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Results from the MAX-DOAS Network-Measurement of NO₂, HCHO, SO₂ and CHOCHO during the NEAQS-ITCT 2004 Campaign

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From July 1st through August 15th the New England Air Quality Study Intercontinental Transport and Chemical Transformation (NEAQS-ITCT) 2004 Campaign took place. We performed measurements with Multiple Axis Differential Optical Absorption Spectroscopy (MAX-DOAS) at six different sites (MIT Cambridge, Thompson Farm (UNH), URI Narragansett, NL Brookhaven, Harvard Forest (Harvard University) and Pinnacle State Park (UAlbany)) and on the research vessel Ron Brown to derive slant column densities of NO₂, HCHO, SO₂ and CHOCHO (Glyoxal). Such a comprehensive network of continuous measurements was assembled for the first time. Thereby scattered sun light was measured at several elevation angles (Multiple Axis), which allows to gain information on the vertical distribution of atmospheric trace gases. We present examples of the results of these MAX-DOAS measurements over the north-eastern States, which have often been called the tailpipe of the USA.