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## Latest Validation Results for the Atmospheric Chemistry Experiment (ACE)

In August 2025, the Canadian-led Atmospheric Chemistry Experiment (ACE) mission will complete its 22nd year in orbit on board the SCISAT satellite. The more than two decades of ACE operations provide a valuable time series of composition measurements that contribute to our understanding of ozone recovery, climate change and pollutant emissions. The main instruments on board SCISAT use infrared and UV-visible spectroscopy to make their solar occultation measurements. The ACE Fourier Transform Spectrometer (ACE-FTS) is an infrared FTS operating between 750 and 4400  $\text{cm}^{-1}$  and the ACE-MAESTRO (Measurements of Aerosol Extinction in the Stratosphere and Troposphere Retrieved by Occultation) is a dual UV-visible-NIR spectrophotometer which was designed to extend the ACE wavelength coverage to the 280-1030 nm spectral region. From these measurements, altitude profiles of atmospheric trace gas species, temperature and pressure are retrieved. The 650 km altitude, 74 degree circular orbit provides global measurement coverage with a focus on the Arctic and Antarctic regions. This presentation will describe the validation results for the newest ACE-FTS and MAESTRO data sets.

### Topic

Current and past limb and occultation instruments: algorithms, products, validation

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