Key Uncertainties in the Global Carbon-Cycle:
Perspectives across terrestrial and ocean ecosystems
August 6th-10th 2013 – Boulder, CO

Motivation

The ocean and terrestrial biosphere currently absorb about half of annual anthropogenic CO_2 emissions. These sinks are sensitive to climate; future warming will reduce their effectiveness. Understanding the mechanisms regulating natural carbon sinks is an essential element of climate prediction and a key challenge for Earth System models.

Overview

This colloquium is designed to bring together terrestrial and ocean carbon cycle scientists from across the world to explore key uncertainties the global carbon cycle. The aim is to build a dialogue crossing traditional disciplinary boundaries to address common conceptual challenges. Each topic covered will include an invited talk by a prominent terrestrial and ocean researcher and be followed by contributed talks and a poster session.

Topics include:

- **The State of the Carbon Cycle**
- **Nutrient controls on carbon cycling**
- **Remineralization pathways and climate**
- **Role of individuals in ecosystem and carbon dynamics**
- **Top-down controls on carbon cycling**
- **Physical climate variability on carbon dynamics**
- **Using observations to constrain model predictions**

Confirmed Speakers include:

- **Tom Anderson (National Oceanography Centre Southampton)**
- **Adrian Burd (UGA)**
- **Curtis Deutsch (UCLA)**
- **Scott Doney (WHOI)**
- **Serita Frey (UNH)**
- **Jeff Hicke (U of Idaho)**
- **Tim Lenton (Exeter)**
- **Galen McKinley (UW - Madison)**
- **Kiona Ogle (ASU)**
- **Ying Ping Wang (CSIRO)**

As part of the ASP Colloquium on 'Carbon-climate Connections in the Earth System':

The workshop will be the middle week of a 3-week Advanced Studies Program Colloquium at NCAR where graduate students will learn about terrestrial and ocean carbon cycles through lectures and exercises, and engage in group research projects focused on CMIP5 simulations. With the ASP colloquium students in attendance, this workshop provides an opportunity introduce the next generation of scientists to the frontier of research

This workshop is being supported by the Carbon Cycle Interagency Working Group and its U.S. Carbon Cycle Science Program, The Ocean Carbon and Biogeochemistry (OCB) program, and US-CLIVAR.
NCAR is supported by the National Science Foundation.

For more information please see the following web page:
http://www.asp.ucar.edu/colloquium/2013/index.php