Regional surface ozone: is it locally controlled?
Andrew Langford

Springtime O₃ often exceeds National Ambient Air Quality Standard (NAAQS) in rural Southwest

Mean 8-h O₃ in May >60 ppbv in some remote areas

CSD research seeks to explain where this O₃ comes from

Los Angeles? Wildfires? Asia? Stratosphere?
How does CSD address this question?

1. We combine unique ozone lidars developed at CSD with in situ measurements to investigate O$_3$ transport.
2. We use NOAA models to help predict transport events in the field and interpret the measurements.
What does **CSD** do with this information?

**Working with stakeholders:**

**Las Vegas Ozone Study (LVOS)**

**Jan 2013:** Clark County, NV asks **CSD** to help explain high springtime O₃.

**Feb-Apr 2013:** **CSD develops** research plan to be funded by Clark County.

**May-June 2013:** **CSD conducts** measurement campaign and begins analysis.

**Jul-Aug 2014:** **CSD publishes** LVOS findings in peer-reviewed journal.

**2015:** Clark County uses **CSD results** to produce *Exceptional Events Report for EPA.*
Future Plans

• Continue targeted $O_3$ process studies like LVOS.

• Coordinate with TOLNet (Tropospheric Ozone Lidar Network).

• Conduct fire plume analyses for FIREX campaign.
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Relevant Publications (2009-present)


