Taaffe Colloquium Speaker

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Antarctic Sea Ice Variability, Change and Linkages with the Atmospheric Circulation

April 8, 2022, 3:30-5:00 p.m. Zoom

Antarctic Sea ice is a critically important component of our Climate system. It is habitat for penguins, moderates largescale atmospheric circulation, and influences global thermohaline circulation. There are five distinct regions of Antarctic sea ice variability. These regions exhibit similar annual cycles but vary in sea ice extent, times of advance and retreat, and overall trends; they also have different spectral signatures with interannual frequencies of varying strengths. While some spatial variability is due to the geography of Antarctica and the influence of the ocean, some is due to large scale atmospheric circulation – the Southern Hemisphere Annular Mode, Zonal Wave Three, and the Amundsen Sea Low. In this presentation I discuss how these components of atmospheric circulation exert their influence on different regions of sea ice and how the sea ice might change as atmospheric circulation changes. I also discuss the role that these atmospheric circulation mechanisms played in initiating and supporting the recent extremes in Antarctic sea ice.

registration link:
https://osu.zoom.us/meeting/register/tJIpcuuopjkpE9wP29dJ94vK09obrtID_EGJ