

GRADUATE STUDENT IN
EARTH & SPACE SCIENCES

BRAD
MARKLE



Standing outside of his temporary classroom and laboratory overlooking Greenland's Disko Bay, Brad Markle breathes in the big picture. The big picture is always on his mind. As a photographer, he captures immense scenes, from giant, rippling cloud masses and never-ending skies, to massive, bobbing icebergs in a vast ocean. As a scientist who studies paleoclimatology, he asks questions on a sweeping scale to untangle the complexities of Earth's climate history.

Markle, who is pursuing a Ph.D. in the College of the Environment's Department of Earth and Space Sciences, studies the West Antarctic Ice Sheet Divide, a U.S.-led deep ice-coring project. He sifts through 70,000 years of climate data locked within ice cores to unearth indicators of change that predate humans.

But this isn't a project that any one scientist can tackle. Researchers across the globe are working to interpret data from the West Antarctic Ice Sheet Divide. Markle, a native Oregonian, is one of them. He chose to pursue his Ph.D. at the College of the Environment in part because it houses two world-class departments, Earth and Space Sciences and Atmospheric Sciences, and researchers are encouraged to extend the scope of their knowledge into other disciplines.

"Water, ice sheets, atmospheric conditions—these things interact. The Earth doesn't have departments that don't talk to each other," Markle said.

That's why Markle made the trip to Greenland, a hemisphere away from his primary research focus in Antarctica. He learned about the Advanced Climate Dynamics Course through the University of Washington's Program on Climate Change, a program focused on integrating climate science education, research, and outreach activities. Offered in partnership with the UW, Massachusetts Institute of Technology, and the

University of Bergen, Markle was one of around 20 students selected to travel to Greenland and study the dynamics of its massive ice sheet.

Through the Advanced Climate Dynamics Course, Markle gained more than a better understanding of Greenland's ice sheet. He also connected with graduate students and postdocs who, he says, will become leaders in their fields. These connections are paving the way for partnership opportunities; Markle will co-convene a Greenland Dynamics session with others from the course at the next European Geosciences Union General Assembly.

Markle has received several grants and scholarships, including through the National Science Foundation and the Achievement Rewards for College Scientists Foundation. For the Advanced Climate Dynamics Course in Greenland, Markle secured funding through Earth and Space Sciences and the College of the Environment.

Looking through the lens of his camera, Markle captures entire landscapes with the click of one button. Yet his work to capture the landscape of a changing climate over thousands of years is a long-term endeavor. Peering over the edge of what's known today and what we'll learn tomorrow, for Markle, fosters adaptability and a lasting commitment to the search.