

## The Dynamics of the Pacific-North America Teleconnection Pattern on Intraseasonal and Interannual Time Scales

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In this study we investigate the dynamical characteristics on intraseasonal and interannual time scales of the Pacific-North America (PNA) teleconnection pattern. The data are obtained from the National Center for Environment Prediction (NCEP)/National Center for Atmospheric Research (NCAR) reanalysis data set. These data cover the period 1948 through 2007 for the months December through February. In order to investigate the PNA on two time scales we define two PNA indices by projecting the generic PNA pattern onto 300 hPa streamfunction anomalies. The anomalies are defined by subtracting only the annual cycle for the 'external' PNA index and by both subtracting the annual cycle and the individual winter means (DJF) for the internal PNA index. Thus, the internal PNA index describes the PNA evolution due to processes internal to the atmosphere, whereas, the external PNA index contains also external processes which occur on longer time scales like changes in tropical heating. These indices allow us to define 'internal', 'external' and 'mixed' PNA events. The dynamical processes of the PNA evolution at the different time scales will be discussed as well as the associated changes in vertical structure and Outgoing Longwave Radiation.