Paleoclimatology is one of the cornerstones of understanding anthropogenic climate change. Are there past analogs for current levels of atmospheric CO$_2$ and its rate of increase, and if so what was Earth’s climate like? Can we measure the Earth’s ‘climate sensitivity’ (equilibrium response to radiative forcing) using past climate states like the Last Glacial Maximum? What rates and magnitudes of global sea level rise is the Earth capable of? How unusual is current warmth compared to the pre-industrial era? These questions and more are addressed in the Paleoclimate chapter of the Intergovernmental Panel on Climate Change (IPCC) 5$^{th}$ Assessment Report (AR5).

This course will entail a seminar-style critical reading of the Paleoclimate chapter of AR5, and of many of the primary references that are cited in that chapter. Students will be required to make brief presentations on assigned readings, and to lead discussions of those readings. There will be one or two discussion leaders per week, but everyone is responsible for reading the papers and participating in the discussion. Grades will be based on the quality of presentations and on overall participation.

**Instructor:** Tom Marchitto  
**Time and place:** TBD (once per week for 2 hrs)  
**2 credits**

*E-mail* tom.marchitto@colorado.edu *to get on the mailing list and to be informed about the organizational meeting.*