

Carbon Cycle and CO₂ : Past and Future

Reading:

Past:

Petit J.R. and 18 others (1999) Climate and atmospheric history of the past 420,000 years from the Vostok ice core, Antarctica. Nature 399, 429-436.

Future:

Broecker W.S. (1997) Thermohaline circulation, the Achilles heel of our climate system: Will man-made CO₂ upset the current balance? Science, 278, 1582-1588.

1. Read both papers before class and be prepared to discuss your assigned sections on Thursday December 6. The class will divide into three study groups.
2. On Friday, December 7, the groups will mix.
3. After Class prepare a 3 page (double spaced) answer to the Groups Study Synthesis Questions. The assignment is due Wednesday December 12 to Jim Murray's mail box.

Questions for discussion and the written assignment are: **Is the past the key to the future? How much and why did atmospheric CO₂ change from glacial to interglacial periods? What is the role of the global hydrologic cycle? What is an ocean reorganization and what is the evidence that they occurred? How will an increase in atmospheric CO₂ (doubling?tripling?) over the next 100 years effect thermohaline circulation?**