

CGD SEMINAR



DATE: Tuesday, 21 November 2017

TIME: 11 a.m.

LOCATION: NCAR, 1850 Table Mesa Drive
Mesa Lab, Main Seminar Room

TITLE: Through the Looking Glass: Forcing
and Feedbacks in CESM2

SPEAKER: Andrew Gettelman, NCAR

ABSTRACT:

The combination of historical anthropogenic forcing with climate feedbacks determines the past trajectory of the climate system. The total historical and present anthropogenic forcing is uncertain, largely due to the anthropogenic aerosol influence on clouds. And the feedback response of the climate system to forcing is also uncertain. The result is large conceptual uncertainty in the total climate sensitivity and the future trajectory of the earth's climate. The development of the Community Earth System Model version 2 (CESM2) has revealed several interesting sensitivities of the model to processes that govern both anthropogenic climate forcing and climate feedbacks. This occurred as the coupled configuration was being developed and several coupling issues worked out. This presentation will describe some of the pitfalls in the development process and illustrate the forcing and feedbacks in CESM2 (as they stand now) and 'alternative' versions of the model with different forcing and feedbacks, and put that in the context of what we can learn about using 'emergent constraints' from the present climate to falsify some of these possible versions of CESM2 that 'might have been'.

This seminar will not be webcast or recorded

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