THE PORTABLE ATMOSPHERIC RESEARCH INTERFEROMETRIC SPECTROMETER (PARIS-IR): PRELIMINARY RESULTS

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A compact portable Fourier transform spectrometer has been developed for the Waterloo Atmospheric Observatory (WAO) by ABB-Bomem. The spectrometer is based on the design used for the ACE-FTS instrument on the Canadian scientific satellite, SCISAT-1. This new design has been named the Portable Atmospheric Research Interferometric Spectrometer (PARIS). Two of these instruments have been commissioned for the WAO facility, one which will operate in the infrared region and the other which will measure in the near-infrared, visible, and ultraviolet regions of the spectrum. These spectrometers will measure atmospheric absorption spectra from their home base at the observatory in Waterloo, participate in ground-based and airborne campaigns and perform open-path tropospheric measurements. The first of the two spectrometers, PARIS-IR, was delivered to the University of Waterloo in late October. This paper will describe the design of the instrument and present some preliminary results obtained with this new spectrometer.