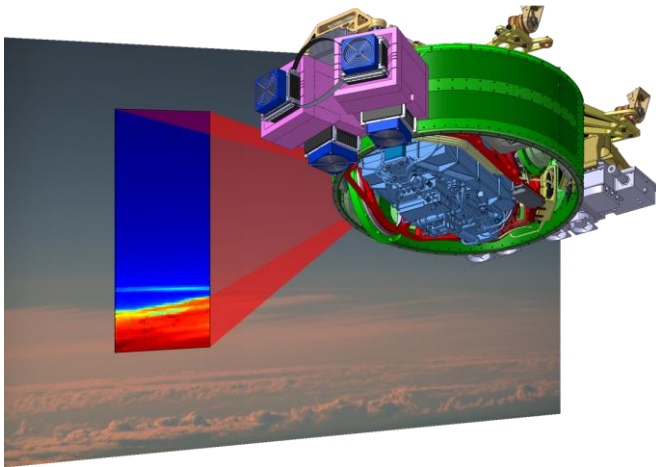
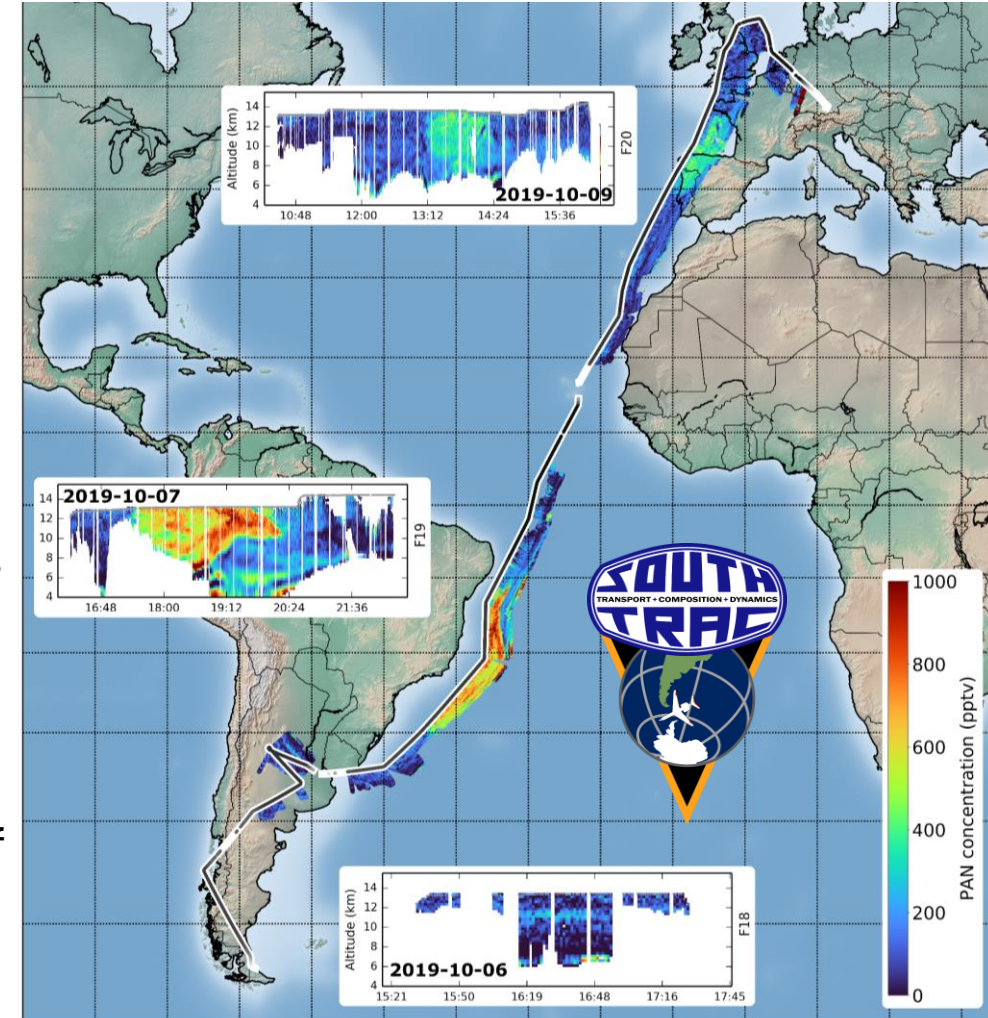


Biomass Burning Pollution in the South Atlantic Upper Troposphere: GLORIA Trace Gas Observations and Evaluation of the CAMS Model

S. Johansson, G. Wetzel, F. Friedl-Vallon, N. Glatthor, M. Höpfner, A. Kleinert, T. Neubert, B.-M. Sinnhuber, J. Ungermann



- Limb imaging IR measurements from GLORIA during SouthTRAC aircraft campaign 2019
- Biomass burning trace gases have an influence on ozone and thus the UTLS climate; long-range transport and uncertain emissions are difficult to simulate → Measurements are important
- Strong biomass burning trace gas enhancements measured during transfer flights above the South Atlantic
- Trajectory analysis indicates central South America as origin of these polluted air masses



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- Direct comparison by interpolation of CAMS reanalysis data on GLORIA measurement locations
- CAMS simulation of PAN agrees with GLORIA, but underestimates C_2H_6
- The comparisons indicate that atmospheric transport processes are well captured by CAMS, but emission strengths and atmospheric gain and loss processes could be improved
- Systematic global observations of UTLS pollution under increased biomass burning due to climate change is important
→ CAIRT EE11 proposal
- Comparisons of $HCOOH$, CH_3OH , and C_2H_4 on the poster

