# IASI L0 and L1 NRT monitoring at EUMETSAT

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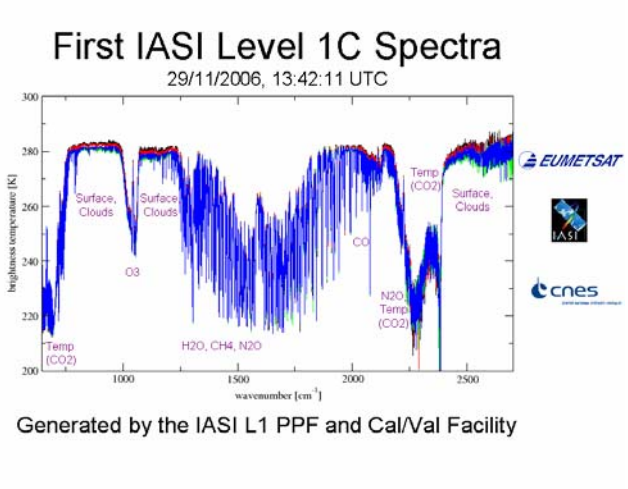
# Overview

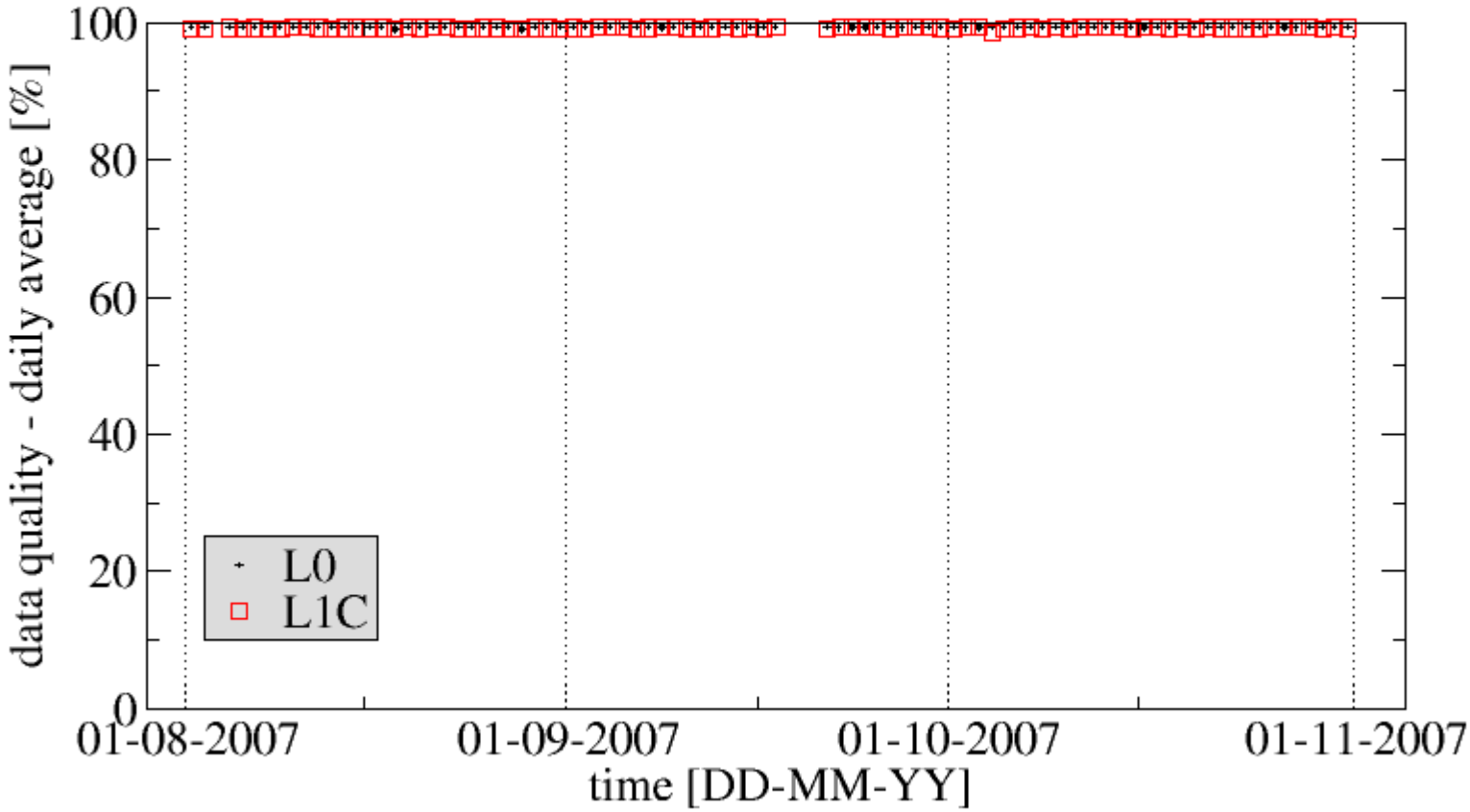
- Introduction to IASI NRT monitoring at EUMETSAT headquarter
- Data quality monitoring in the operational phase August to October 2007
- Results from 3 month of Radiance Monitoring
- Conclusions



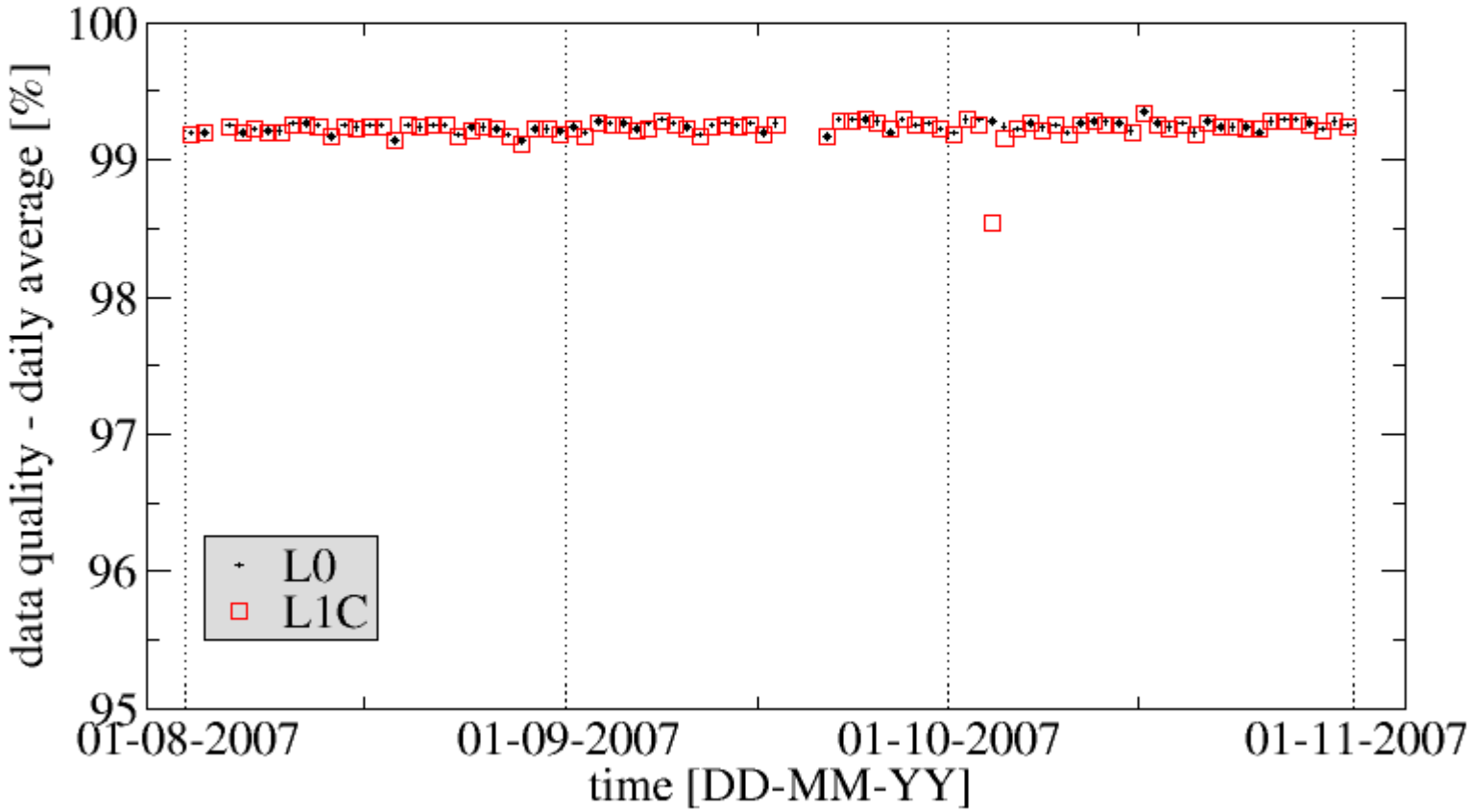
# Operational monitoring of IASI L0 and L1 products at EUMETSAT

- Daily, weekly and monthly reports are generated to evaluate product quality routinely.
- Near real time reports available on-demand in support of decisions on product dissemination.
- Radiance monitoring complements IASI quality indicators summaries and timeseries

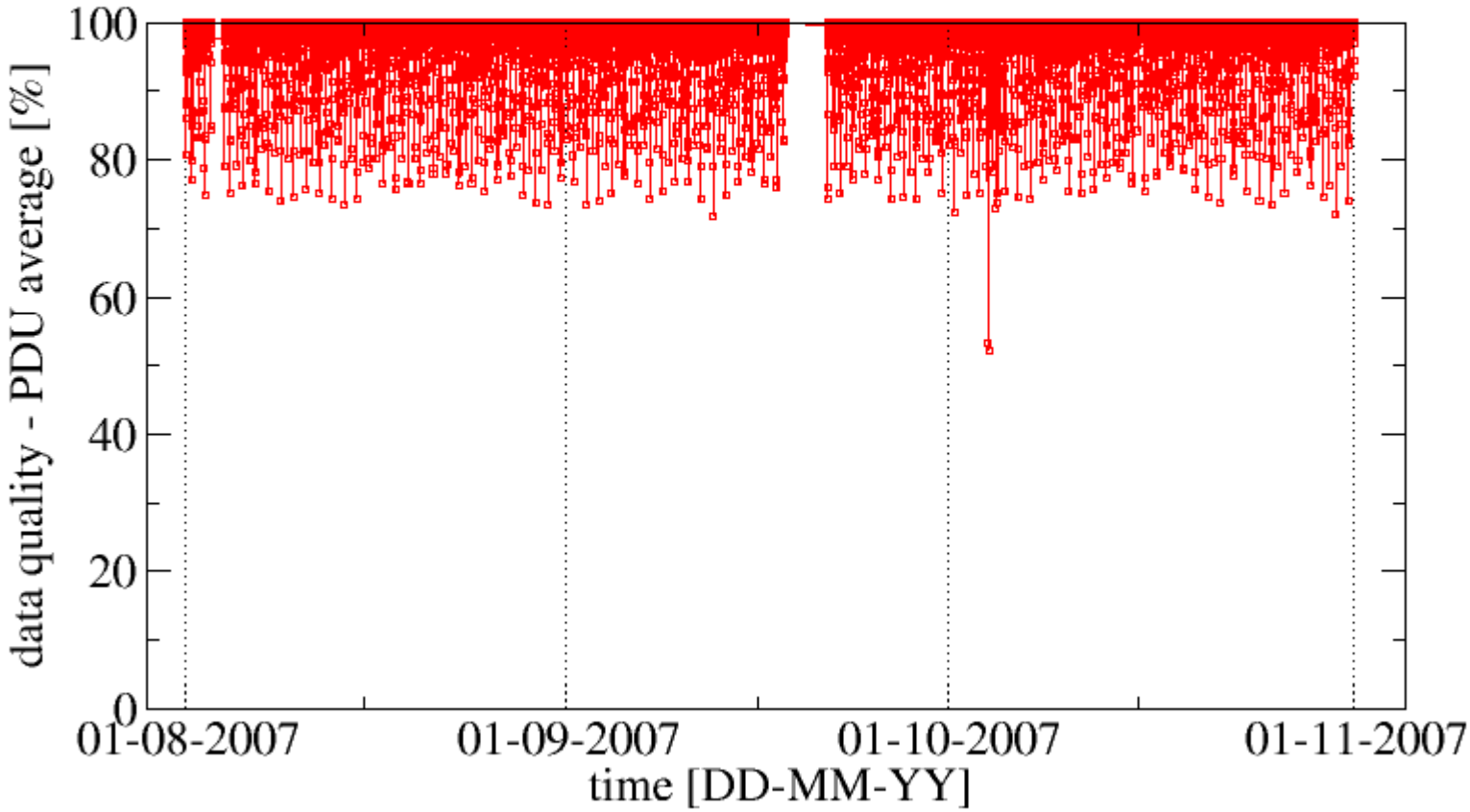
# IASI L0 and L1C data quality - Day



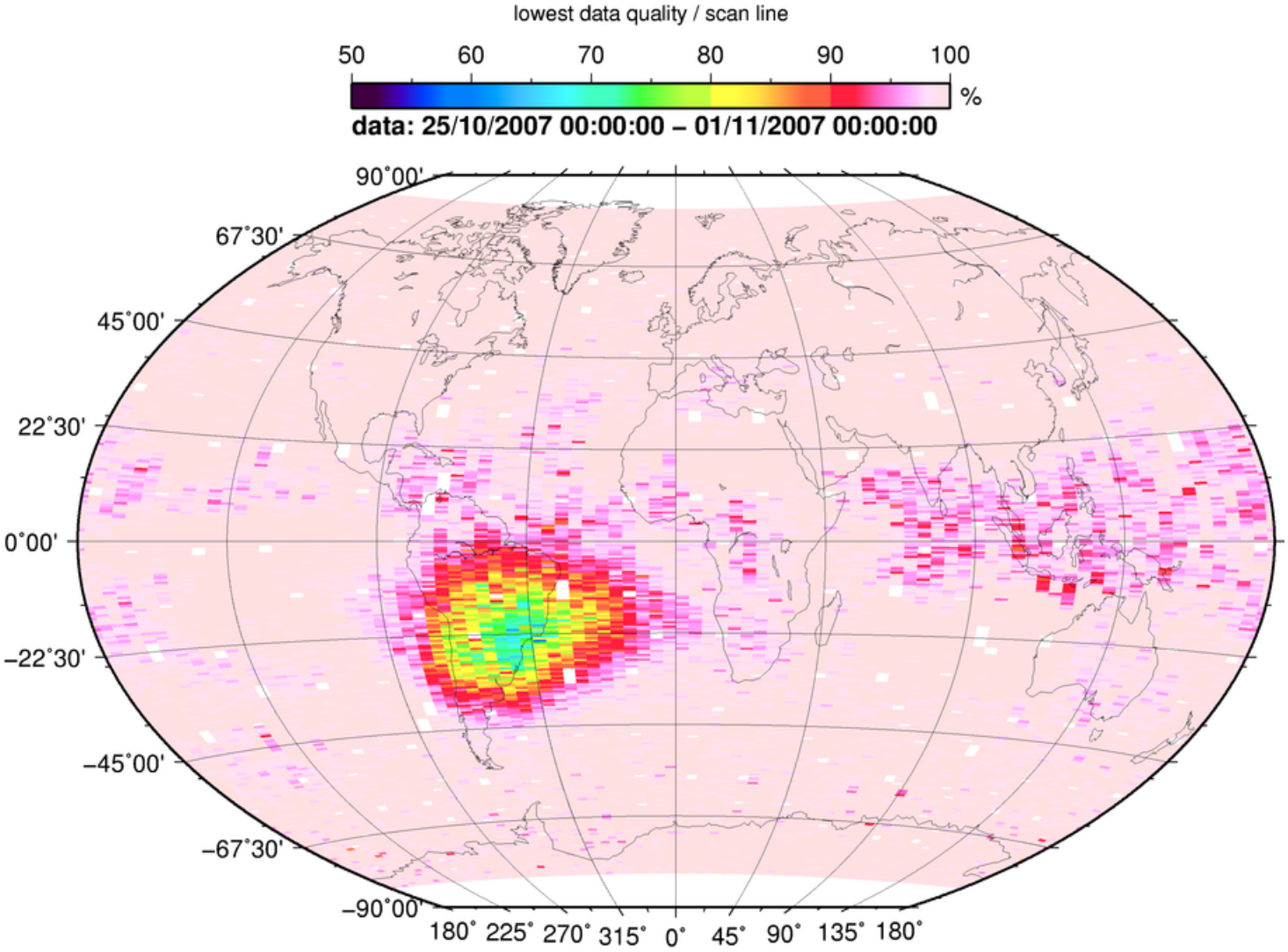
# IASI L0 and L1C data quality - Day



# IASI L1C data quality - PDU

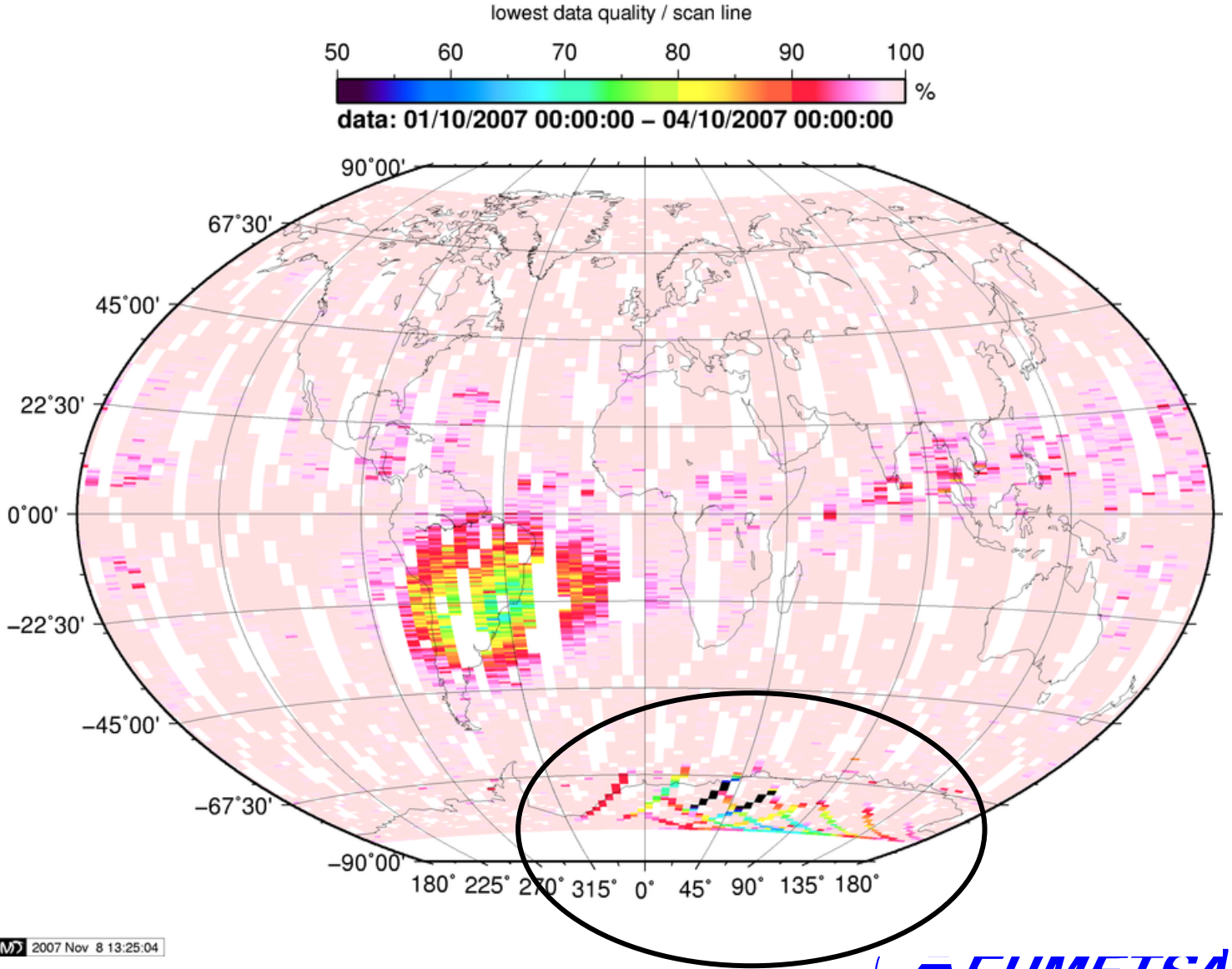


# L1C data quality - scan line

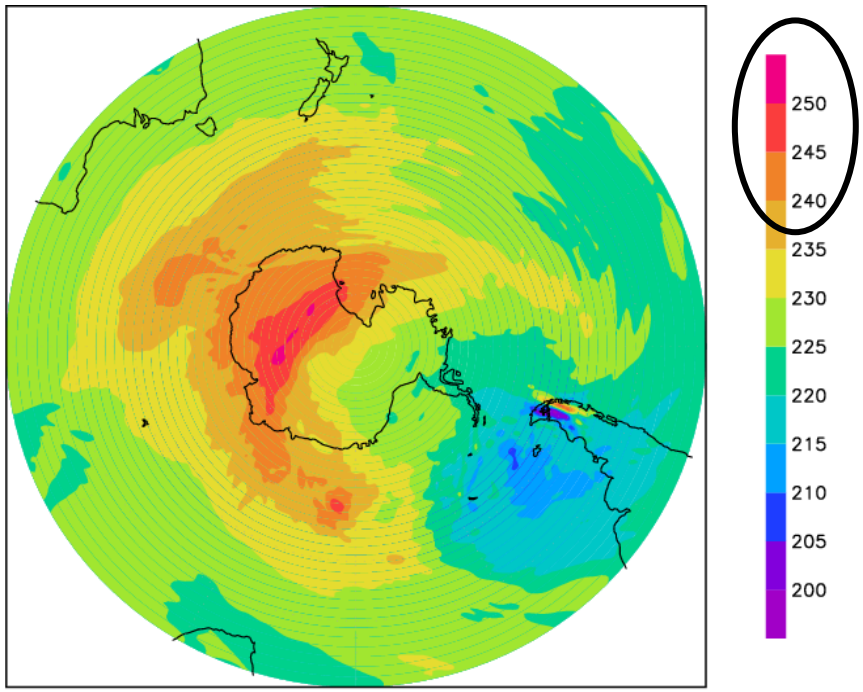



GMT 2007 Nov 8 13:22:40

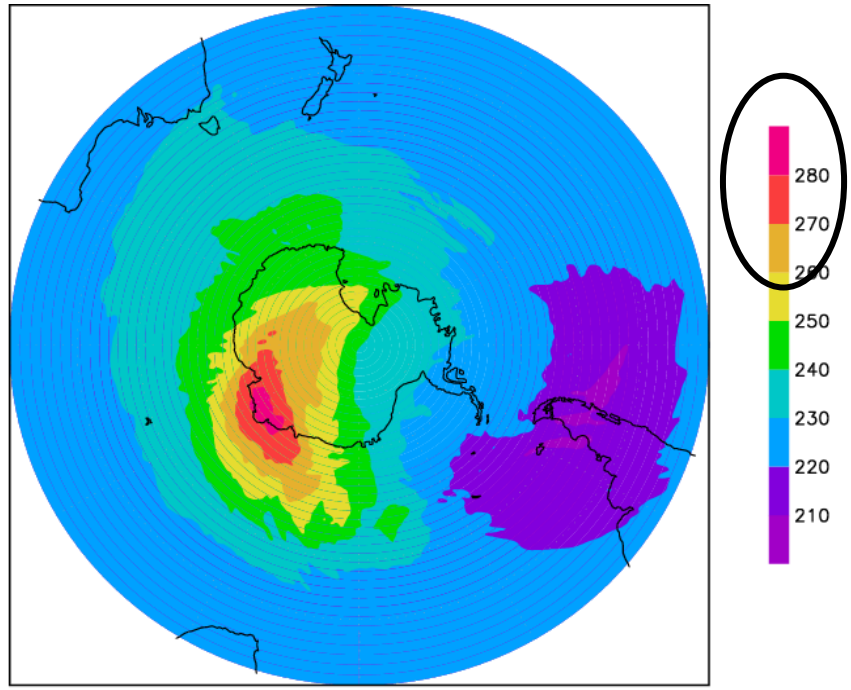
# L1C data quality – 1 to 3 October 2007



# ECMWF forecast 10 hPa



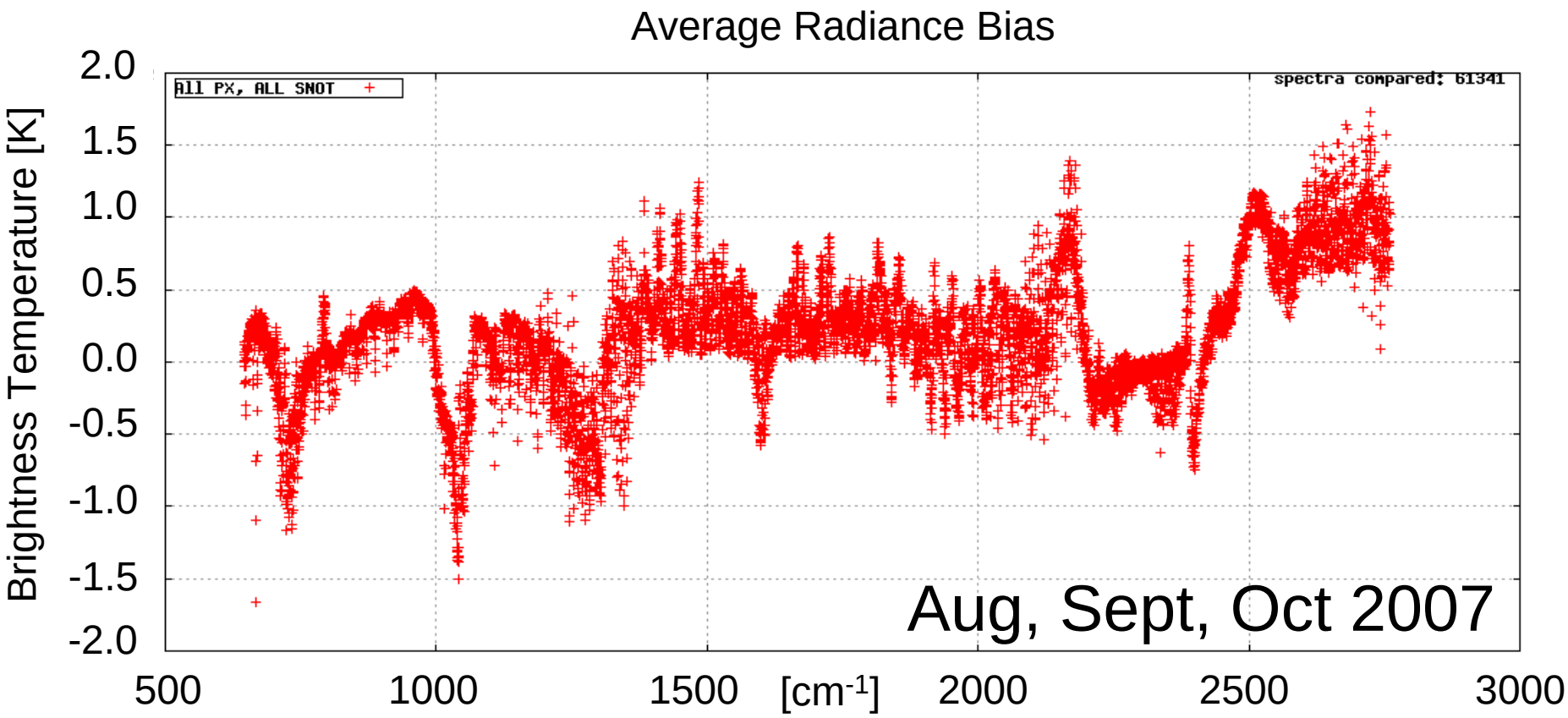

01/10/2007




03/10/2007

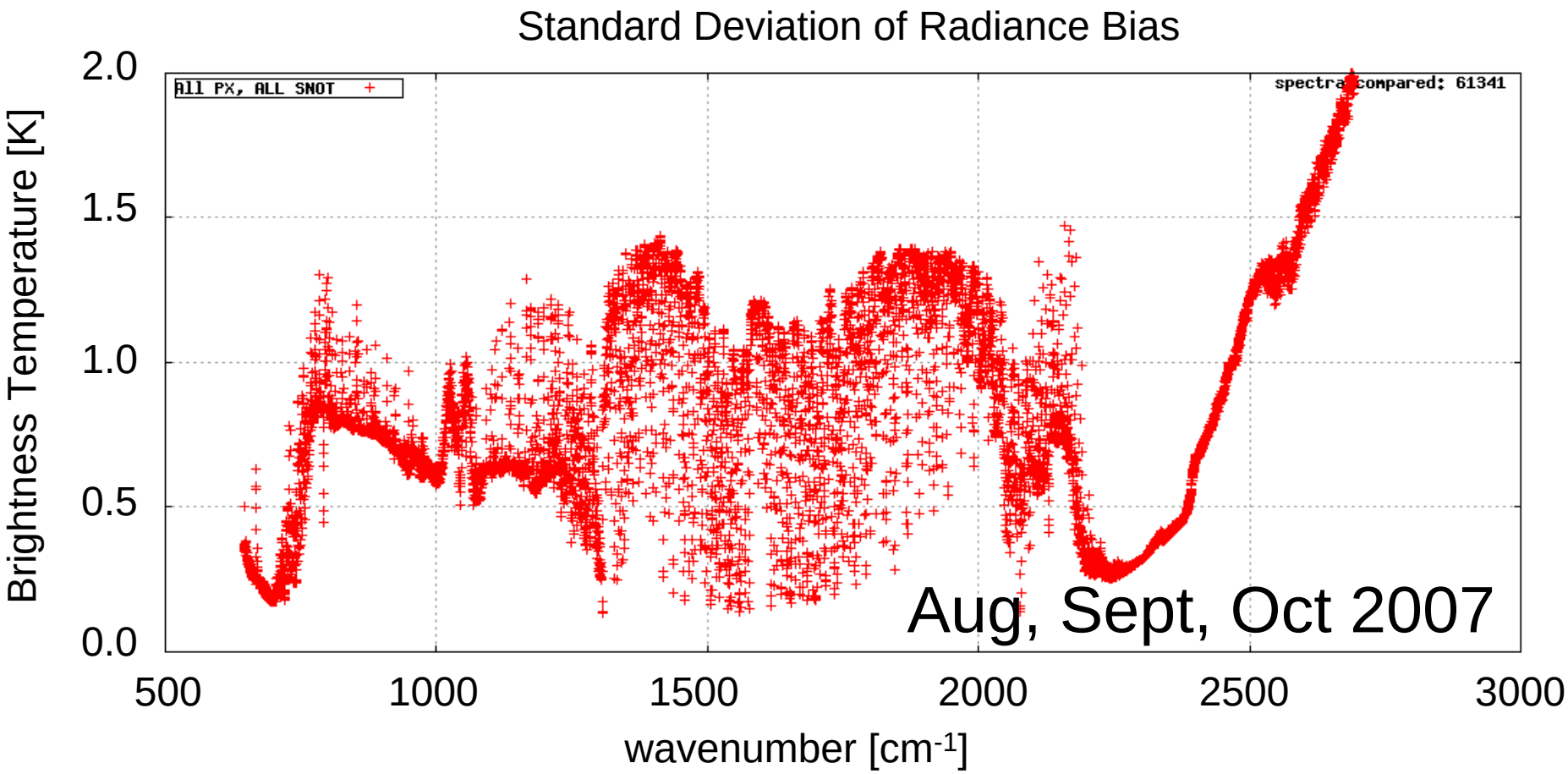
- strong, rapid warming caused overflows over Antarctica for few orbits on 3/10/2007
- not an IASI instrument issue

# IASI measurements vs. RTIASI model



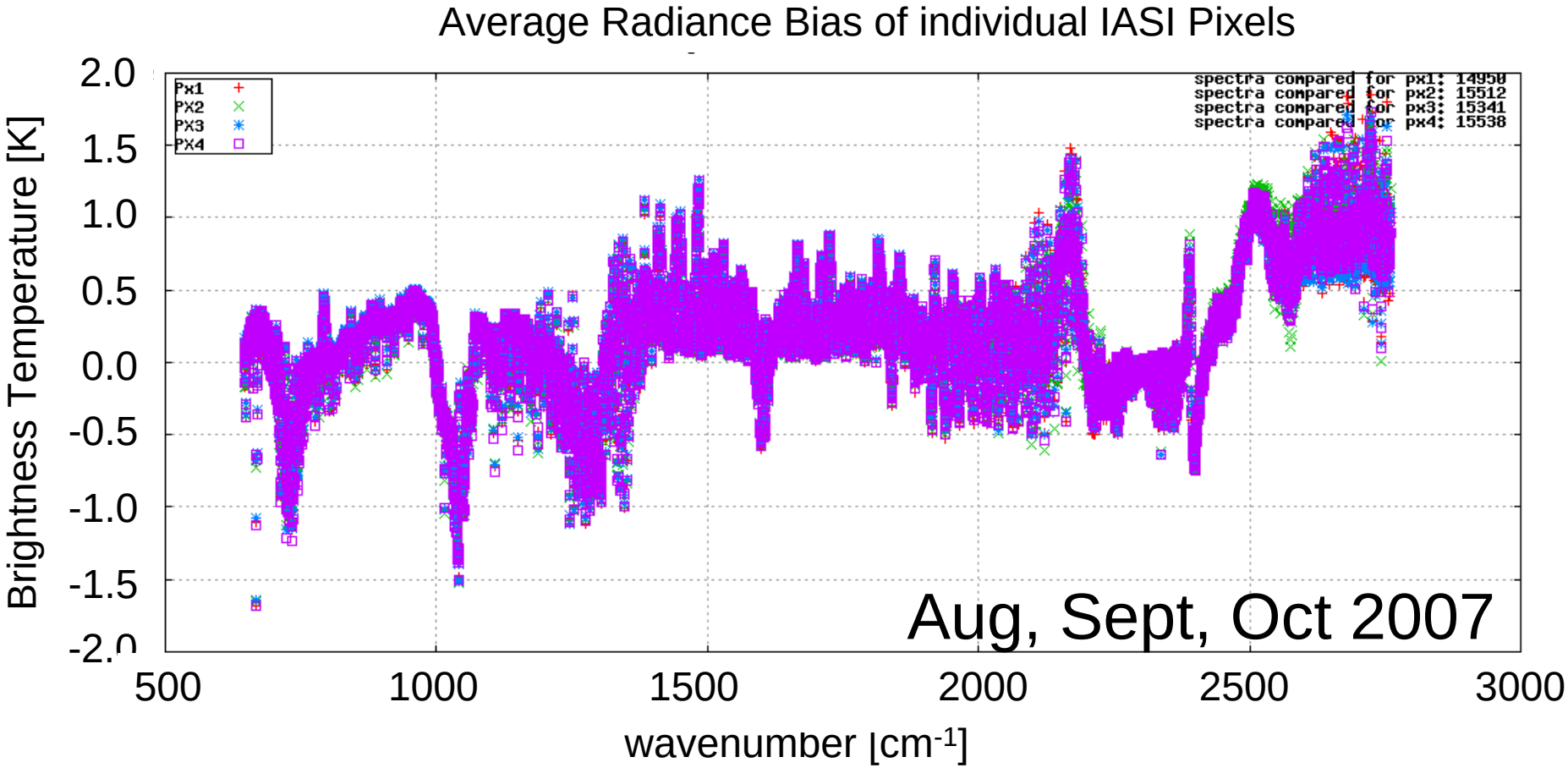

- Based on ECMWF forecast and SST from AVHRR L1B
- Clear sky over sea at night situations
- RTIASI with GENLN2 based coefficients

# IASI measurements vs. RTIASI model



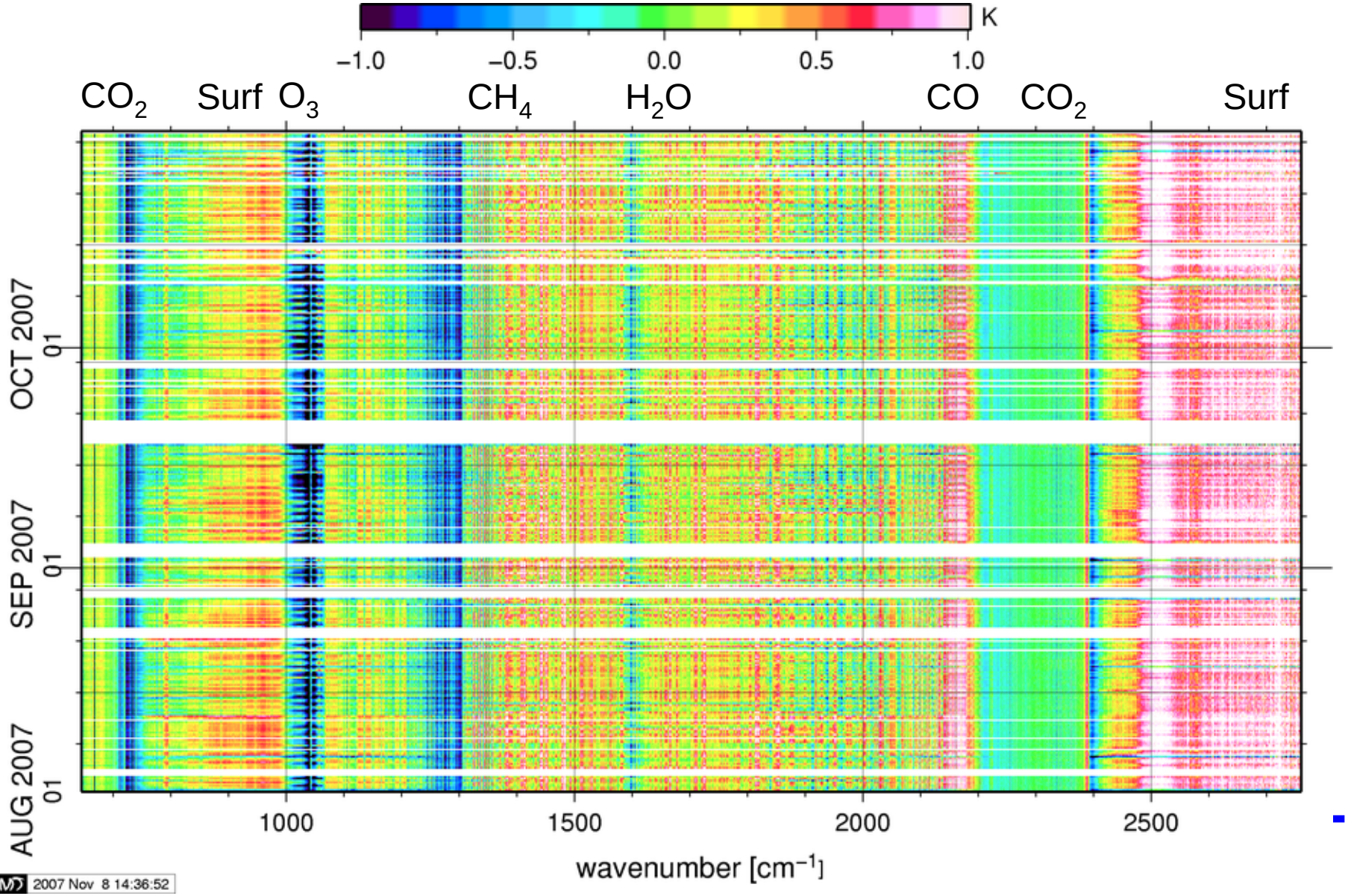

- Number of comparisons: 61341

# IASI measurements vs. RTIASI model



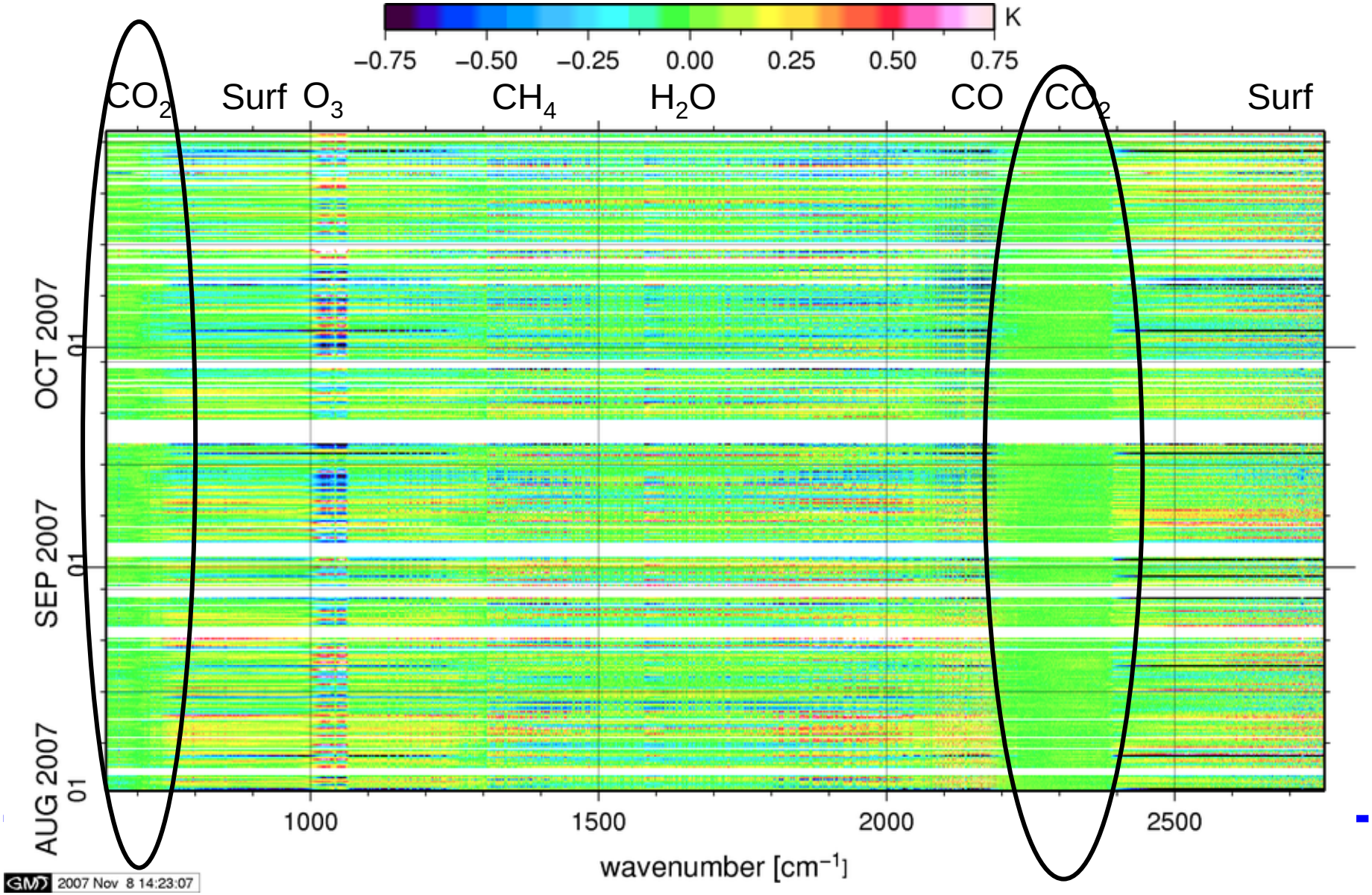

- bias shows no dependency on pixel number
- generally small radiance bias

# IASI measurements vs. RTIASI model at 00, 06, 12, 18 hours



# IASI measurements vs. RTIASI model at 00, 06, 12, 18 h

## with 3 month bias subtracted



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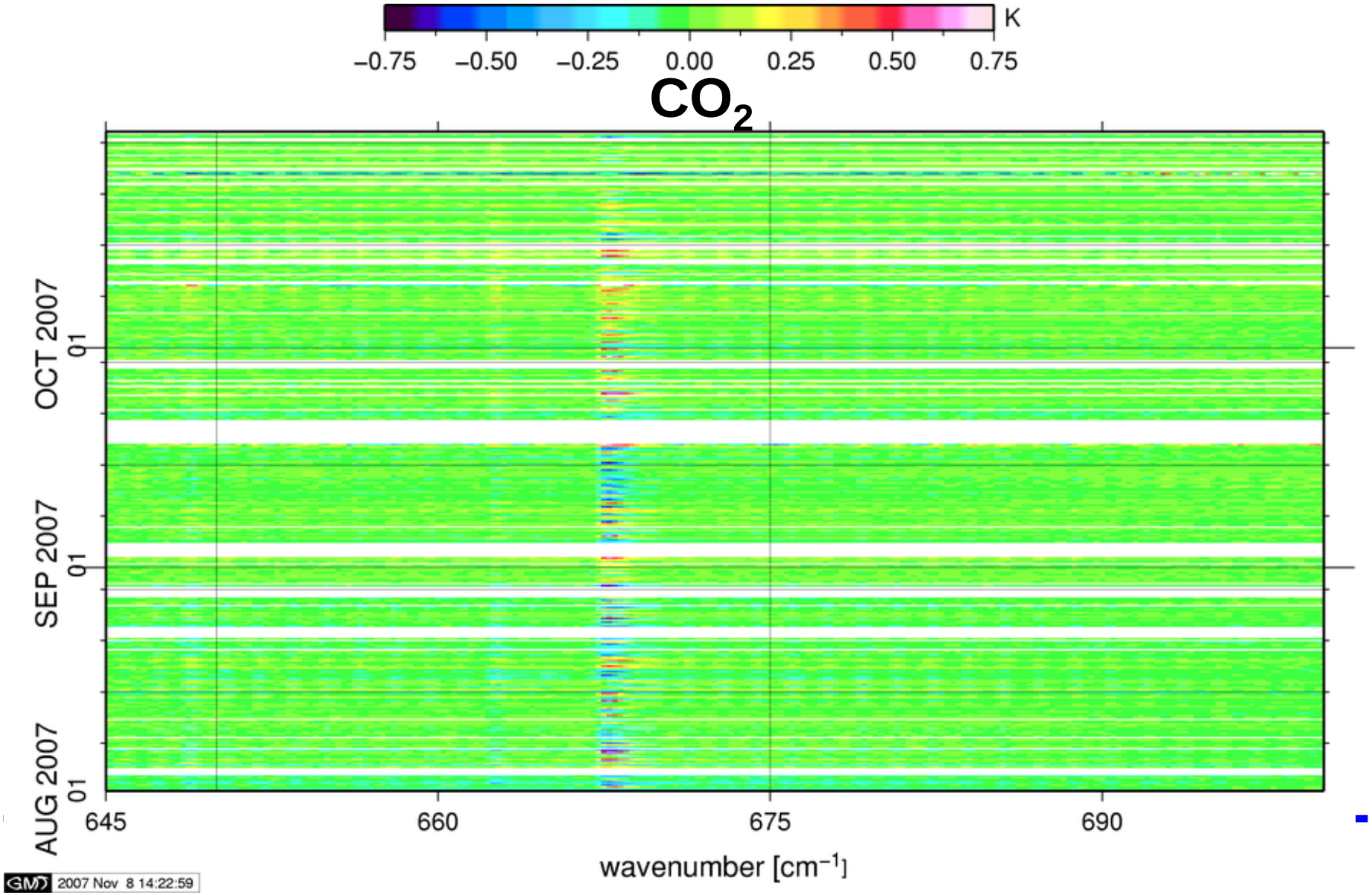

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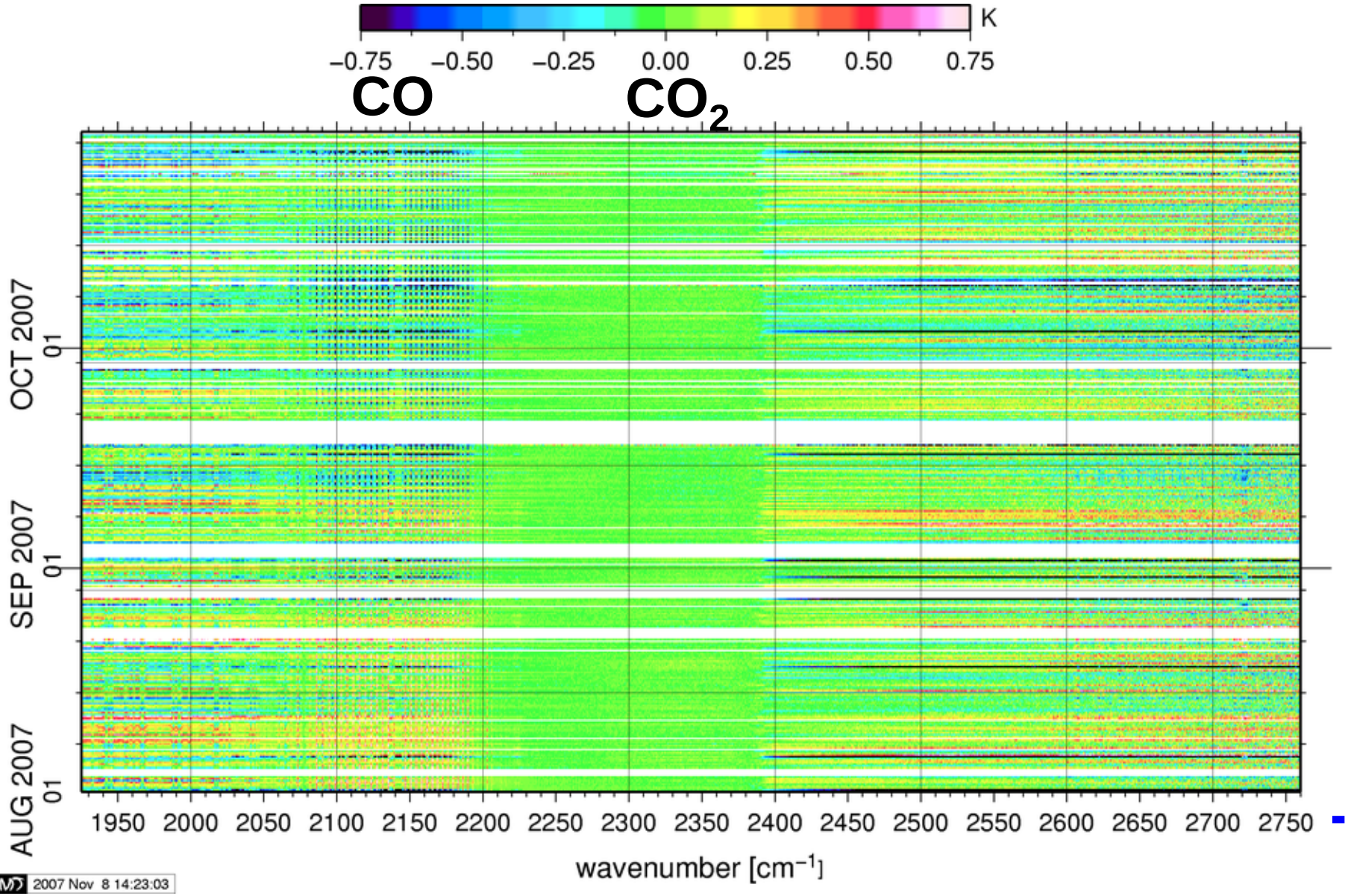

# Conclusions

- Very stable IASI instrument and L1 processing.
- Reliable quality and processing indicators support NRT monitoring well.
- Small biases between IASI L1C measurements and RT calculations.
- Improvement wrt. SST usage in RT calculations to be implemented in November.
- Line-by-Line RT calculations needed to enable monitoring of spectral calibration.