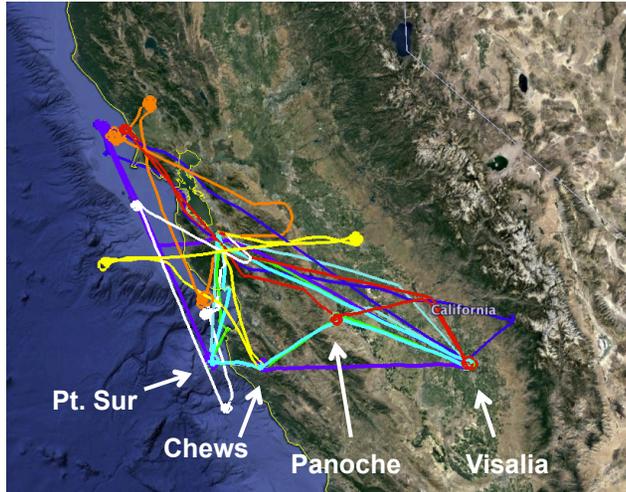
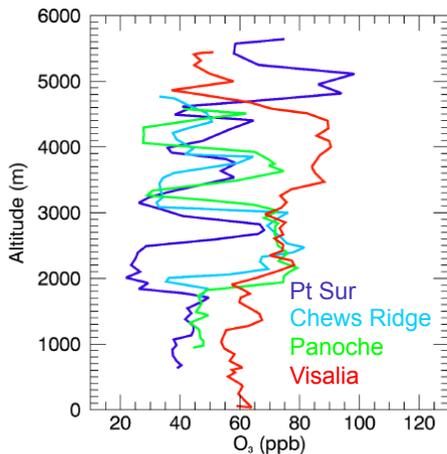




# Airborne Measurements of Ozone and Other Trace Gases during the California Baseline Ozone Transport Study (CABOTS)



Flight paths flown by AJAX in support of CABOTS



Vertical profiles of  $O_3$  measured both offshore and inland in the SJV, highlighting the differences in  $O_3$  structure. See teal and green flight tracks above.

- **Background:** Western states are challenged to meet lowered National Ambient Air Quality Standards (NAAQS) for  $O_3$ , as  $O_3$  can be transported across the Pacific or from the stratosphere. CABOTS sponsored by the Cal Air Resources Board (CARB) seeks to understand how well global models reproduce the daily variability of  $O_3$  and if transported  $O_3$  affects surface sites in the San Joaquin Valley.
- AJAX is supporting CABOTS by measuring  $O_3$ ,  $CO_2$ ,  $CH_4$ , & HCHO during 9 flights to follow transport eastward, from offshore to the SJV. Through vertical profiles and horizontal transects, AJAX data are compared to coastal  $O_3$  sonde launches (SJSU) and  $O_3$  lidar measurements in the SJV (NOAA).
- Data consistently show  $O_3$  laminae at varying altitudes offshore and high  $O_3$  near the surface at Visalia, but reveal that these locations appear to be in different meteorological regimes.
- **AJAX data uniquely characterize these air masses and the latitudinal and longitudinal heterogeneity in  $O_3$  across California.**
- This unique data set, as well as data from any additional future flights, will contribute significantly to the to understanding of ozone transport in California. We hope to make this data widely available to CARB and other researchers exploring CA air quality in spring and summer.