



ATOC COLLOQUIUM

Welcome!

Please join us for the next ATOC Colloquium on **Friday, Nov. 21** from **11:00 AM–12:00 PM**, which will be held in **SEEC S228** and simulcast over **Zoom**. This week's colloquium features Dr. Ivy Tan from the Department of Physics at the University of Colorado Boulder.

Constraining Southern Ocean and Arctic Cloud Feedbacks in Models Using Satellite Observations

The representation of the response of clouds to global warming, known as the cloud feedback, continues to be the leading driver of uncertain model-based climate projections. In this talk, I will discuss recent techniques we have developed and applied to constrain polar cloud feedbacks --- both over the Southern Ocean and in the Arctic, the former by partitioning contributions due to dynamical and thermodynamical effects aided by MODIS and ISCCP satellite observations, and the latter by representing the subgrid-scale variability of cloud phase in the CAM5 model aided by CloudSat/CALIOP satellite observations. I will then end by briefly discussing a validation study of EarthCARE/CPR's unprecedented spaceborne W-band doppler radar velocities using ground-based KAZR and FMCW instruments in Earth's polar regions, and demonstrate its application to inferring dynamic-microphysics coupling in Arctic marine cold outbreak clouds.



Zoom: <https://cuboulder.zoom.us/j/4713174822?omn=99341251732>

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.