



ATOC COLLOQUIUM

Welcome!

Please join us for the next ATOC Colloquium on **Friday, Apr. 24** from **11:00 AM–12:00 PM**, which will be held in **SEEC S228** and simulcast over Zoom. This week's colloquium features **Dr. Claire Pettersen (University of Michigan)**. Please join us for conversation beginning at 10:45 AM.

Observing and Characterizing High-Latitude Precipitation Processes: Perspectives from Space and Ground

High-latitude precipitation has widespread impacts on communities through regional ecology, hydrological planning, and socioeconomic effects. Accurate forecasts or projections of precipitation accumulation in numerical weather prediction or climate models are challenging due to uncertainties in parameterizations of cloud and precipitation processes. In this presentation, I feature recent findings from regime-based studies leveraging precipitation observations from both spaceborne platforms and ground-based instrument suites in high-latitude regions. I will highlight the advantage of long-term observations to examine key physical and dynamical precipitation processes through the lens of regime partitioning. Regimes are determined through distinct large-scale environmental conditions and precipitation properties and processes are investigated using remotely-sensed and in situ observations. Key findings demonstrate that regime-dependent characteristics show differences in precipitation frequency and location of occurrence, intensity, phase, and microphysical properties. Distinct precipitation regimes are linked to significant synoptic and thermodynamic conditions such as atmospheric blocking, poleward moisture transport (e.g., atmospheric rivers), and cold-air outbreaks.



Zoom: <https://cuboulder.zoom.us/j/4713174822>

Passcode: ATOC

About the ATOC Colloquium

The Department of Atmospheric and Oceanic Sciences (ATOC) Colloquium is typically held **every other Friday** from **11:00 AM–Noon**. Colloquia alternate between the following formats: (A) Full-length talk by a faculty member or invited speaker, (B) Three conference-length talks by graduate students. If you would like to nominate a speaker (including self), please email the ATOC Colloquium Committee Chair, Prof. Jianghanyang (Ben) Li (Jianghanyang.li@colorado.edu). Please visit www.colorado.edu/atoc/colloquium for further details.