

# CO<sub>2</sub> and Carbon Emissions from Cities: Linkages to air quality, socioeconomic activity, and stakeholders in the Salt Lake City urban area

**John C. Lin**

Logan Mitchell, Erik Crosman,  
Daniel Mendoza, Ryan Bares,  
Ben Fasoli, Dave Bowling,  
Diane Pataki, Doug Catharine,  
Martin Buchert, Court Strong,  
Kevin Gurney, Risa Patarasuk,  
Derek Mallia, Alex Jacques,  
Sebastian Hoch, John Horel,  
Munkh Baasandorj,  
Jim Ehleringer  
and many, many, others...



(figure by B. Fasoli)

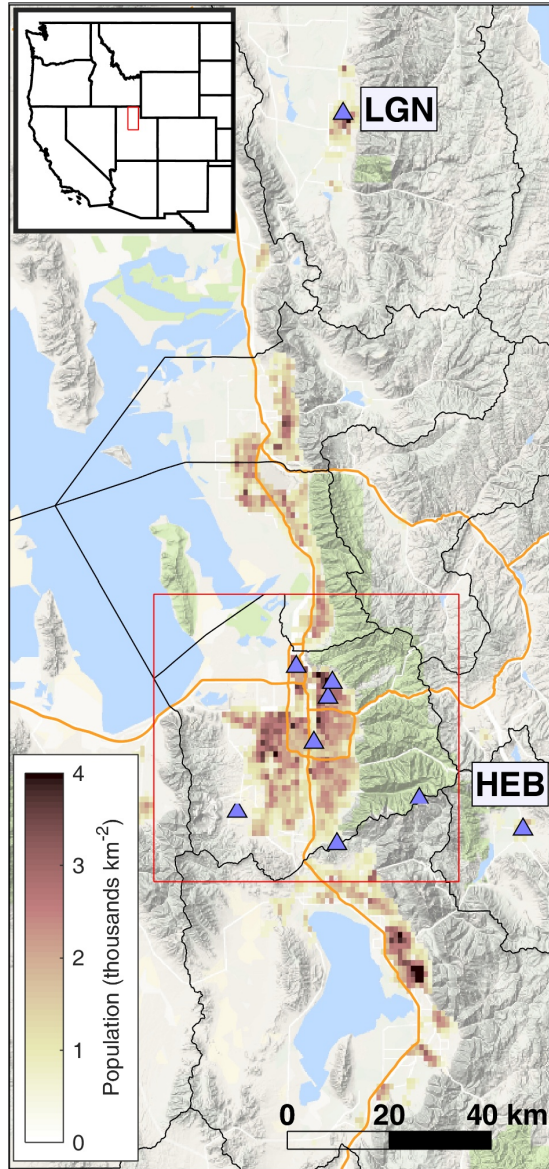


*CO<sub>2</sub>-USA Lightning Talk: October 24<sup>th</sup>, 2018*  
**Land-Atmosphere Interactions Research (LAIR) Group**

DEPARTMENT OF ATMOSPHERIC SCIENCES | THE UNIVERSITY OF UTAH

# Salt Lake Area Greenhouse Gas Monitoring System

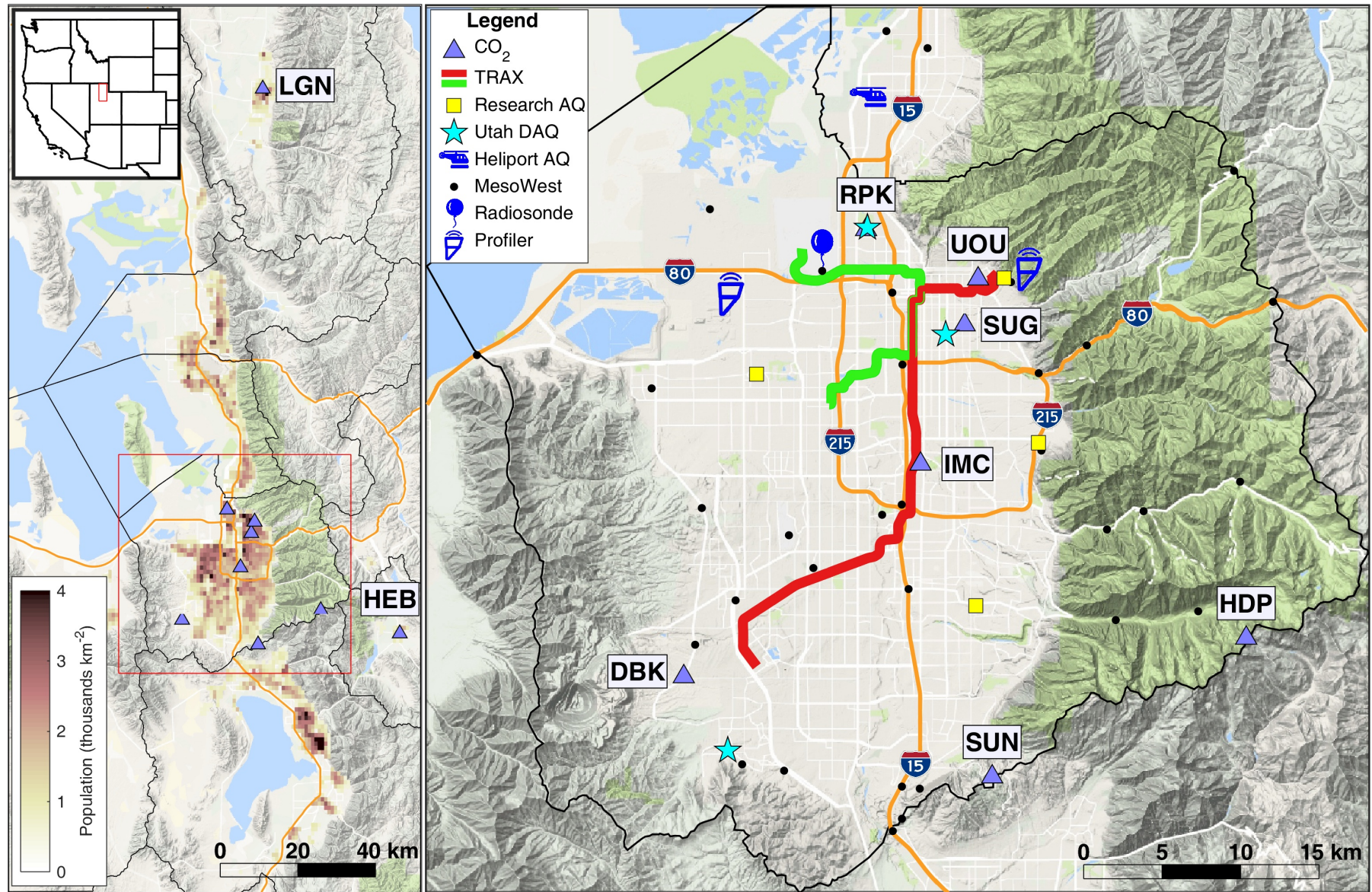
<https://air.utah.edu/>; Lin et al., BAMS, In Press (Nov. 2018 Issue)





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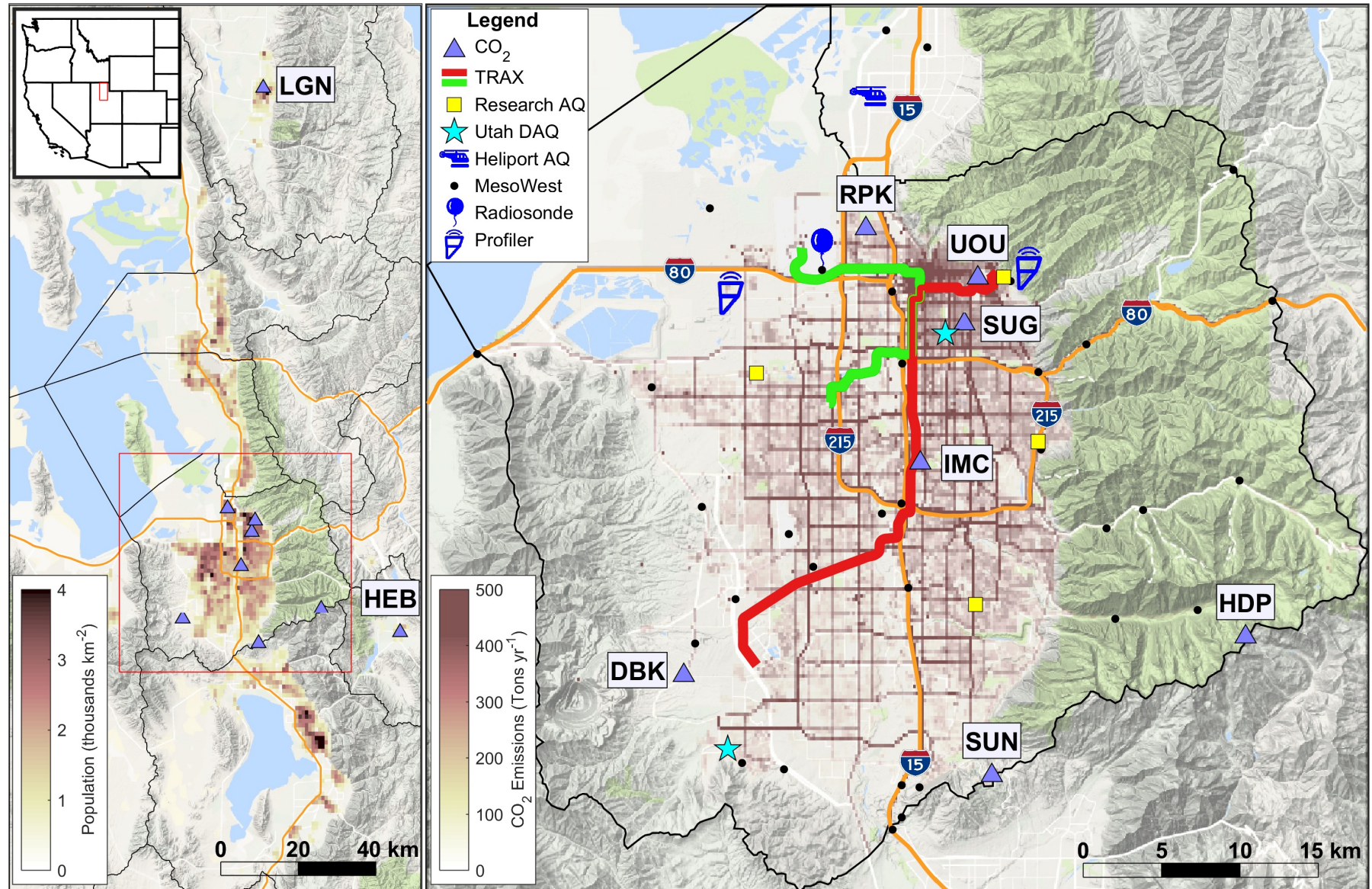
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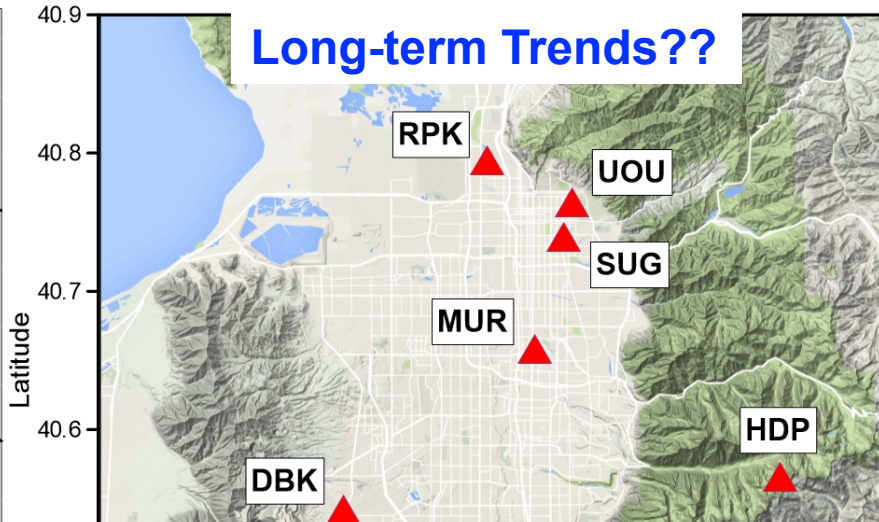
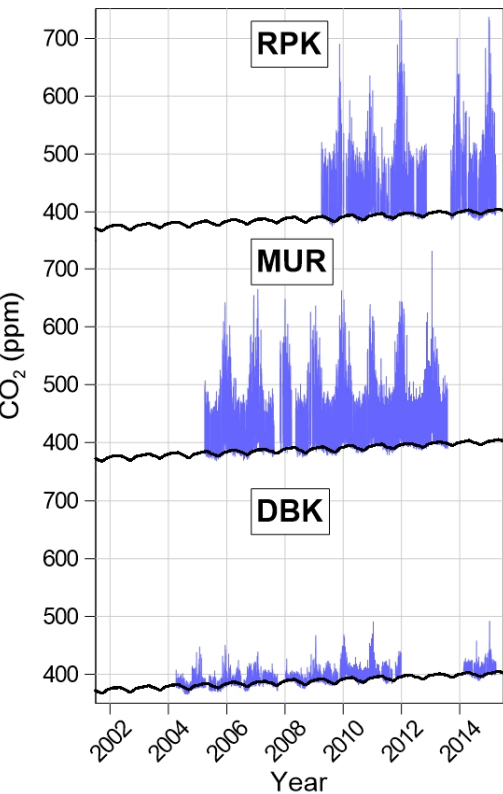


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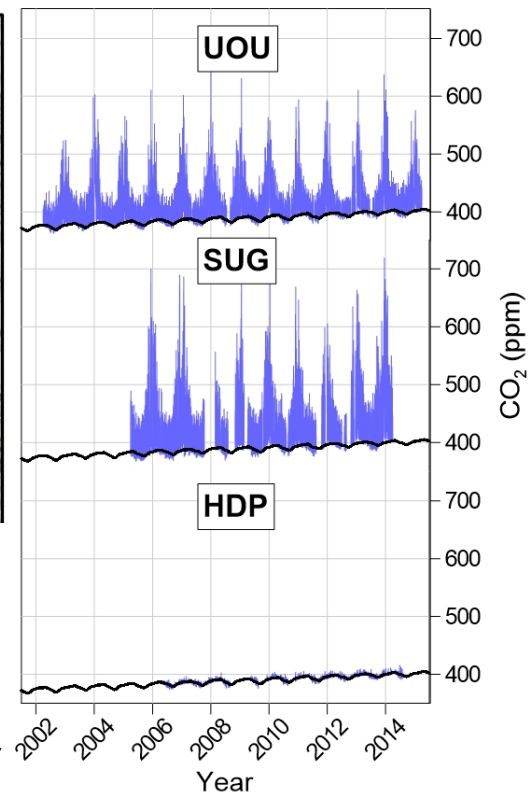




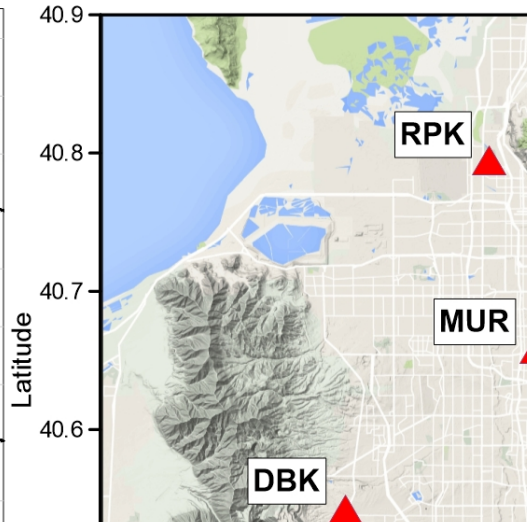
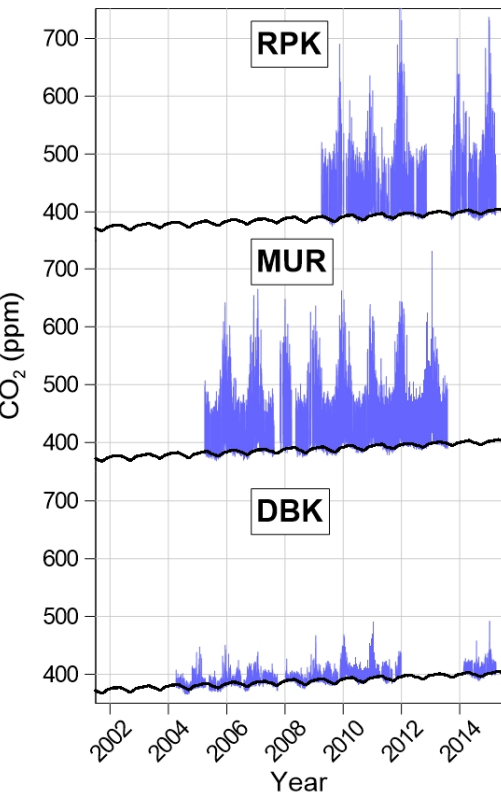
## Long-term urban carbon dioxide observations reveal spatial and temporal dynamics related to urban characteristics and growth

Logan E. Mitchell<sup>a,1</sup>, John C. Lin<sup>a</sup>, David R. Bowling<sup>b</sup>, Diane E. Pataki<sup>b</sup>, Courtenay Strong<sup>a</sup>, Andrew J. Schauer<sup>c</sup>, Ryan Bares<sup>a</sup>, Susan E. Bush<sup>b</sup>, Britton B. Stephens<sup>d</sup>, Daniel Mendoza<sup>a</sup>, Derek Mallia<sup>a</sup>, Lacey Holland<sup>a,e</sup>, Kevin R. Gurney<sup>f</sup>, and James R. Ehleringer<sup>b</sup>

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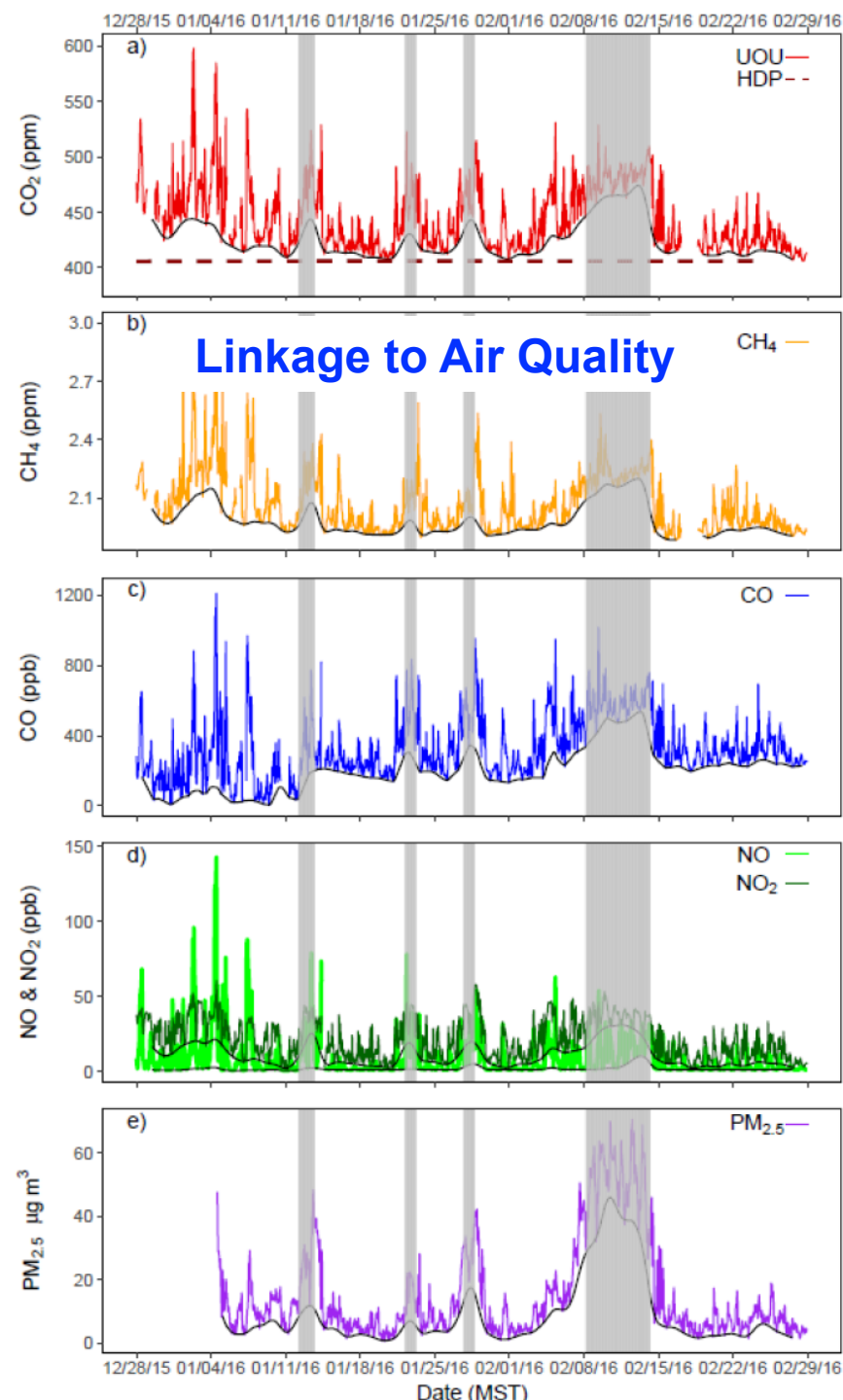


## Long-term urban carbon dioxide spatial and temporal dynamics characteristics and growth

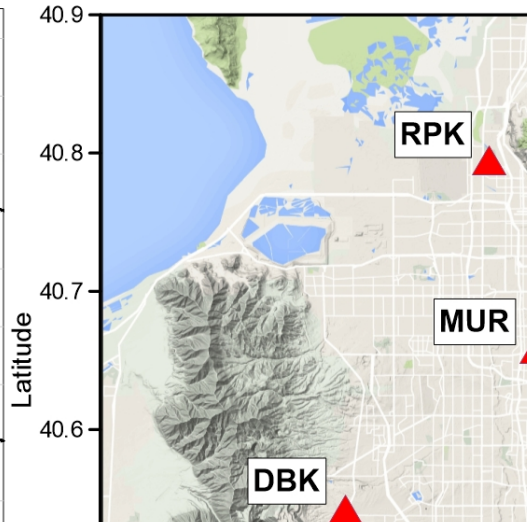
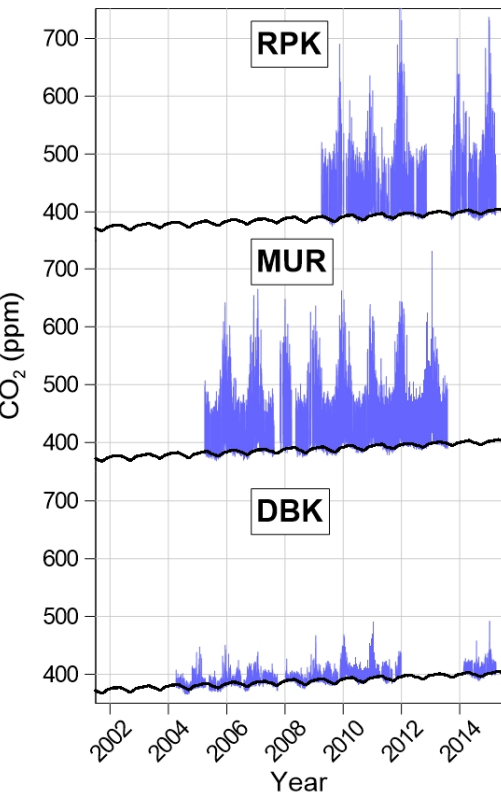
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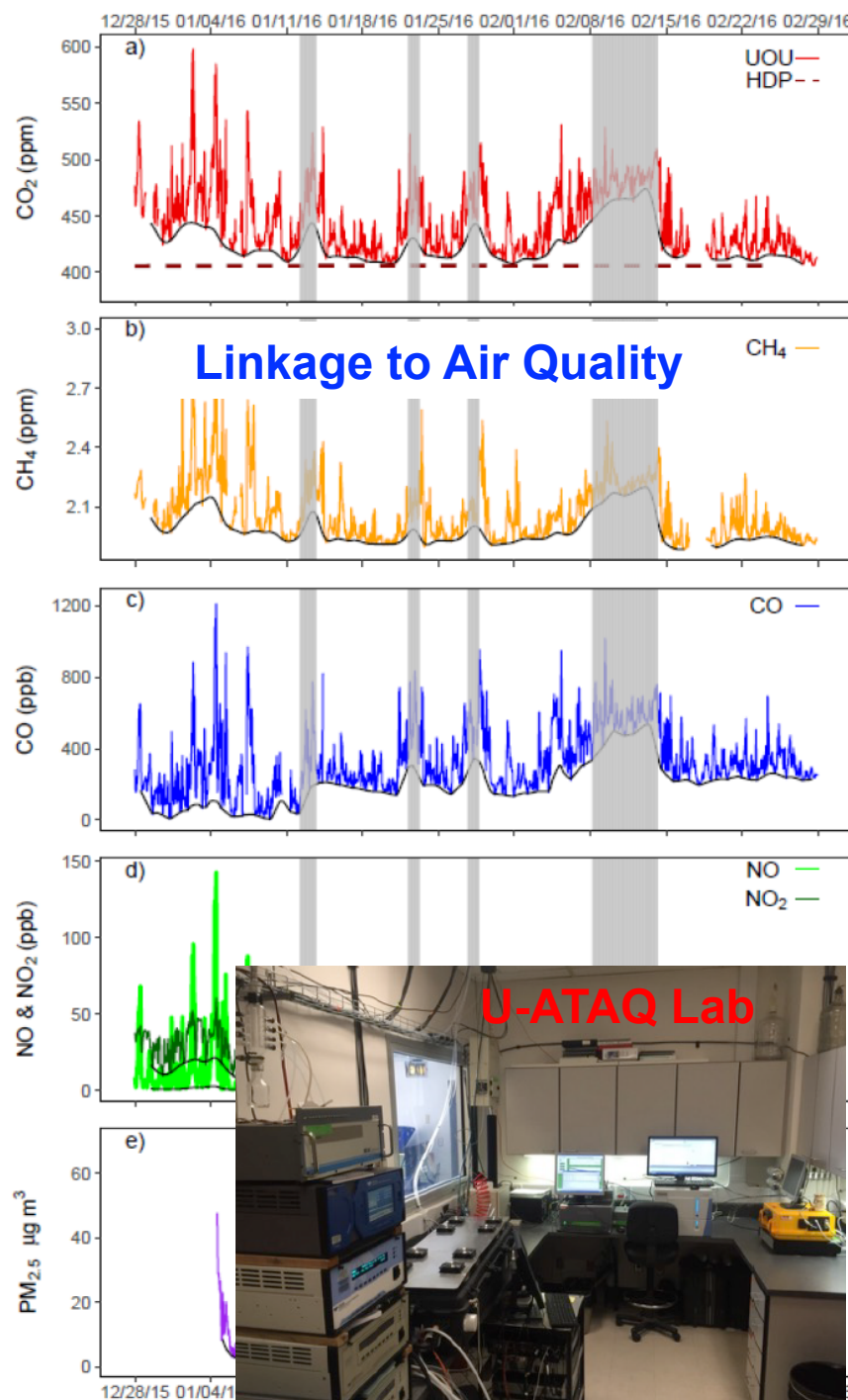


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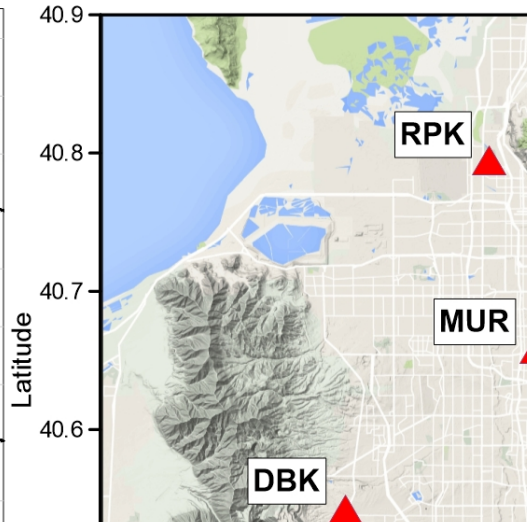
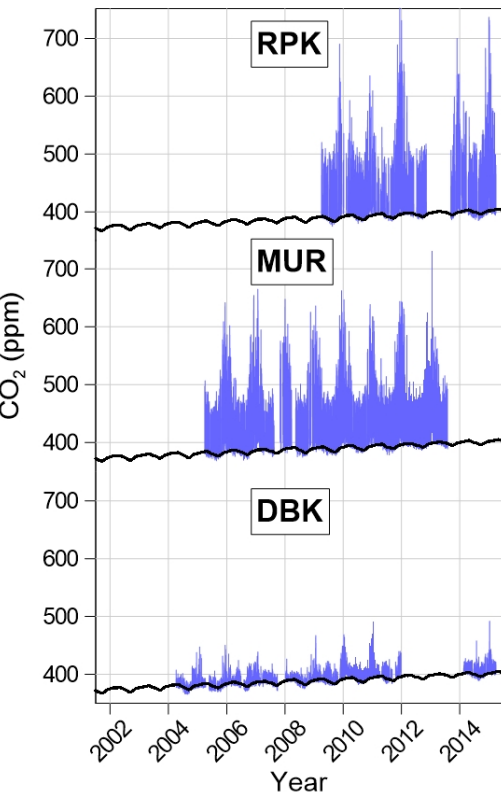
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<sup>a</sup>Department of Atmospheric Sciences, University of Utah, Salt Lake City, UT 84112; <sup>b</sup>84112; <sup>c</sup>Department of Earth and Space Sciences, University of Washington, Seattle, CO 80307; <sup>d</sup>Department of Atmospheric Sciences, University of Hawaii at Manoa, HI University, Tempe, AZ 85287

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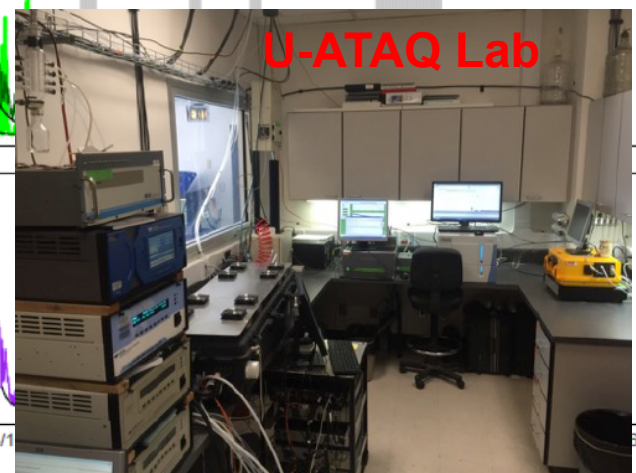
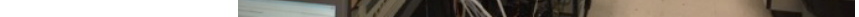
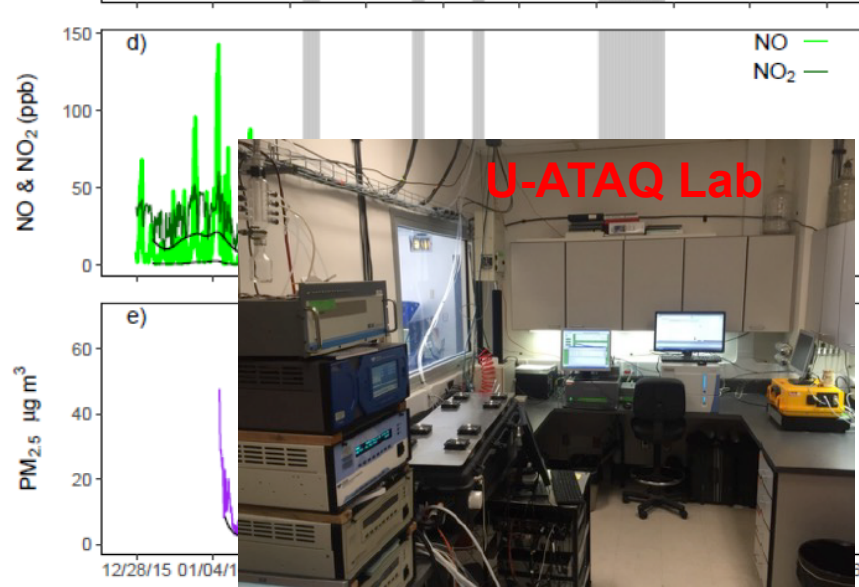
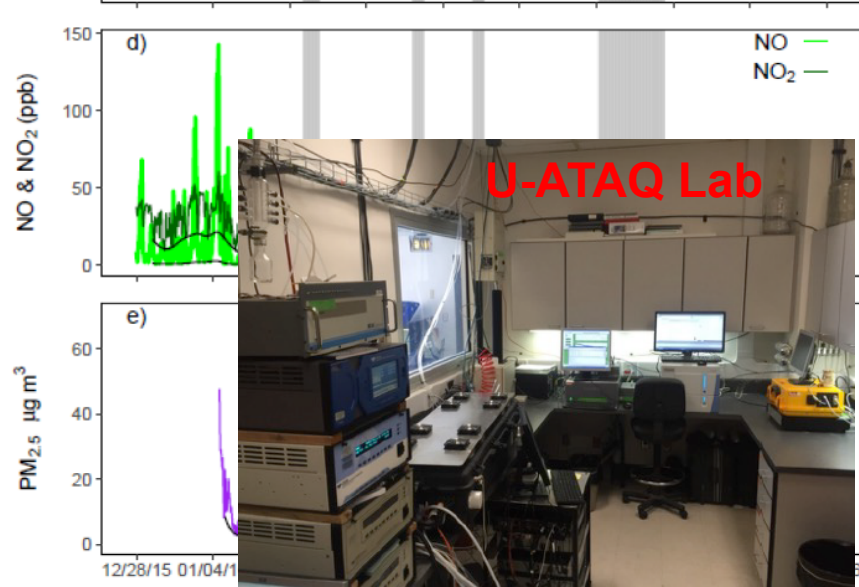
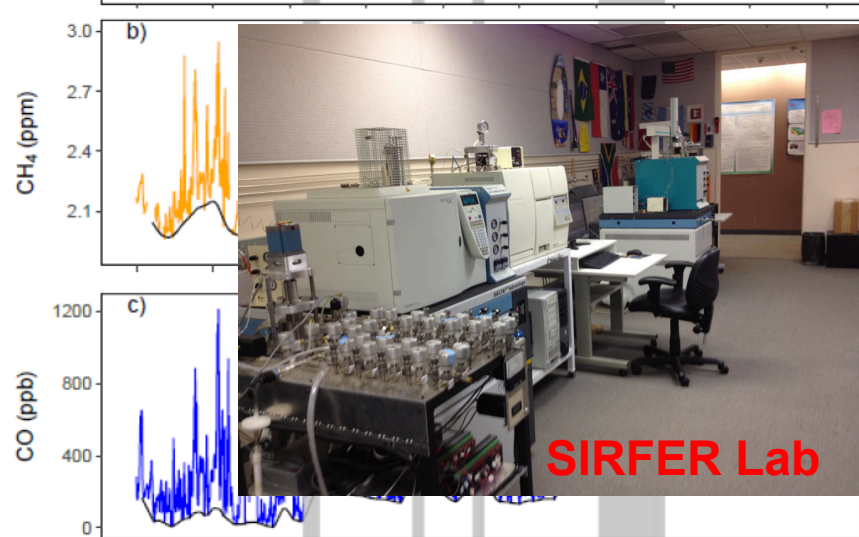
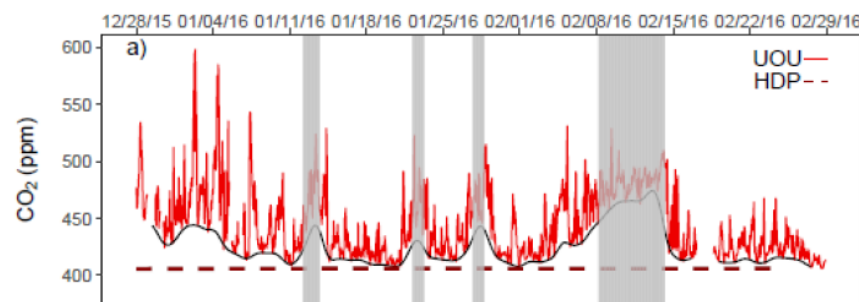


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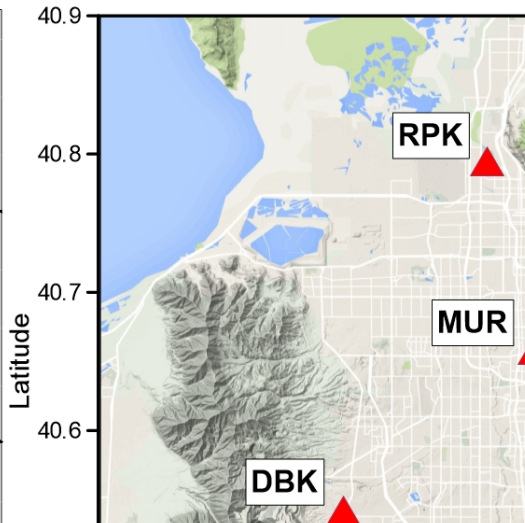
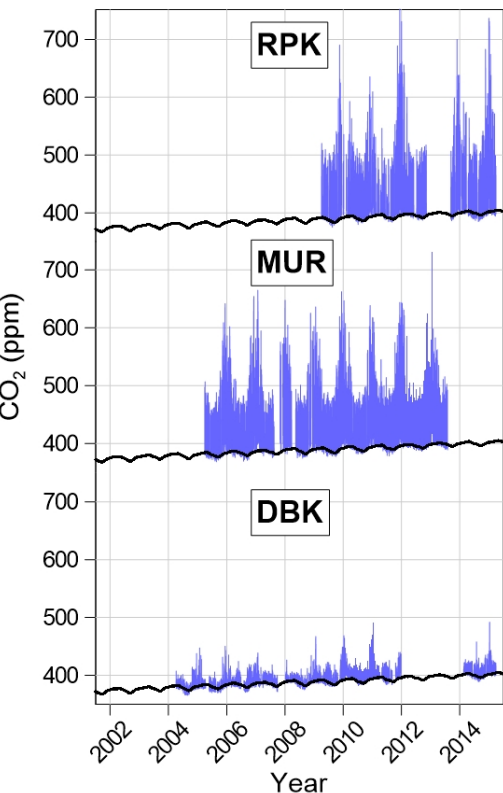
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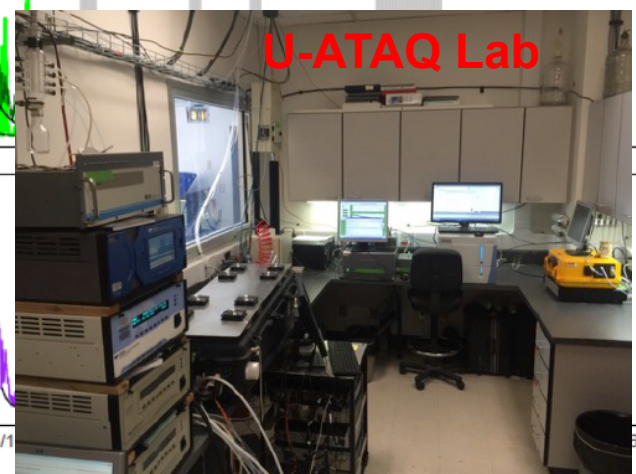
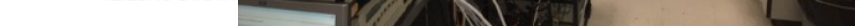
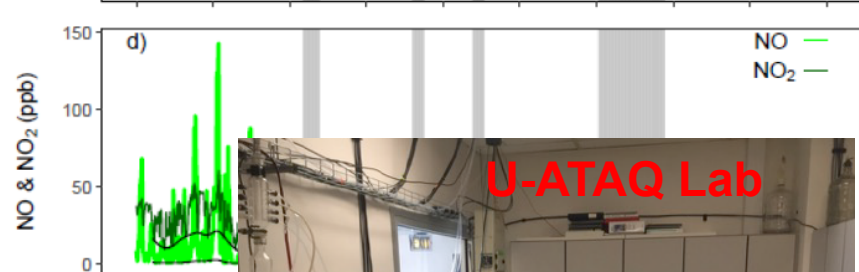
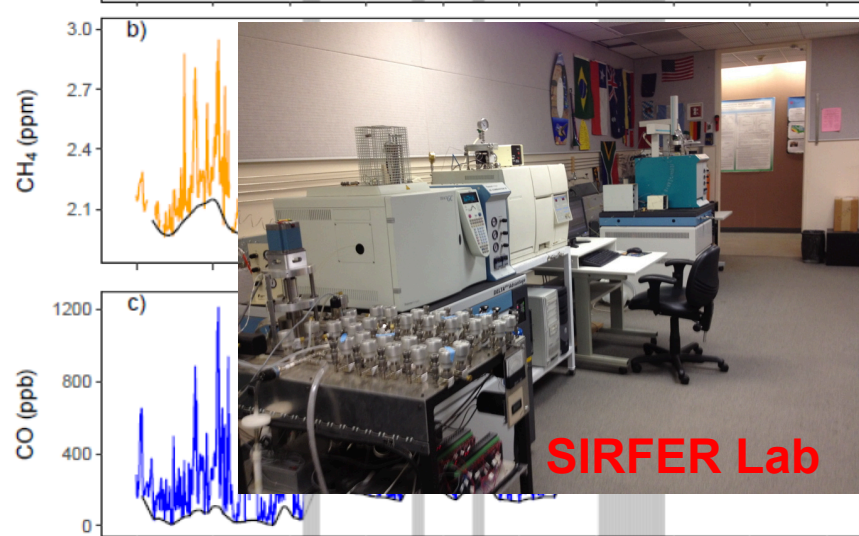
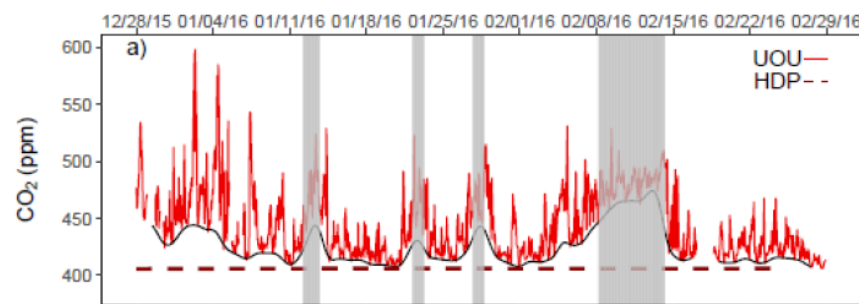
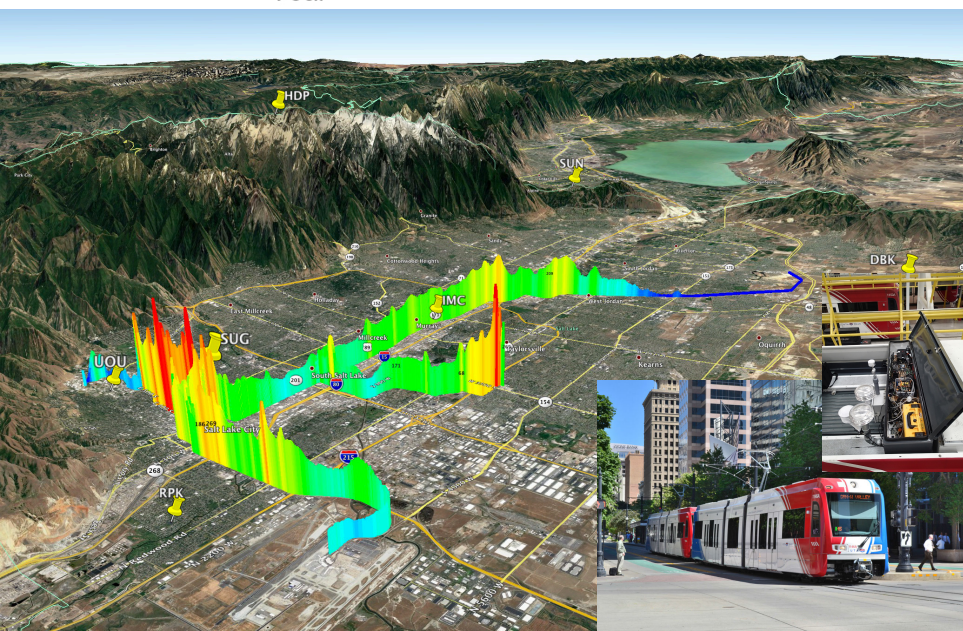


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# Urban Growth/Planning

## Year 2040 Commercial Buildings (business as usual growth scenario)

