Principle component analysis of IASI spectra with a focus on non-uniform scene effects on the ILS

David Tobin, Hank Revercomb, Paolo Antonelli

Exploiting the inherent redundancy in hyperspectral observations, Principle Component Analysis (PCA) is a simple yet very powerful tool not only for noise filtering and lossy compression, but also for the characterization of sensor noise and other variable artifacts using Earth scene data. This presentation will include a description of our approach for dependent set PCA of IASI radiance spectra, characterization of the IASI sensor noise using PCA, and the characterization and removal of spectral artifacts due to scene inhomogeneity.

INTERNATIONAL

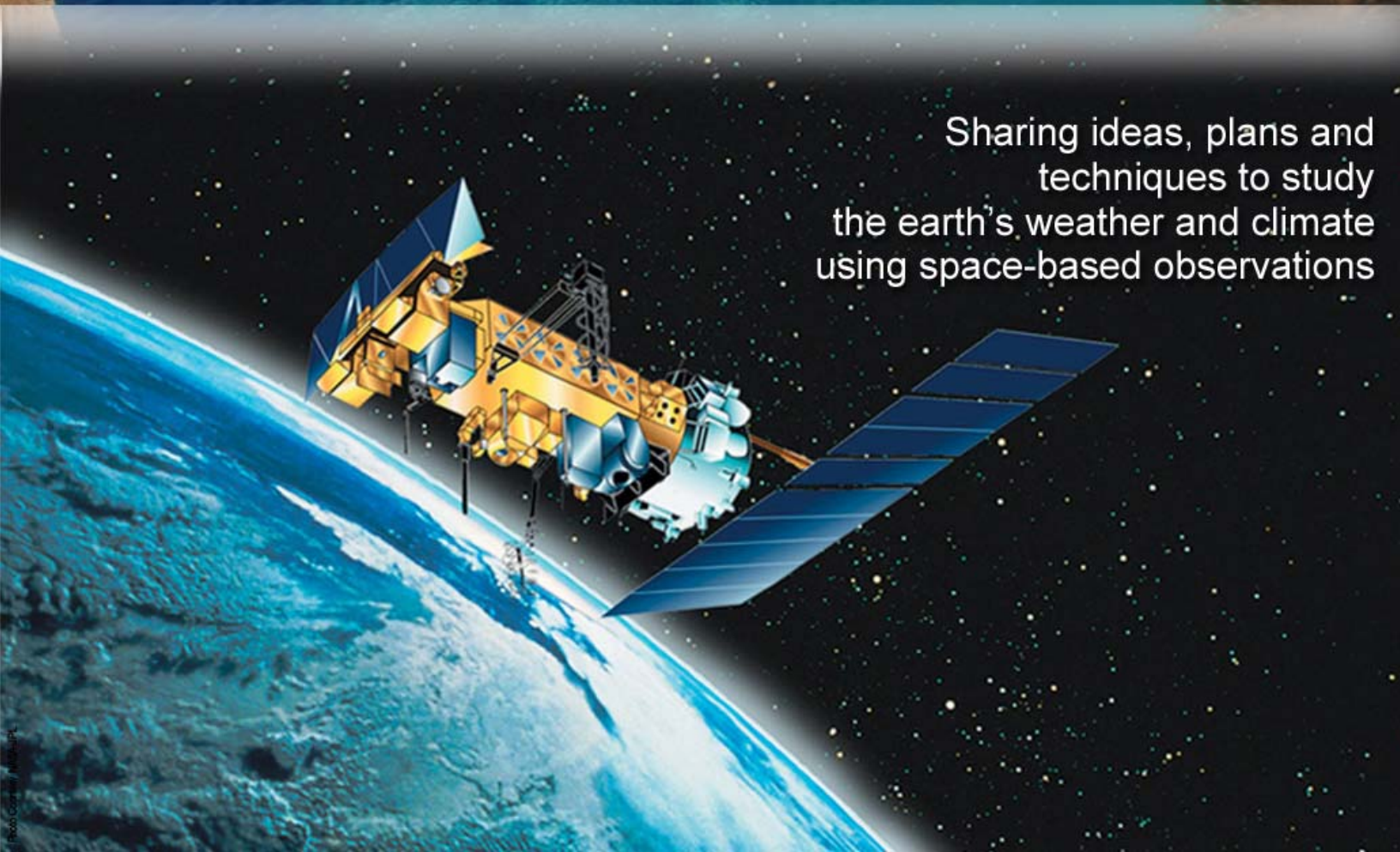
ATOVS

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