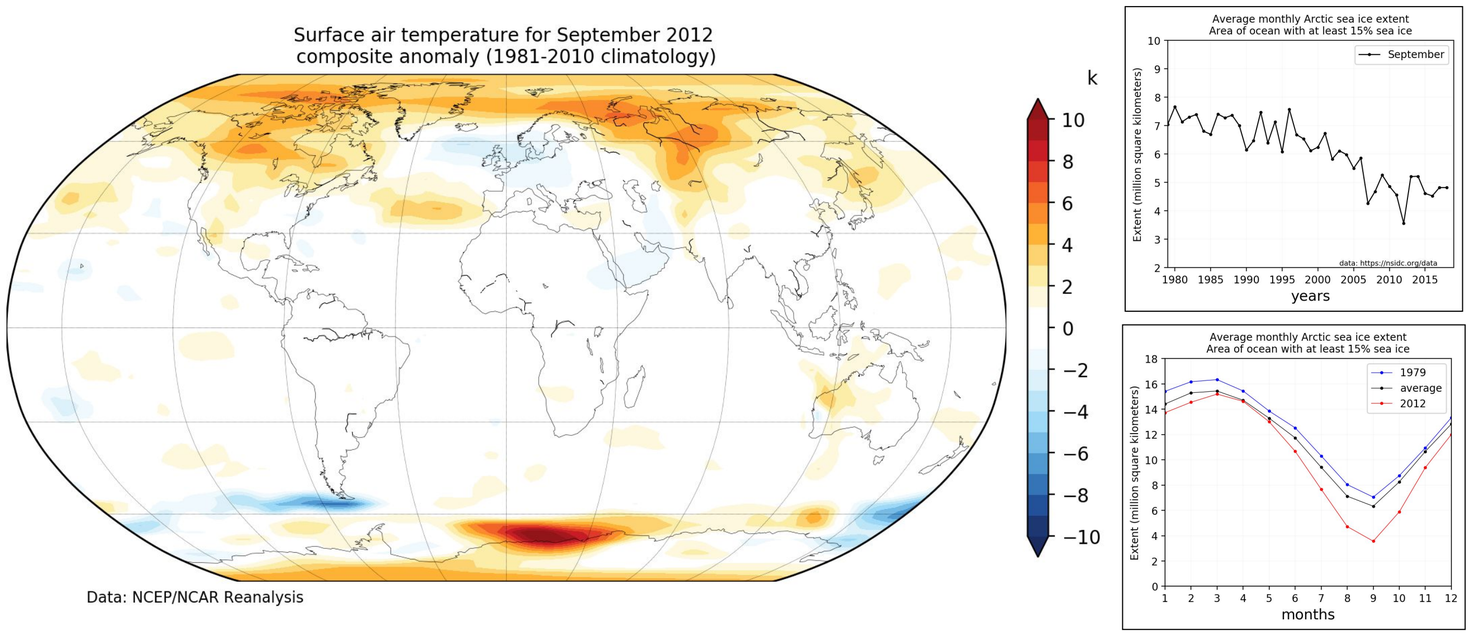
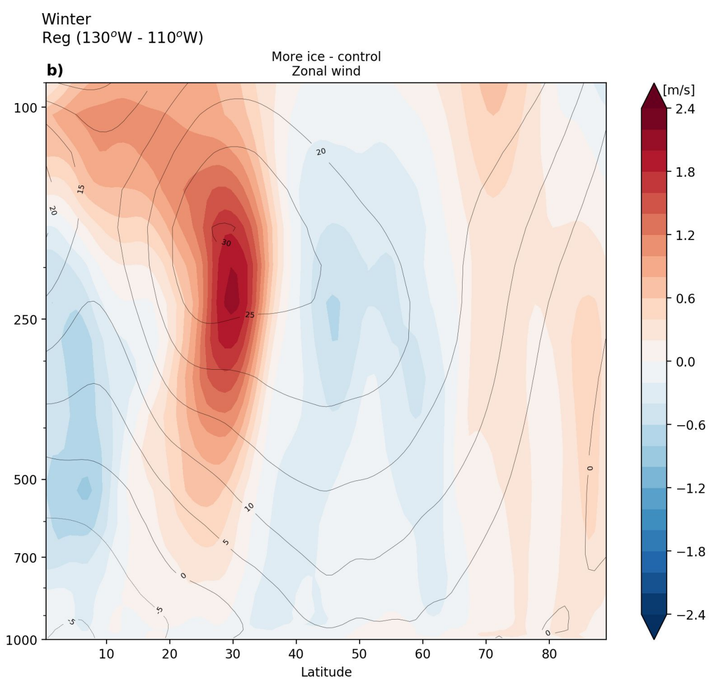
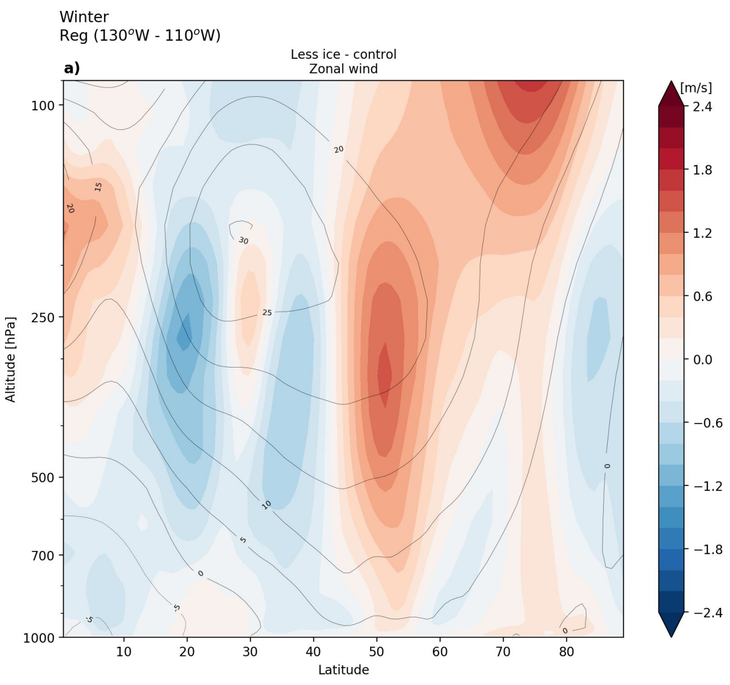
Arctic Amplification and Jet Stream



***Left**: Surface air temperature for September 2012 . **Right**: Arctic sea ice extent*



Differences between control (CESM-AMIP) and experimental run with the Arctic sea ice extent of 1979.



Differences between control (CESM-AMIP) and experimental run with the Arctic sea ice extent of 2012.

Arctic sea ice decline and increasing surface temperatures have been present in the last decades. The influence of this phenomenon in atmospheric circulation has been of great interest in recent years since sea ice anomalies have the potential to bring a significant impact. In winter, mid-latitudes zonal winds are weaker at higher levels of the atmosphere, and a wavier jet stream is present. The consequences are latitudinal displacements of the jet and amplification of quasi-stationary waves, associated with extreme weather in different parts of the world.

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