

SIO269 Special Topics in Marine Chemistry
Seminar – Carbon Cycle from an Isotope Perspective
1 meeting/week, Tuesday 2-3:50 PM (VN 300).

Lecture and Class Discussion

Assignments will include primarily reading and class discussion.

Instructor: Lihini Aluwihare (laluwihare@ucsd.edu, VN 302, 822-4886)

Two books on reserve at the SIO library that provide a good introduction to stable isotope chemistry:

Principles of Stable Isotope Distribution (R. Criss) and Stable Isotope Geochemistry (Hoef)

October 2nd Stable Carbon Isotopes: A quick introduction (Reading: Gruber *et al.*, 1999; Kroopnick, 1985)

October 9th No Class

October 16th Carbon fixation and respiration (M. H. O’Leary, 1981; Laws *et al.* 2001)

October 23rd Class cancelled due to wild fires

October 30th Paper Presentations: Holsten *et al.* (Sandy Kirtland?)
Wakeham *et al.* (Emiley Elo?)

If time allows begin lecture on:

Primary Production rates, carbon export rates as measured by natural abundances of stable and radioactive isotopes (Reading: Luz *et al.*, 1999;

November 6th Paper Presentations: Blunier *et al.* (Celli?)
Wei and Murray (Stuckel?)

Oxygen isotopes and biosphere production

November 13th Radiocarbon Distributions in the Atmosphere and Ocean

November 20th Changes in the ocean carbon cycle readings:
Broecker *et al.* (2007)
Quay *et al.* (2003)

November 27th Residence time of carbon on land and possible sinks for relict carbon. Schuur and Trumbore (2006)
Fontaine *et al.* (2007)
Dickens *et al.* (2004)
Petsch *et al.* (2001)

December 4th

December 11th