ABSTRACT

Title: Study of atmospheric trace gas retrieval with satellite hyper-spectral infrared sounder.

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Abstract

It is important for the global environment research to understand the distribution of quantitative atmospheric trace gases. In recent years, the operations of the hyper-spectral sounder onboard satellite to achieve this purpose are started, and its results are also reported. In this research, the ozone in troposphere is focused, and its retrieval algorithm is examined with the hyper-spectral infrared sounder. The selection of effective channels, vertical resolution, and accuracy for the retrieval algorithm are examined by using simulated hyper-spectral radiance data. Additionally, the results of the test with the spectral radiances measured by TES (Tropospheric Emission Spectrometer) onboard Aura satellite are also discussed.