

GLORIA(-lite) and CAIRT: future observations of pollution in the UTLS from extreme fire events

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Severe biomass burning events are predicted to become more frequent as well as intense in future due to the rapidly changing climate. These will affect also higher atmospheric layers from the upper troposphere to even the mid-stratosphere in extreme cases. In this important region for Earth's radiative budget, aerosols as well as ozone are influenced by the mix of different trace-gases. Remote sounding observations by the GLORIA limb-imaging infrared spectrometer have shown that recent models do not well capture quantitatively many of the involved species. Our new developments of GLORIA-lite and the CAIRT satellite instrument proposed for ESA's Earth Explorer 11 will allow to monitor the distribution of these species up the global scale and, thus, to validate and improve global models.

Primary authors: HOEPFNER, Michael (Karlsruhe Institute of Technology IMK-ASF); TEAM, The GLORIA and CAIRT

Presenter: HOEPFNER, Michael (Karlsruhe Institute of Technology IMK-ASF)

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