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Mixing between a stratospheric intrusion and a biomass burning plume

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Abstract. Ozone, carbon monoxide, aerosol extinction coefficient, acetonitrile, nitric acid and relative humidity measured from the NOAA P3 aircraft during the TexAQS/GoMACCS 2006 experiment, indicate mixing between a biomass burning plume and a stratospheric intrusion in the free troposphere above eastern Texas. Lagrangian-based transport analysis and satellite imagery are used to investigate the transport mechanisms that bring together the tropopause fold and the biomass burning plume originating in southern California, which may affect the chemical budget of tropospheric trace gases.

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