

IASI TECHNICAL EXPERTISE CENTER

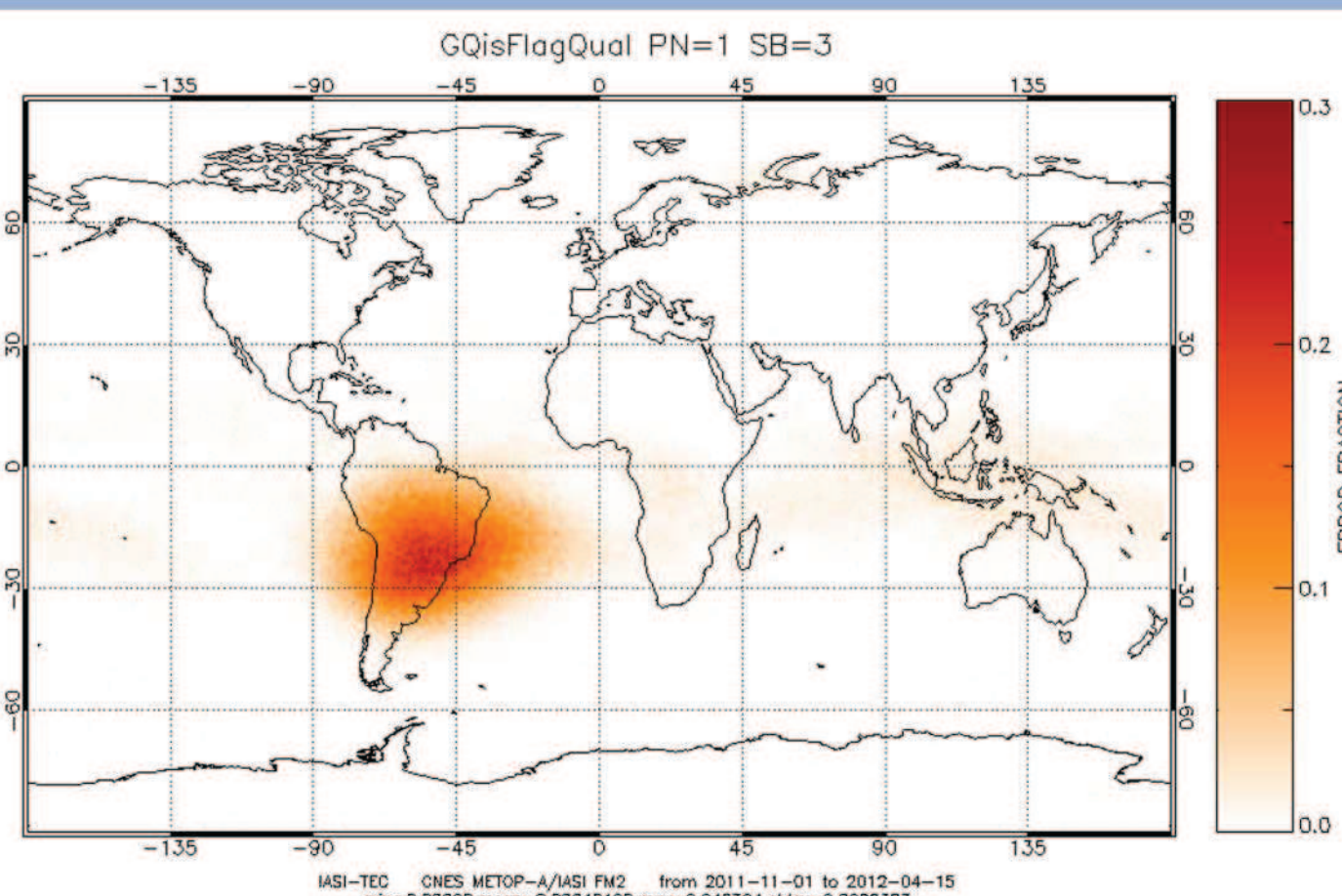
Jordi CHINAUD, Vincent LONJOU, Eric PEQUIGNOT, Elsa JACQUETTE, Laurence BUFFET, Denis JOUGLET, Carole LARIGAUDERIE
CNES, Toulouse, FRANCE



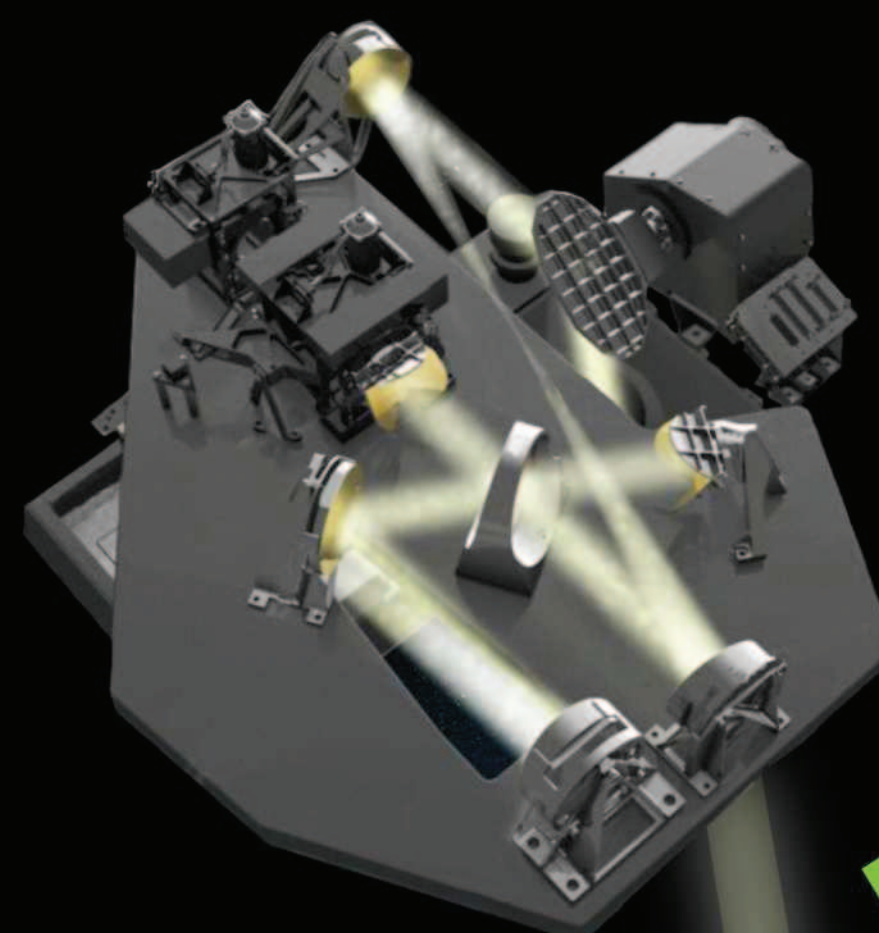
Located in CNES Toulouse Space Center
24/7 performance monitoring of METOP-A / IASI FM2 since 2006
Key role in the coming CALVAL of METOP-B / IASI PFM-R

DATA QUALITY MONITORING

Spatial distribution of data quality
(November 2011 to April 2012, pixel 1, spectral band 3)



- Data quality is monitored on a daily and long term basis
- Overall product quality > 99 %
- Most anomalies located around the SAA

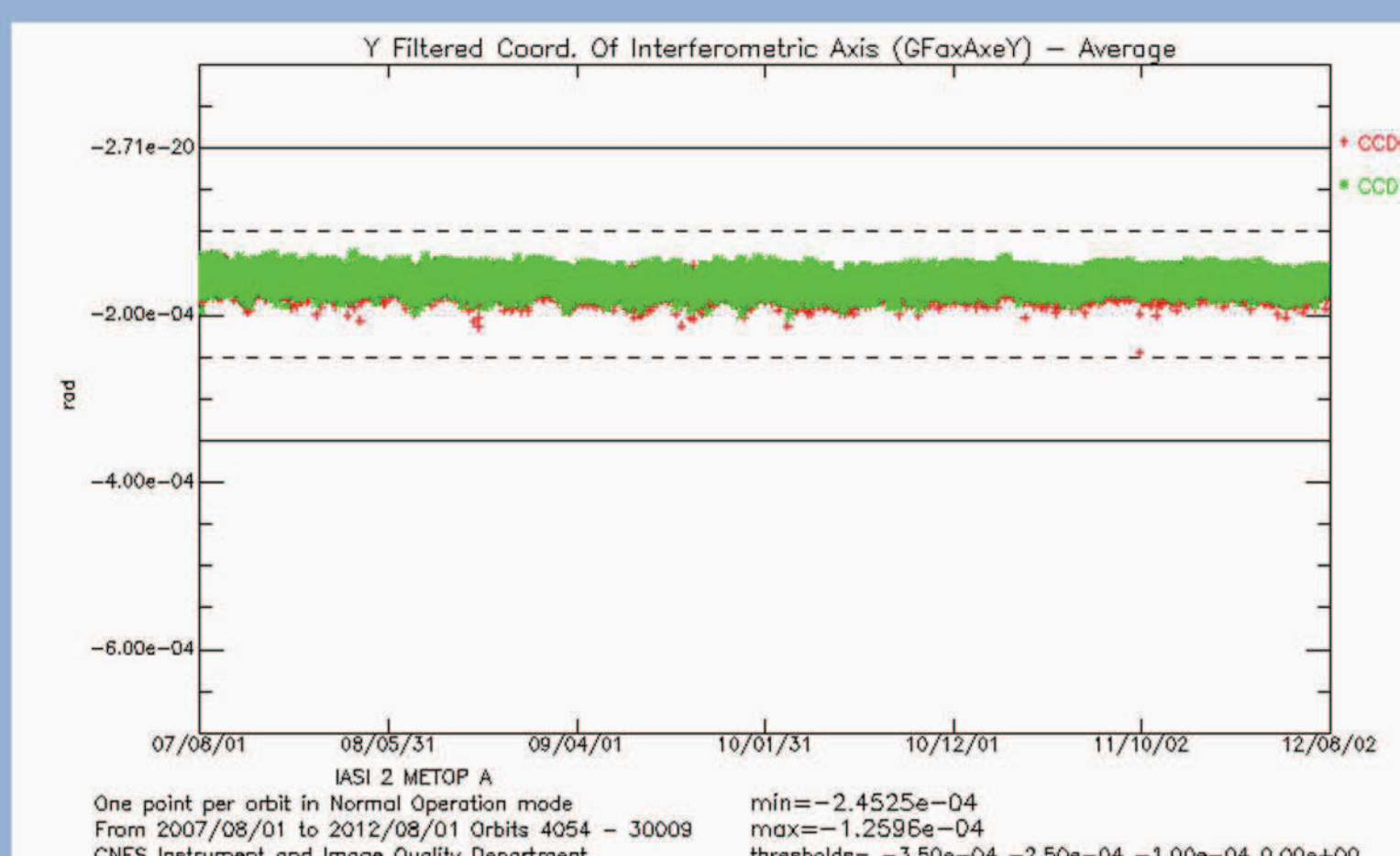
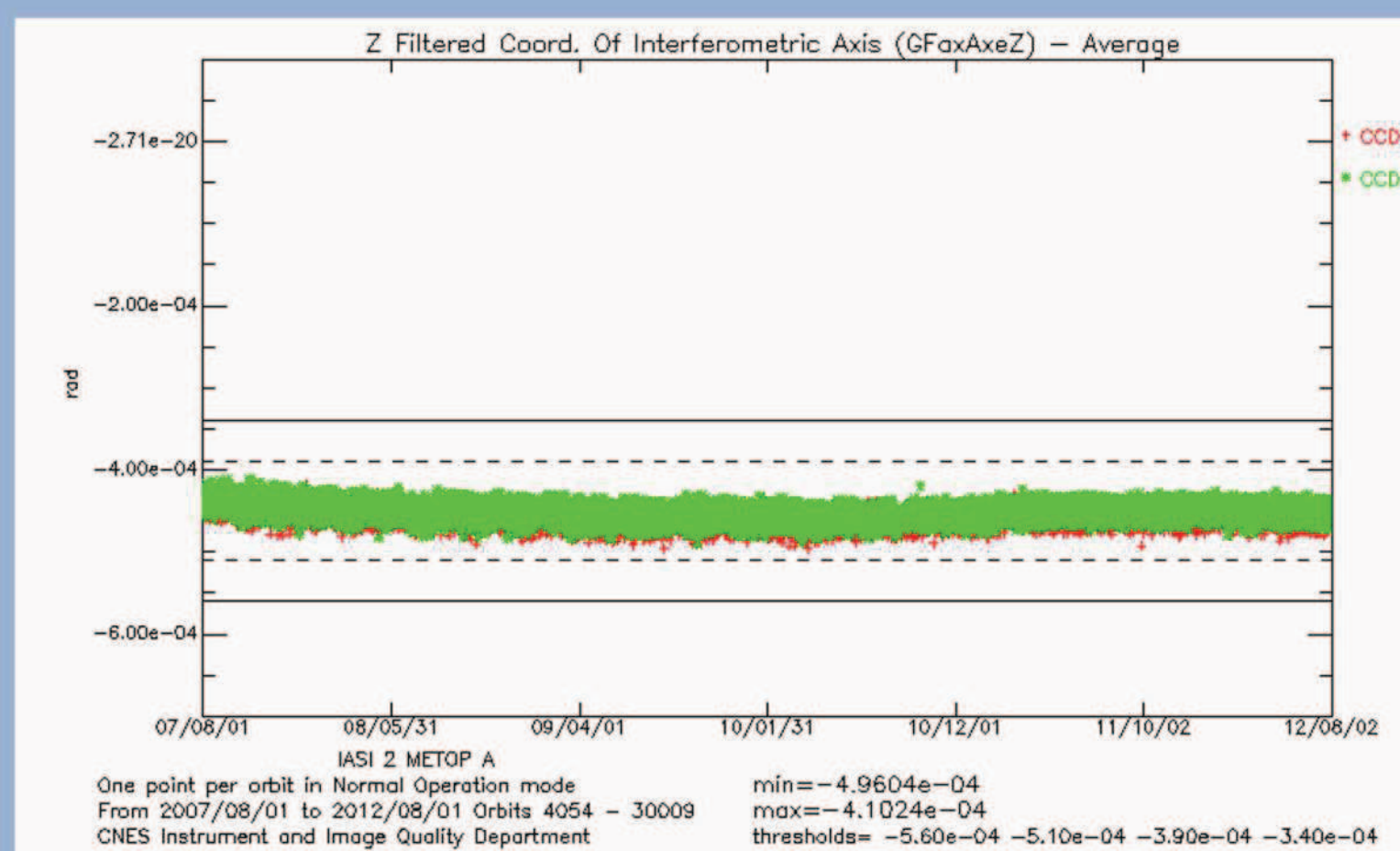


IASI L0 DATA

TELECOMMAND
TELEMETRY

SPECTRAL CALIBRATION

Monitoring of interferometric axis position



- Very good stability of the instrument
- No need to update the spectral database

Monitoring and Control

EUMETSAT

Operational L1 Chain

BOARD CONFIGURATIONS
OPERATIONAL REQUESTS
(decontamination, calibration mode ...)

GROUND CONFIGURATIONS
L1 SOFTWARE UPDATES

IASI TEC role :

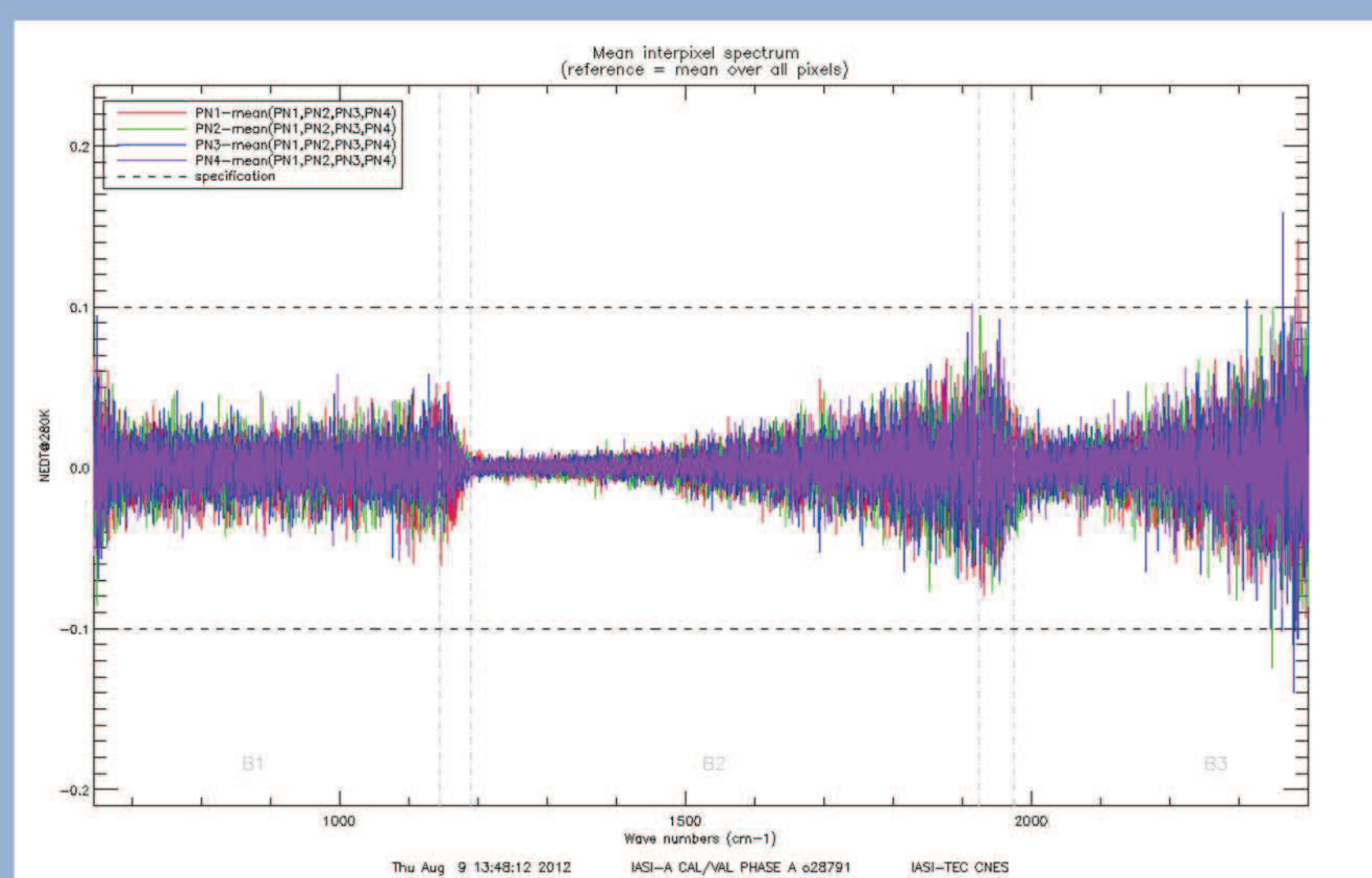
- Instrument monitoring
- Radiometric, spectral and geometric performance monitoring
- Generation, validation and delivery of configuration files: board and ground parameters
- Level 1 processing chain maintenance
- Operational requests : decontamination, calibrations, raw data selection
- Intercalibration of IASI with other sounders (AIRS)
- Quarterly performance reports : http://smc.cnes.fr/IASI/lien1_car_instr.htm

IASI L1 DATA

IASI DATA
L0,
ENGINEERING,
VERIFICATION DATA
AVHRR
35 Gb / day / instrument

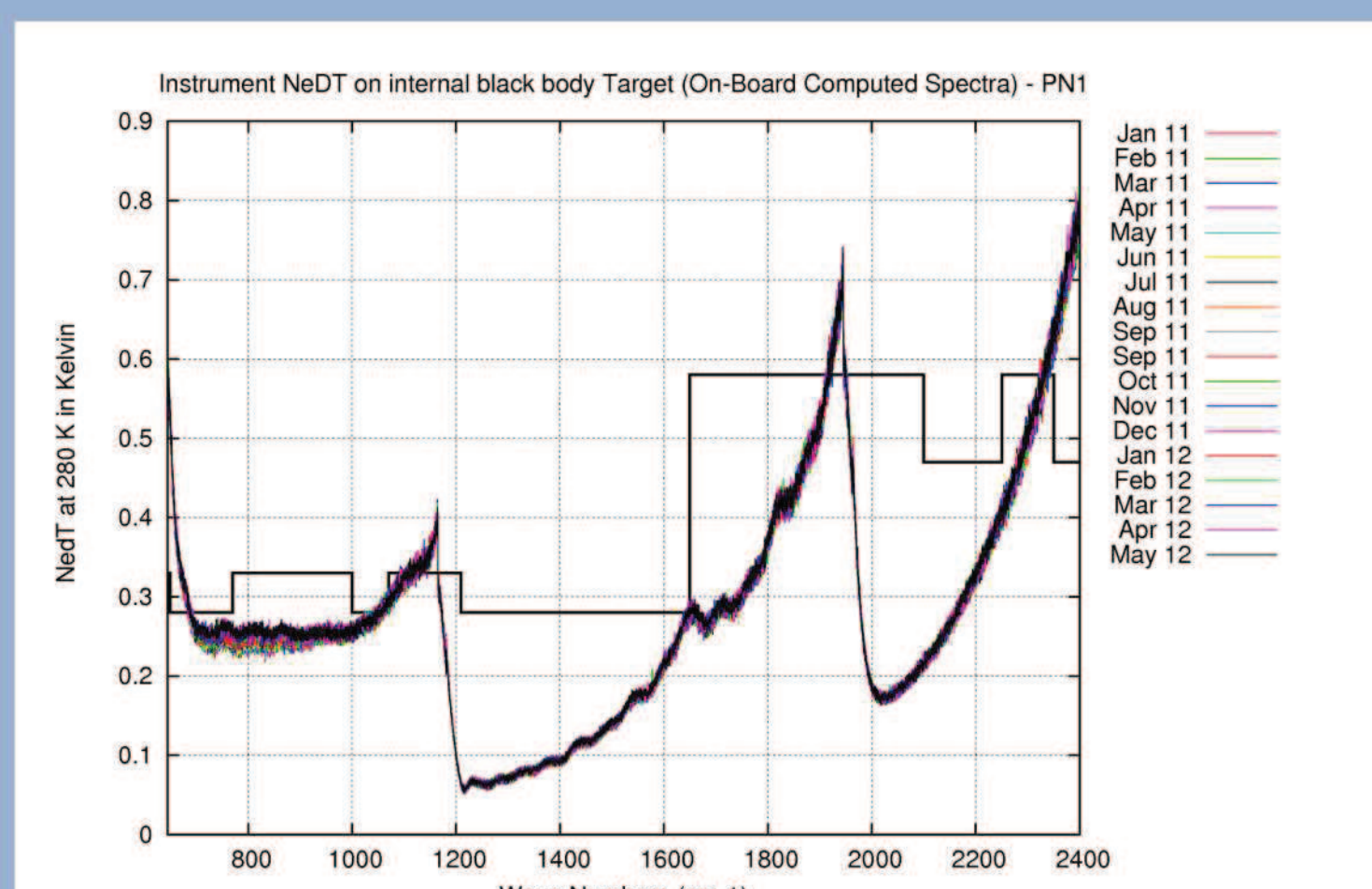
RADIOMETRIC PERFORMANCES

Interpixel radiometric calibration



- Interpixel calibration within specifications
- Good stability over time

Radiometric noise long term monitoring



- Very good stability of instrument noise
- To limit the degradation of transmission around 850 cm-1, decontamination is needed from time to time to remove ice contamination (performed 3 times on IASI-FM2 since METOP-A launch, next one scheduled in 2015)

GEOMETRIC PERFORMANCES

- Geometric calibration performed during external calibration
- IASI pixel location accuracy in AVHRR raster ~ 100 m
- Stable and well within specifications (5km)

