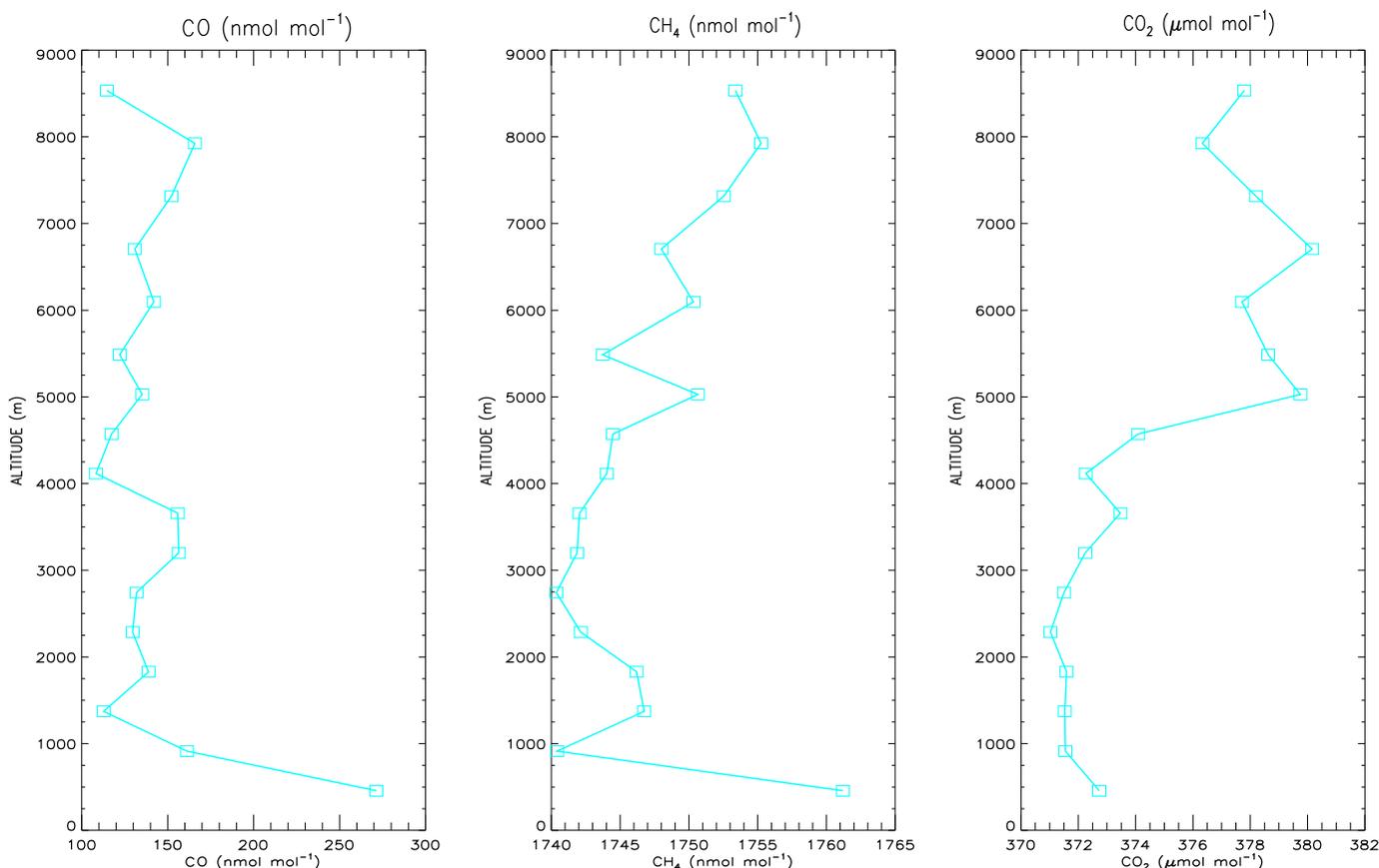


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NOAA/CMDL

As part of the MOPITT validation program, NOAA/CMDL determined the vertical profiles of CO, CH₄, CO₂, H₂, N₂O and SF₆ from the SAWB Aerocommander JRB. Samples of air were collected in glass flasks and shipped to Boulder for analysis. From 14 August through 05 September, eleven profiles were determined. All flights were collocated in time/space with the TERRA overpass, and several provided coincidence with both MOPITT and MOPITT-A (the MOPITT simulator flown aboard the ER-2).

The profiles often show considerable variation with altitude, and strong enhancements of CO and other trace gases are common. These data have been used in the validation of the MOPITT radiances (level 1 product). Comparison of the measured radiances and those determined using the MOPITT forward radiative transfer model and CMDL profiles show good agreement. Differences between measured and modeled radiances may reflect the spatial heterogeneity of trace gases or effects of aerosols on the retrievals. Comparison of the CMDL results to MOPITT-A results are still to come. The profiles have yet to be interpreted in combination with other species measured aboard the aircraft or in terms of air trajectory analysis. Comparison of the CMDL CO results to the simultaneous measurements of CO made by the University of Witwatersrand and by the University of Maryland (UMd) from the JRB are still needed. An intercomparison of CO standards between CMDL and UMd is planned for this summer.



Carbon monoxide, methane, and carbon dioxide mixing ratios determined from samples collected above Southern Mozambique between 0800 and 0930 (UT) on August 31, 2000.