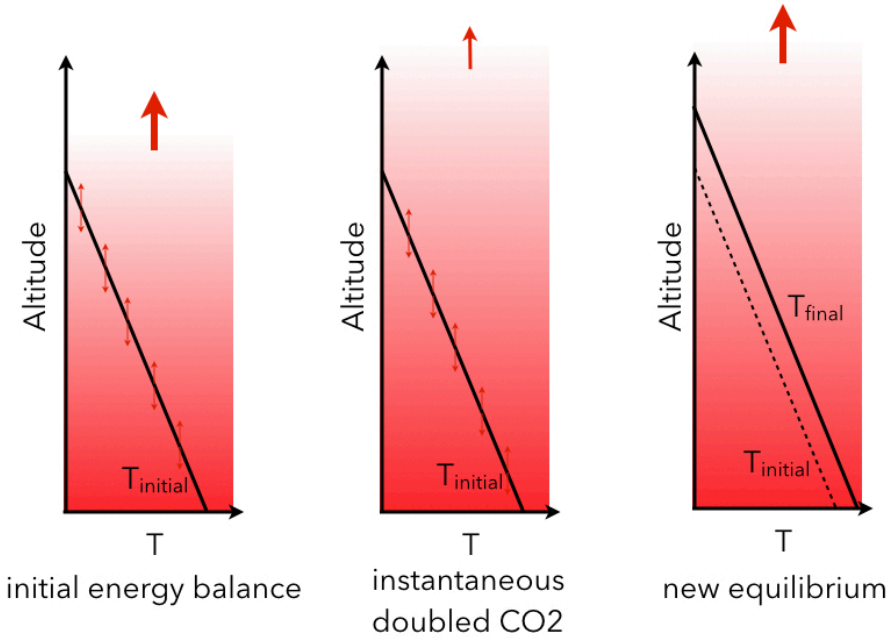

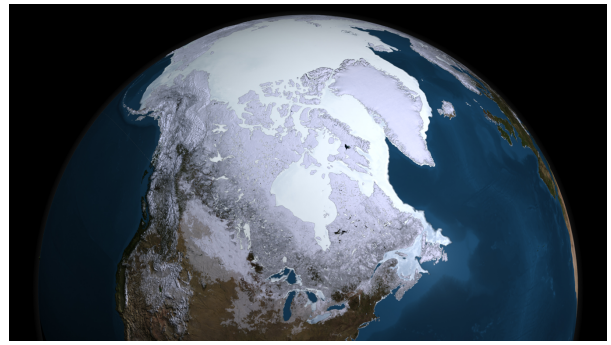

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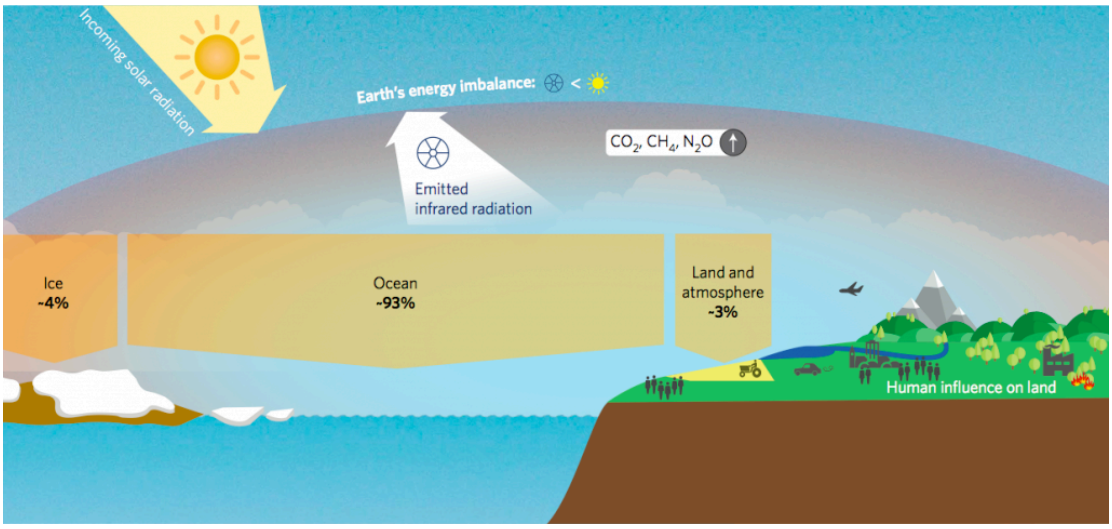

THE CLIMATE SYSTEM

GEOG430/530 Spring 2021

Dr. Kevin Anchukaitis
School of Geography, Development, and Environment
kanchukaitis@arizona.edu

MWF 10:00 to 10:50am
3 credits
Flex/In-Person

The goal of the course is to provide students with an intensive and physically-based understanding of the fundamental processes that control climate variability and climate change at a range of temporal and spatial scales with a particular focus on energy in the Earth system.

The course includes hands-on experience and exploration including quantitative evaluation of physical climate processes and analysis of climate observational and model data. Specific topics include the Earth's energy balance and the greenhouse effect and the role of the biosphere and carbon cycle in controlling energy and temperature in the Earth system, the circulation of the oceans and atmosphere, observations of past and present climate change and simulation for predicting future climate, and specific anticipated impacts of future climate change. Students will develop process-based knowledge, learn to quantitatively evaluate climate data, and provide them with the necessary understanding of the physical, chemical, and dynamical processes and phenomena of the climate system to incorporate these within their own scholarship and research.