Sub-seasonal to seasonal atmospheric predictability arising from remote connections in the climate system

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Abstract:

The climate system exhibits a large range of remote connections, so-called teleconnections. Certain regions of the globe are influenced by others through a variety of mechanisms that allow signals to propagate in the horizontal and vertical directions. Examples are the global impacts of El Nino Southern Oscillation or the downward influence of the upper atmosphere onto the surface. Signals that propagate from regions with high persistence to regions of high variability can lead to longer term predictability of weather and climate on timescales of weeks to months, and even years to decades. This presentation will explore to what extent these remote connections are understood, which tools provide an improved understanding, and how these connections contribute to longterm predictability.