

Oceanography Seminar

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“Do atmospheric GCMs underestimate the
atmospheric response to Arctic sea ice loss?”

There is much observational evidence of a significant impact on the large-scale atmospheric circulation of interannual sea ice variability in the Barents-Kara Seas, where a sea ice concentration decrease in the fall tends to be followed by a negative NAO in winter. Our recent work also suggests that observed Arctic sea ice loss in the last few decades would have resulted in a large negative NAO-like signal in winter if it had not been masked by the atmospheric response to other forcing such as greenhouse gas concentration, aerosols, and sea surface temperature changes. The observational results are compared with a multi-model large ensemble of AMIP-like AGCM simulations of the 1979-2014 period performed during the Blue-Action project of the European Union. Here the impact of Arctic sea ice variability is determined from differences between simulations with observed and climatological sea ice, while the other forcings are identical.

Thursday January 23rd, 2020 3:00p.m. MSB 100