



Alison S. Criscitiello

Graduate Institution: Massachusetts Institute of Technology

Graduate Discipline: Glaciology, Polar Climate

Hometown: Winchester, MA

Relevant SC Research: Basic Energy Sciences

Research Interest:

My research focuses on the changing marine influence on the West Antarctic Ice Sheet with a multi-disciplinary approach, utilizing a suite of new shallow and deep firn cores from Pine Island and Thwaites Glaciers along the Amundsen Coast. These new cores offer some of the highest-resolution, most coastal records in the region to date. My research includes sea-ice proxy development (methanesulfonic acid, sea salts, and inorganic species), which has allowed me to look at Southern Ocean sea-ice variability during the satellite era from glaciochemical records. I also explore the influence of temperature and precipitation origin on the isotope signal recorded in the cores, as well as the teleconnection between the tropical Pacific and West Antarctica, which is crucial in interpreting these new ice-core records. My work will give a comprehensive view of regional surface ocean and ice-sheet changes over the last ~200 years, with a particular focus on how the glaciochemical records associated with these processes are deposited and preserved in the ice-sheet stratigraphy.

About Me:

In addition to continuing to pursue polar climate research, I am committed to translating our scientific results for policy makers and the public. I believe that the value of research depends on our ability to communicate it in an effective way beyond the scientific community. I recently

took a position on the Science Advisory Board of a new non-profit organization, Adventurers and Scientists for Conservation, which links adventure and science communities to gather field data and involve non-scientists in science. I am an active member of the International Glaciology Society. After completing my PhD, I hope to work in academia where I can pursue research, teaching, and outreach. Outside of work, I am an avid mountaineer and a mountain guide. I love playing the mandolin, blowing glass, and backcountry skiing.



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