ATS/CIRA Colloquium

Gretchen Keppel-Aleks

Visiting ATS from the University of Michigan

Quantifying carbon cycle feedbacks through the lens of atmospheric CO2 variations

Hosted by Chris O'Dell

Friday, October 7, 2016

ATS room 101; Discussion will begin at 11:15am
Refreshments will be served at 10:45am in the weather lab

Carbon-cycle feedbacks are one of the most uncertain components of global climate predictions. Over the coming century, atmospheric CO2 will continue to accumulate in the atmosphere at a rate controlled by anthropogenic drivers, natural feedbacks to changing atmospheric composition, and the interaction thereof. In this talk, I will discuss Earth system model results that show the importance of considering both anthropogenic and natural processes in making predictions of long-term carbon cycle evolution. I will also discuss challenges to using atmospheric CO2 as an observational constraint on ESM performance. Namely, imperfect knowledge of atmospheric transport is a major source of uncertainty in interpreting atmospheric CO2 observations, both for model evaluation and flux inference. The discussion will underscore the importance of careful integration of data and models to improve carbon cycle predictivity.

Link to colloquium videos and announcement page: http://www.atmos.colostate.edu/dept/colloquia.php