

Abstract Submitted  
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**The impact of tropical ocean on Arctic climate** CONSTANTIN ANDRONACHE, Boston College — Climate variations at high latitudes are dependent on the perturbations of sea - ice extent, snow cover over continents, sea surface temperature (SST) anomalies, and predominant atmospheric circulation patterns. In this study we report on possible links between sea surface temperature anomalies (SSTA) in the tropical global ocean and various oceanic regions in the Arctic. We use the National Oceanic and Atmospheric Administration (NOAA) observed SST, the data from NCEP/NCAR Reanalysis project and statistical techniques to detect possible connections between various parts of the global ocean. We show that SSTA have notable correlations between: 1) Tropical Atlantic and North East Atlantic, impacting climate in Scandinavia; 2) East equatorial Pacific (NINO 3.4 area) and North West Pacific, impacting climate in Alaska; and 3) Tropical Indian Ocean and northern latitudes (with impact on Scandinavian and Canadian climate). Our analysis confirms earlier reports based on statistical analysis and model simulations showing a connection between the tropical ocean and the climate at higher latitudes.

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