

Please note special date and time

ATS/CIRA Colloquium

Scot Miller

Visiting ATS from Stanford University

Sources of methane emissions in North America

Hosted by Jakob Lindaas

Monday, September 12, 2016

**ATS room 101; Discussion will begin at 3:00pm
Refreshments will be served at 2:45pm in the weather lab**

Methane is the second-most important greenhouse gas after carbon dioxide. The role of methane emissions in climate change is well-known, but the distribution of these emissions from different sources across the globe and the underlying emissions processes are often poorly understood. My research uses observations of methane gas collected in the atmosphere to understand emissions at the Earth's surface through inverse modeling. My results indicate a distribution of methane emissions across North America that is very different from government emissions inventories and process-based emissions estimates. Relative to these estimate, I find that a much larger share of emissions are human-caused, not natural. Emissions from the agricultural, oil, and natural gas industries account for much of this discrepancy. Furthermore, I find that both natural and human-caused emissions have not changed substantially in recent years, despite variability in environmental conditions and trends in industry activity.

Link to colloquium videos and announcement page: <http://www.atmos.colostate.edu/dept/colloquia.php>