Pulling results out of thin air: Four years of ozone and greenhouse gas measurements by the Alpha Jet Atmospheric eXperiment (AJAX)

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The Alpha Jet Atmospheric eXperiment (AJAX) has been measuring atmospheric ozone, carbon dioxide, methane and meteorological parameters from near the surface to 8000 m since January 2011. The main goals are to study photochemical ozone production and the impacts of extreme events on western US air quality, provide data to support satellite observations and aid in the quantification of emission sources e.g. wildfires, urban outflow, diary and oil and gas. The aircraft is based at Moffett Field and flies multiple times a month to sample vertical profiles at selected sites in California and Nevada, providing long-term data records at these sites. AJAX is also uniquely positioned to launch with short notice sampling flights in rapid response to extreme events e.g. the 2013 Yosemite Rim fire. This talk will focus on the impacts of vertical transport on surface air quality, and investigation of emission sources from diaries and wildfires.