**ESS 431 PRINCIPLES OF GLACIOLOGY**

**ESS 505 THE CRYOSPHERE**

**Lecture 14 – Paleoclimate and Ice Ages I:** Ice core science and climate reconstruction.

*Due Friday, November 16 2018, at start of class*

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| Jouzel, J., 2013. A brief history of ice core science over the past 50 years *Climate of the Past* Vol. 9, 2525–2547. |

1. Where is Vostok, and what characteristics of the environment there make this a good site for a long paleoclimate record?
2. What geochemical signal is used as a proxy for air temperature in the past?
3. Estimate the temperature change implied by a change of 10 per mil in d18O.
4. How has CO2 in the atmosphere varied over the past 800,000 years?
5. Does CO2 vary in phase with the temperature variations at the Vostok ice core?