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Validation of version 3.0 profiles from the Atmospheric Chemistry Experiment Fourier Transform Spectrometer (ACE-FTS)

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The Atmospheric Chemistry Experiment (ACE), also known as SCISAT-1, is a Canadian scientific satellite to make remote sensing measurements of the Earth's atmosphere. It was launched on 12 August 2003 and has been making measurements for eight years (since February 2004). The primary ACE instrument is a high-resolution (0.02 cm^{-1}) Fourier Transform Spectrometer (ACE-FTS) operating between 750 and 4400 cm^{-1} and it uses the solar occultation technique to make its measurements. The newest ACE-FTS data version (3.0) provides profiles of temperature, pressure, and volume mixing ratios of more than 30 atmospheric trace gas species, as well as 20 subsidiary isotopologues of the most abundant trace atmospheric constituents. This paper will describe current satellite validation results for these new ACE-FTS data products and will highlight changes from the previous data version (2.2).