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Response of North Pacific and North Atlantic decadal variability to weak global warming

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Abstract

The Pacific Decadal Oscillation (PDO) and the Atlantic Multidecadal Variability (AMV) are the two dominant low-frequency modes in the climate system. This research focused on the response of these two modes under weak global warming. Observational data were derived from the Hadley Center Sea Ice and Sea Surface Temperature dataset (HadISST) and coupled model outputs from the Coupled Model Intercomparison Project Phase 5 (CMIP5). Changes in PDO and AMV were examined using four models (bcc-csm1-1, CCSM4, IPSL-CM5A-LR, and MPI-ESM-LR) with long weak global warming scenarios (RCP2.6). These models captured the two low-frequency

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