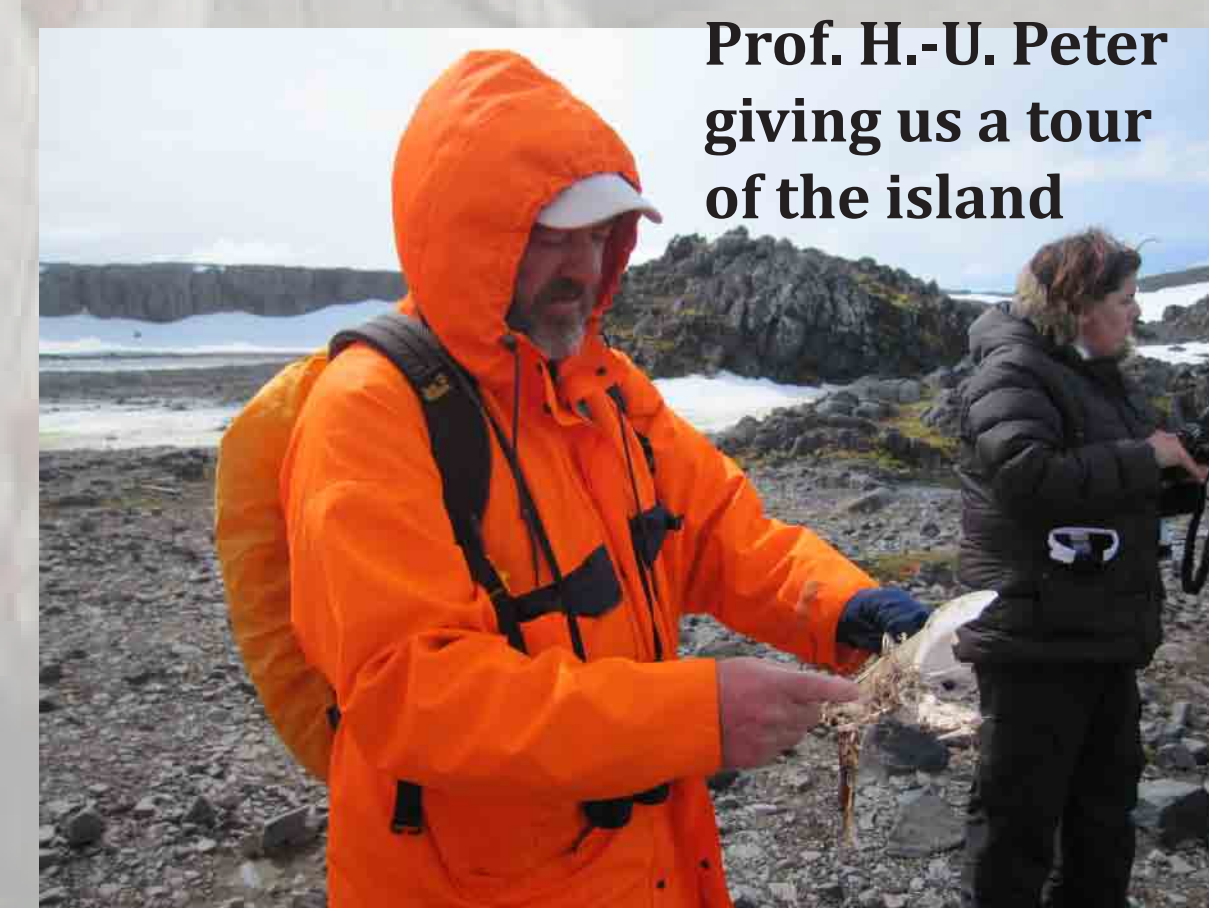


Loading C-130



Seal striking a pose

Prof. H.-U. Peter giving us a tour of the island



We are in Antarctica!



Acknowledgments

Alexander Gliko, Igor Mokhov, Sergey Kulichkov, Alexander Kutsuruba, Oleg Sakharov, Bulat Movlyudov, Sheldon Bart, Hans-Ulrich Peter, Jorge Osorio Veas
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 Association for Polar Early Career Scientists
 Russian Foundation for Basic Research
 Russian Antarctic Expedition
 National Science Foundation
 Wilderness Research Foundation
 University of Wisconsin Stevens Point
 University of Alaska Fairbanks
 Chicago Museum of Science and Industry
 Alfred Wegener Institute
 Jena University