FIRST INTERNATIONAL IASI CONFERENCE
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Abstract: The First international IASI conference, organized by CNES and EUMETSAT, took place in Anglet (France) from 13 to 16 November 2007, only one year after the successful launch of the IASI instrument on the Metop-A platform. The main topics of the conference were: the performance of IASI, the impact of IASI on NWP, the clouds and surface parameters, climate and atmospheric chemistry. The performance of IASI was assessed by the IASI Technical Center in CNES and validated against NWP model output and airborne and balloon coincidence flights. The results showed that the radiometric performance of IASI is better than 0.5K, likely between (0 and 0.2 K).

Perspective
The early outcome of good results with IASI is analysed as the result of a good preparation thanks to the ISSWG. The potential of IASI is so high that the area still open to scientific development is very broad. A coordination of the scientific activities around IASI will permit to incorporate the innovative development into the IASI products and take the largest benefit for all the community. The exchange of information remains very essential. Therefore, after the success of this conference, CNES and EUMETSAT decided to organize regular conferences (every 1.5-2 years) in coordination with ITSC.

IASI Instrument performances
Main contributions by:
D. Simeoni (TAS), D. Blumente, B. Tournier, T. Phulpin, D. Klaes, P. Schüssler, R. Jeyneef, L. Gaudet, F. Girod

IASI Preprocessing
Main contributions by:
M. Goldberg, Borming Huang, D. Tohok, W. Wolf, N. Atkinson, P. Brunel

NWP assimilation and Monitoring
Main contributions by:
A. Collard, L. Pineda, V. Guidart, F. Hilton, L. Garcia, R. Randrianampianina, B. Routon

Validation campaigns -Radiances
Main contributions by:

Valiation campaigns –Products, properties
Main contributions by:
M. Kruglanski, F. Montagner, F. Rabier

Radiative Transfer and Spectroscopy
Main contributions by:
A. Perrin, N. Jacquetin, M. Matricardi, L. Strow

Temperature Water Vapour retrieval
Main contributions by:
R. Knutean, L. Lavran, Jun Li, Xu Liu, C. Serio, Jon Taylor, R. Armane, G. Grice, A. Gambaorsa

Trace gas and Chemistry
Main contributions by:

Clouds and aerosols
Main contributions by:
C. X. Cabrol, JP Chaboureau, Allen Huang, L. Strow

Issues raised from NWP topic
EUMETSAT (1) CNES should make an effort on developing the EUMETSAT archives and additional documentation for NWP

ISSWG

To make IASI better
• Work towards implementation of IASI raw counts needed for testing and monitoring program (e.g. MOZAIC), also on IASI
• IASI raw counts needed for testing
• PC analysis of IASI spectra
• Fast retrievals
• Treat all bands together - no advantage to use granule by granule (IASI)
• Factor 4.7 lossless reachable (Predictive Partitional learning Algorithm)
• Lossless compression

Some ideas to make IASI better
• With the great potential for climate applications and monitoring, IASI should be a key component of operational climate observation systems, not an isolated instrument.
• IASI could be used to stimulate spectroscopists for new laboratory measurements
• In order to provide an error estimation of the Level 1 and Level 2 products, a dedicated database for IASI should be established

First International IASI Conference
ANGLET, 13 to 16 November 2007

In association with:
- INSU
- METEOR
- EUMETSAT
- CNES

The IASI Sounding Science Working Group is called to maintain a coordination on the development of IASI products and will assist CNES and EUMETSAT to organize a 2nd IASI conference in 2009.