

Abstract – L. Iraci

Title: Using Airborne In-Situ Profiles to Evaluate TCCON Data from Armstrong Flight Research Center_A41F-0114:

Abstract: A Fourier Transform Spectrometer (FTS) was deployed to the Armstrong Flight Research Center (AFRC) in Edwards, CA as a member of the Total Carbon Column Observing Network (TCCON) and has now been in operation for over 3 years. The data record from AFRC will be presented as well as airborne validation profiles obtained during the NASA SEAC4RS, SARP, KORUS-AQ, and ATom missions utilizing various NASA aircraft. One of the reasons that the AFRC location was selected is due to its proximity to a highly reflective lakebed, which has proven to be difficult for accurate satellite retrievals. As such, the data from AFRC has been used for OCO-2 calibration. In order for accurate calibration of OCO-2, the validity of the TCCON measurements must be established. To this end, integrated airborne in-situ vertical profiles will be presented and compared with the TCCON FTS measurements, where good agreement has been found.