

## **Stratosphere-Troposphere coupling in the extratropics: dynamics and predictability**

Peter Hitchcock,  
Laboratoire de Meteorologie Dynamique  
Ecole polytechnique

The circumpolar westerly jets that form over the wintertime poles in the stratosphere exhibit some of the most dramatic variability in the general circulation of the atmosphere. The processes underlying this variability are a fascinating topic in their own right, but its apparent influence on the troposphere below is of practical relevance for seasonal forecasting and climate prediction.

In this talk I will introduce some aspects of polar stratospheric variability and present several lines of evidence that confirm its downward influence on the troposphere. I will then discuss what is known about the dynamics of this coupling and what remains unclear, with a focus on the relevance of this coupling to practical questions of predictability.