

EARTH OBSERVATION SYMPOSIUM (B1)  
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CARBON DIOXIDE RETRIEVAL OF ARGUS 1000 SPACE DATA BY USING GENSPECT  
LINE-BY-LINE RADIATIVE TRANSFER MODEL

**Abstract**

The micro-spectrometer Argus 1000 being in space, continuously monitors the sources and sinks of the trace gases. It is commonly believed that among other gases, CO<sub>2</sub> is the major contributor causing the greenhouse effect. Argus 1000 along its orbit gathers the valuable spectral data that can be analyzed and retrieved. In this paper we present the retrieval of CO<sub>2</sub> gas in the near infrared window 1580 to 1620 nm by using line-by-line code GENSPECT. The retrieved Argus 1000 space data taken over British Columbia on May 31, 2010 indicates an enhancement of CO<sub>2</sub> by about 25%-30%.