Reconstructing ozone chemistry during transport of boreal fire plumes over Northern Pacific with TES, RAQMS and spring ARCTAS 2008 measurements

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We examine tropospheric ozone production and loss in Thailand, Kazakhstan and Siberian fire plumes transported over Northern Pacific during spring 2008 ARCTAS campaign. We used collocated O$_3$ and CO profiles as measured by the Tropospheric Emission Spectrometer (TES), Regional Air Quality Modeling System (RAQMS) and ozone from the Airborne UV Differential Absorption Lidar (DIAL). High CO concentrations, over 200 ppbv, are observed in fire plumes as well as O$_3$ concentrations ranging from less than 40 to more than 100 ppbv.