

## 2.030 Drought impacts on high ozone in California.

Early Career Scientist

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Abstract:

California is currently experiencing the most severe drought both since the start of the 120-year observational record and over the last millennium. California is also home to the worst ozone (O<sub>3</sub>) air quality in the U.S., with the top 5 most O<sub>3</sub>-polluted cities in the U.S. located in the state. Here, we explore the drought's influence on high O<sub>3</sub> in the polluted agricultural region of California's San Joaquin Valley. We describe drought effects on O<sub>3</sub> production chemistry, on O<sub>3</sub> stagnation over multiple days, and on the O<sub>3</sub> lifetime. We also consider the atmospheric implications of the adaptive agricultural practices taking in place in the region. Climate change has been implicated as a driver of the severity of the current drought in California, suggesting that the response of O<sub>3</sub> to the 2012-2015 drought may offer insight into air quality in the future.