MONTANA STATE UNIVERSITY | College of LETTERS & SCIENCE

Physics Colloquium

Friday, April 7, 2017
4:10 – 5:00 PM
Barnard/EPS 103

The NASA Atmospheric Carbon and Transport-America Mission: Chasing Carbon Across America

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Mike received his Ph.D. in Physics from MSU in 2007

Abstract:

Incomplete knowledge of both greenhouse gas (GHG) sources and sinks, and atmospheric transport of these gases limits our ability to use atmospheric observations to infer surface fluxes. The existing long-term observational network is too sparse to disentangle these two factors. The NASA Atmospheric Carbon and Transport - America (ACT-America) mission aims to improve our understanding of both transport and fluxes of GHGs via spatially dense, airborne observations spanning a range of midlatitude weather conditions. The first of five ACT-America field campaigns was conducted in July and August of 2016 and focused on gathering measurements of carbon sources, sinks, and transport during a biologically active season, while the second campaign in February and March of 2017 complemented these measurements during a relatively biologically dormant season. Remote and in situ observations were collected with two aircraft across fronts and during fair weather conditions across three regions of the eastern United States.

I will present overviews of ACT-America's goals, instrumentation, and measurement techniques, and discuss initial results of our observations and plans for future campaigns.

Host: David Klumpar

****** Refreshments served in the Barnard/EPS second floor atrium at 3:45 ******