

Using JAVIEX data to evaluate the impact of PCA Noise Filtering on the High Spectral Resolution Physical Retrieval Algorithm

Paolo Antonelli, Dave Tobin, Bob Knuteson, Steve Dutcher, and Hank Revercomb

PCA has been demonstrated to be a powerful approach to characterize and reduce the random component of the instrument noise for high spectral resolution Grating and FTS infrared instruments. While the impact of a PCA based noise filter at radiometric level has been investigated quite extensively, its impact of the accuracy of the retrieved atmospheric variables is still unclear and not widely tested. By using S-HIS and IASI data collected during the JAVIEX field campaign, this work aims to evaluate the impact of the PCA-based noise filter on the accuracy of the Physical Retrieval Algorithm used to invert the radiances into the atmospheric variable space.

INTERNATIONAL
ATOVS
WORKING GROUP

*Proceedings of the
Sixteenth International
TOVS Study Conference*

Angra dos Reis, Brazil

7-13 May 2008

Sharing ideas, plans and
techniques to study
the earth's weather and climate
using space-based observations

