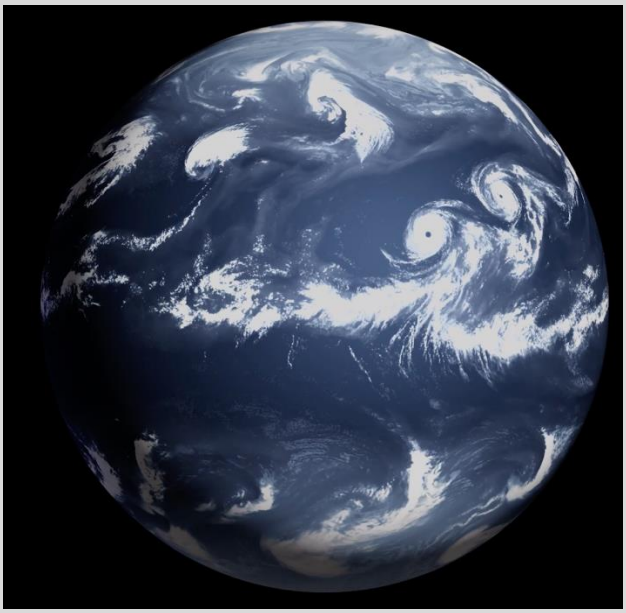
Welcome!

Please join us for the next ATOC Colloquium on **Friday, Feb. 7** from **11:00 AM–12:00 PM,** which will be held in **SEEC N224 and simulcast over Zoom**. This week's colloquium features **from Dr. Rosimar Rios-Berrios (NSF-NCAR).** Please join us for conversation beginning at 10:45 AM and stay for lunch afterwards.

Subseasonal and Climate Variability of Tropical Cyclones in Aquaplanet Simulations

Despite the powerful and devastating effects of tropical cyclones, many questions remain unanswered about these phenomena. For example, what are the precise mechanisms that allow tropical cyclones to form in clusters within a given hurricane season? Furthermore, should we expect more and/or more powerful tropical cyclones in light of our warming oceans? In this talk, I will address some of these questions using novel idealized numerical experiments with a global model. The experiments—known as aquaplanet simulations—capture the convective dynamics of tropical cyclones and other tropical phenomena by means of employing convection-permitting resolution in the tropics. These experiments reveal an uptick in tropical cyclogenesis events after the rainfall peak of convectively coupled Kelvin waves. While this result has been previously documented, the aquaplanet experiments shed new light on the physical mechanisms that explain the uptick in tropical cyclogenesis. I will discuss these results together with a preliminary overview of tropical cyclone activity in experiments with varying ocean temperatures.



Location: SEEC N224 & Zoom
Zoom:
https://cuboulder.zoom.us/j/4713174822
Password: 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.