The regional background of ozone and carbon monoxide from a synthesis of TES and RAQMS: implications for MILAGRO

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The Tropospheric Emission Spectrometer (TES) on the NASA EOS-Aura spacecraft has been making global measurements of ozone and carbon monoxide in the troposphere since September 2004. During the MILAGRO campaign TES made an extensive set of measurements to supplement its standard global coverage. These special observations focused on a geographic region centered on Mexico City and encompassing Mexico, Central America, the Gulf of Mexico and the continental United States. The TES data can be used in conjunction with results from the NASA Langley Research Center Realtime Air Quality Modeling System (RAQMS) to provide information about the background chemical conditions in the troposphere during the MILAGRO time period. In particular we will look for instances of enhanced carbon monoxide in the middle and lower troposphere as seen by TES and use results from RAQMS to examine how these events might affect the chemical composition of the atmosphere near Mexico City.