

June 4-15, 2007
Boulder, CO
National Center for Atmospheric Research
Advanced Study Program

Graduate students involved in research on regional-scale terrestrial biogeochemical cycles of carbon, water and nitrogen are invited to apply for the National Center for Atmospheric Research's (NCAR), 2007 Advanced Study Program's Summer Colloquium, "Regional Biogeochemistry: Needs and Methodologies" to be held June 4-15, 2007 in Boulder, CO

Biogeochemical processes are intertwined and span a wide range of spatial and temporal scales, from the molecule to the globe and from nanoseconds to millennia. Methods to bridge these scales and to fill gaps in understanding at the regional-scale are rapidly developing, promulgated by the advancements in state-of-the-art observation technologies and networks, expanding computational and database capacities, and demand from government agencies interested in regional-level decision support. Yet, regional-scale understanding is limited by the complexity of terrestrial ecosystems and fundamental limits on atmospheric observation methods. A more complete understanding of regional biogeochemistry and hydrology is essential to evaluate our ability to upscale results of local ecological studies to larger scales.

The colloquium will provide unique hands-on learning components and significant opportunities to discuss the state of the science and future directions of the field with colleagues and a select group of keynote speakers. Morning lectures will be followed by either afternoon tutorials or evening poster sessions. The tutorials will focus on state of the art methods for studying regional-scale biogeochemical budgets and the mechanisms governing them. Ample time will be provided for group interaction, including professional development seminars and social activities.

Colloquium topics include:

- 1) Advances in methods for studying cycles of carbon, water and nitrogen at regional scales; a) Atmospheric inversions, b) Ecological inventories, c) Regional biogeochemical models, d) Remote sensing and in situ observational networks, and (e) Biogeochemical data assimilation, model-data fusion and parameter optimization.
- 2) Scientific applications of regional scale biogeochemical observations; a) Diagnosis/quantification, b) Mechanistic understanding, c) Development of large-scale predictive capacities.
- 3) Interactions among biogeochemical cycles at the regional scale.
- 4) Relevance of regional biogeochemistry to decision-support and policy.

Please send a 2-page CV, a personal statement of interest and 1 letter of recommendation to:

asp-coll1@asp.ucar.edu

Travel expenses will be provided for the applicants accepted to the program.

Application deadline is March 1, 2007

For questions regarding the colloquium email:

asp-coll1@asp.ucar.edu