

IASI L0 and L1 Daily Monitoring Report **Metop-C**

IASI monitoring team

10/11/2025 00:00:00 - 11/11/2025 00:00:00

1 Introduction

This report provides summary monitoring plots and figures from IASI instrument on the Metop-C satellite retrieved from the IASI L0 and L1 ENG product (3 minutes data packet) for 10/11/2025 00:00:00 - 11/11/2025 00:00:00 .

The monitoring data are extracted on PDU basis.

2 Data quantity 10/11/2025 00:00:00 - 11/11/2025 00:00:00

Product Type	Number	Action
L0 HKTМ PDUs	481	-
L0 IASI PDUs	481	-
L1 ENG PDUs	480	-
L1 ENG distinct GEPSSGranule	480	-
L1 DPX PDUs (RM: IASI-HIRS)	0	e
L1 DPS Files (RM: OBS-CAL NWP based)	480	-

Table 1: Data quantity

APID	Seq from	Seq to	Time from	Time to
PX1 (130)	4335	4337	20251110011533.562	20251110011533.995
PX1 (130)	11612	12399	20251110162142.554	20251110162513.573
PX1 (130)	12578	12606	20251110162601.358	20251110162608.925
PX1 (130)	12629	12631	20251110162613.897	20251110162614.331
PX1 (130)	12634	12665	20251110162614.979	20251110162623.194
PX1 (130)	4356	5154	20251110170217.808	20251110170549.694
PX2 (135)	11612	12399	20251110162142.554	20251110162513.573
PX2 (135)	12578	12606	20251110162601.358	20251110162608.925
PX2 (135)	12615	12617	20251110162610.870	20251110162611.303
PX2 (135)	12622	12624	20251110162612.385	20251110162612.815
PX2 (135)	12629	12631	20251110162613.897	20251110162614.331
PX2 (135)	12634	12664	20251110162614.979	20251110162622.979
PX2 (135)	4356	5154	20251110170217.808	20251110170549.694
PX3 (140)	11612	12399	20251110162142.554	20251110162513.573
PX3 (140)	12577	12606	20251110162601.139	20251110162608.925
PX3 (140)	12631	12633	20251110162614.331	20251110162614.760
PX3 (140)	12634	12664	20251110162614.979	20251110162622.979
PX3 (140)	4356	5154	20251110170217.808	20251110170549.694
PX4 (145)	11612	12399	20251110162142.554	20251110162513.573

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Table 2 – continued from previous page

APID	Seq from	Seq to	Time from	Time to
PX4 (145)	12577	12606	20251110162601.139	20251110162608.925
PX4 (145)	12617	12619	20251110162611.303	20251110162611.737
PX4 (145)	12624	12626	20251110162612.815	20251110162613.249
PX4 (145)	12631	12633	20251110162614.331	20251110162614.760
PX4 (145)	12634	12664	20251110162614.979	20251110162622.979
PX4 (145)	4355	5154	20251110170217.589	20251110170549.694
IMG (150)	9539	10435	20251110162142.335	20251110162513.573
IMG (150)	10637	10666	20251110162601.139	20251110162607.628
IMG (150)	10674	10676	20251110162609.788	20251110162610.221
IMG (150)	10676	10678	20251110162610.221	20251110162610.655
IMG (150)	10683	10685	20251110162611.737	20251110162612.167
IMG (150)	10690	10692	20251110162613.249	20251110162613.682
IMG (150)	10697	10732	20251110162614.760	20251110162622.979
IMG (150)	3503	4406	20251110170217.589	20251110170549.694
VER (160)	8718	8720	20251110011759.288	20251110011759.288
VER (160)	16380	0	20251110044215.262	20251110044223.262
VER (160)	1	16381	20251110044223.262	20251110044223.262
VER (160)	-1	2	20251110044223.262	20251110044231.262
VER (160)	16381	0	20251110115911.242	20251110115919.242
VER (160)	2	16382	20251110115919.242	20251110115919.242
VER (160)	-1	3	20251110115919.242	20251110115927.242
VER (160)	9837	9973	20251110162135.202	20251110162519.194
VER (160)	10002	10004	20251110162559.194	20251110162601.358
VER (160)	10007	10013	20251110162601.358	20251110162623.194
VER (160)	11362	11493	20251110170215.210	20251110170551.206
VER (160)	16382	0	20251110191607.187	20251110191615.186
VER (160)	3	16383	20251110191615.186	20251110191615.186
VER (160)	-1	4	20251110191615.186	20251110191623.186
AUX (180)	11769	11797	20251110162135.636	20251110162519.628
AUX (180)	11803	11805	20251110162607.628	20251110162623.628
AUX (180)	12074	12101	20251110170215.644	20251110170551.640

Table 2: L0 data gaps

3 Instrument modes

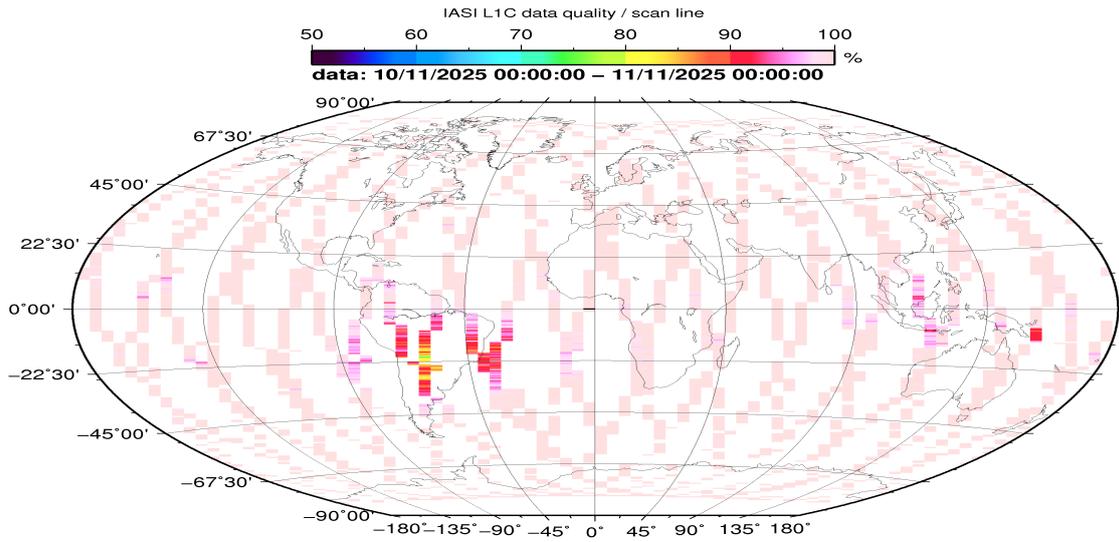
Time	Transition from	Transition to
10/11/2025 00:00:12	-	Normal operation

Table 3: Instrument modes

4 L0 and L1 Data Quality

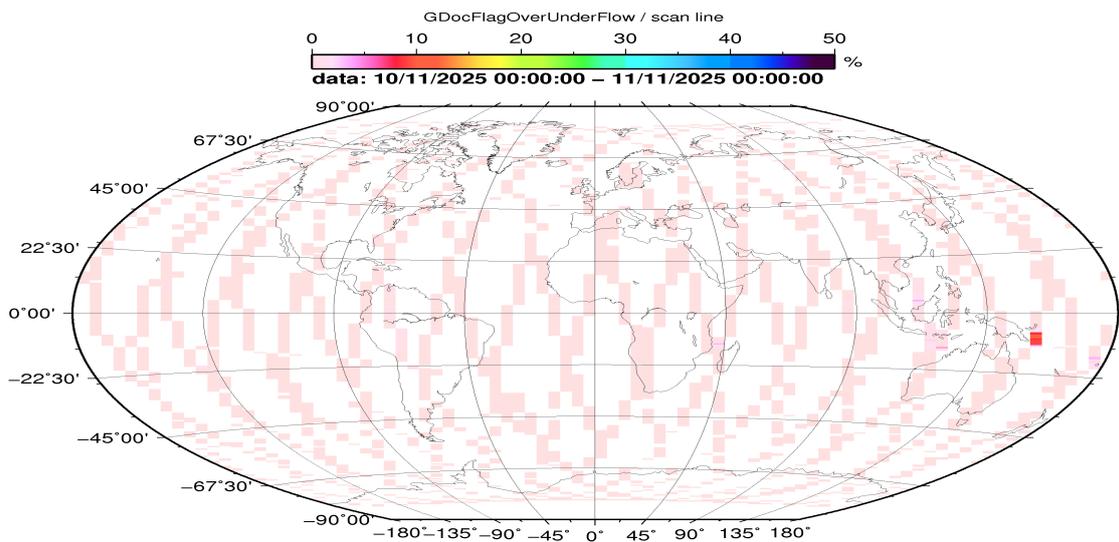
Flag	Value	Action
L0 IASI PDUs	481	-
L1 ENG PDUs	480	-
L1 ENG distinct GEPSGranule	480	-
GQisFlagQual set (PX1)	99.61 %	-
GQisFlagQual set (PX2)	99.66 %	-
GQisFlagQual set (PX3)	99.66 %	-
GQisFlagQual set (PX4)	99.62 %	-
GQisFlagQual set (all)	99.64 %	-

Table 4: Quality flags



GM 2025 Nov 11 07:40:29

Figure 1: L1C data quality



GM 2025 Nov 11 07:40:33

Figure 2: Flag of Over and Under Flows

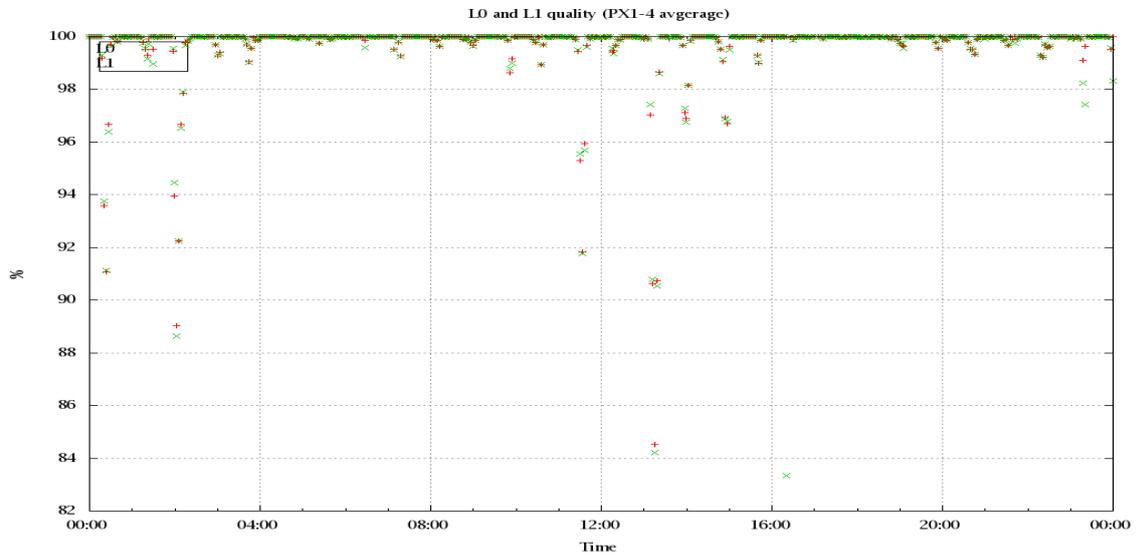


Figure 3: Level 0 and 1C overall quality

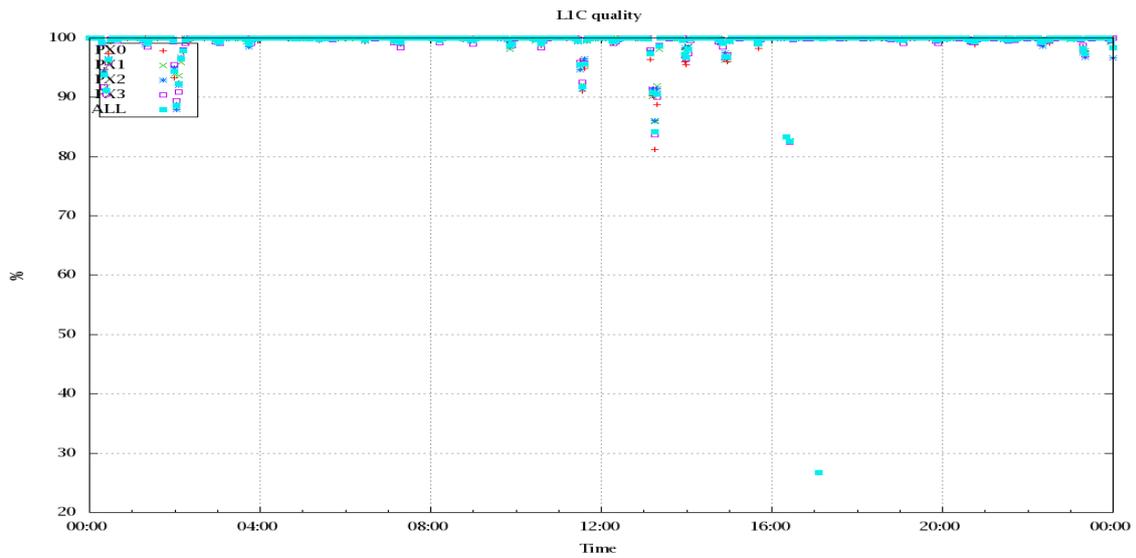


Figure 4: Level 1C quality

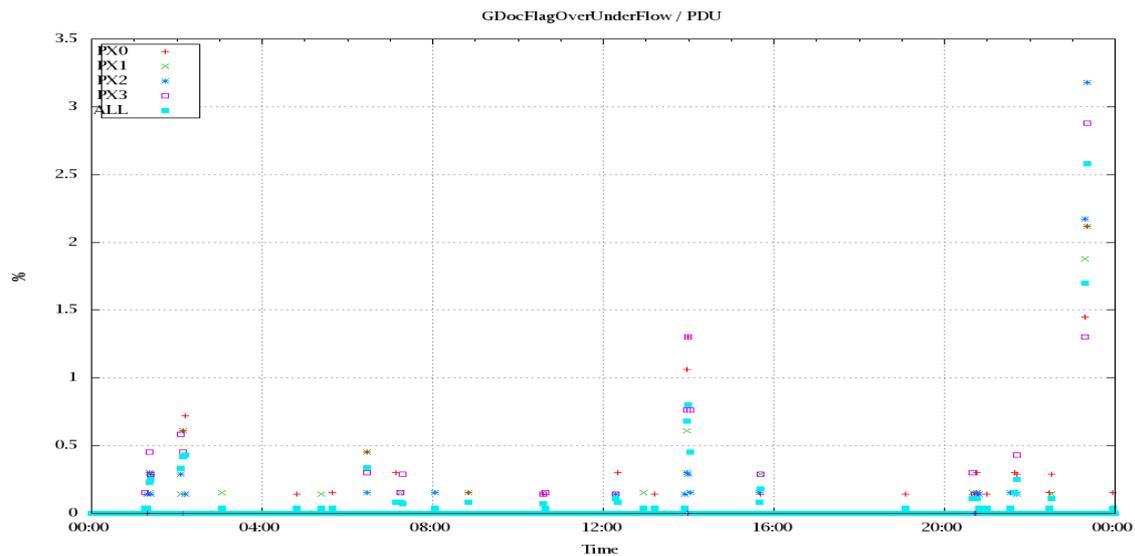


Figure 5: Timeseries of flag of Over and Under Flows

5 Radiance monitoring based on NWP

The radiance monitoring compares the IASI measurements (L1C-eps-products) obtained under clear sky situation over sea with modeled radiances. Cloud identification is based on cloud flag of co-located AVHRR L1B data in addition to information from the IASI L1C clustering analysis here only homogenous situations are taken into account (99.0 percent in first class).

A radiative transfer model (RTM) is feed with co-located ECMWF profiles of T, water vapor and Ozone. Between March 2007 and the 18th of May 2010 RTIASI in Version 4.0 is used. After that date the RTTOV model in V9.3 is used.

Information about the SST is obtained from the AVHRR L1B or taken from AVHRR scenes analysis (CGS only). In the following figures 28 to 34, the so-called radiance anomaly is shown. The radiance anomaly is defined as the difference between the quarter daily radiance average OBS-CAL (over all pixels and scan positions 10 to 20) and the average bias OBS-CAL (over all pixels and scan positions 10 to 20) of the last 30 days.

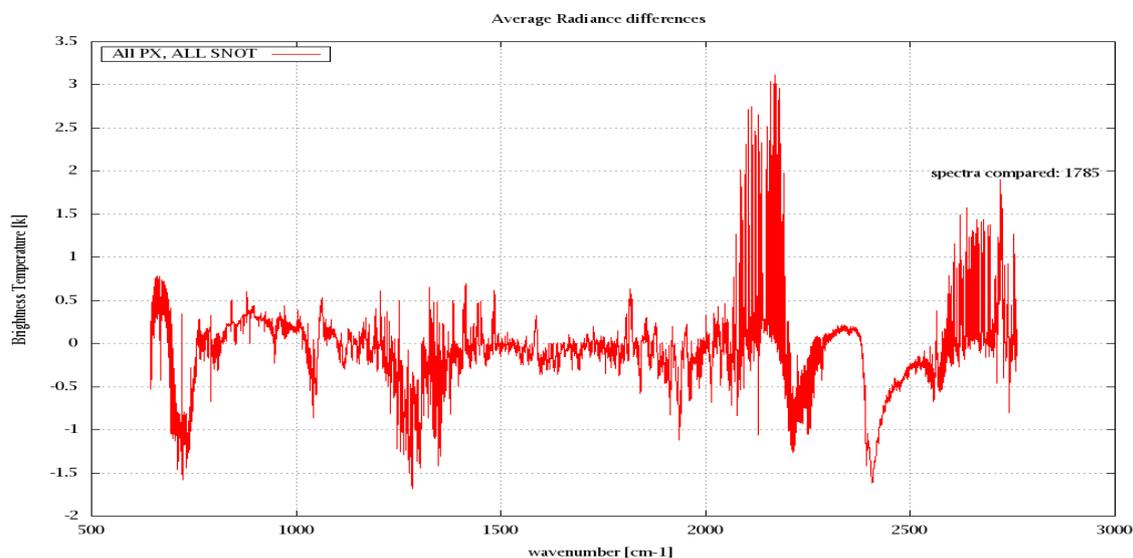


Figure 6: Average Radiance differences: OBS-CAL

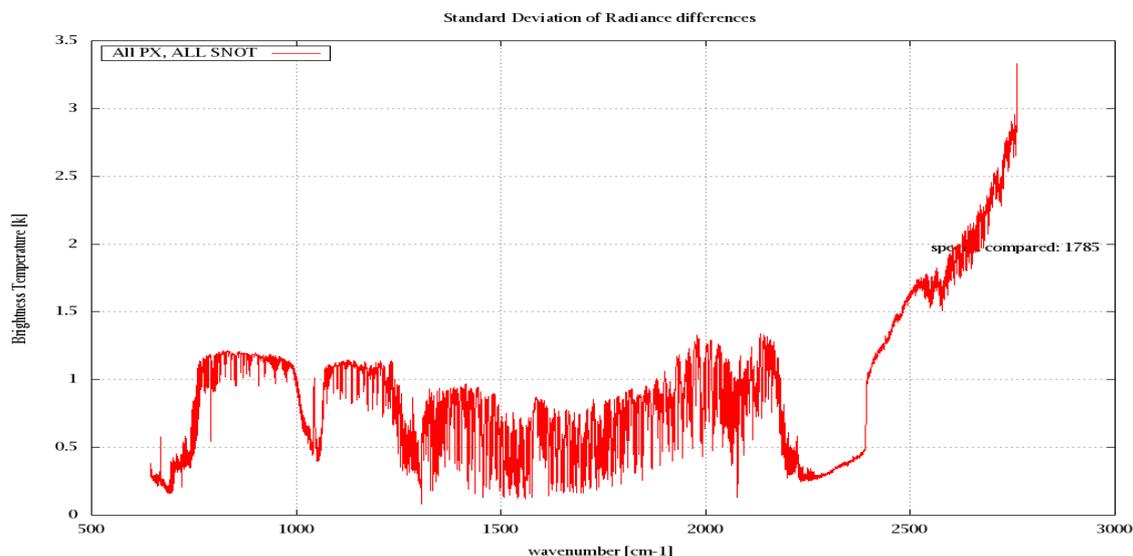


Figure 7: Standard Deviation of Radiance differences

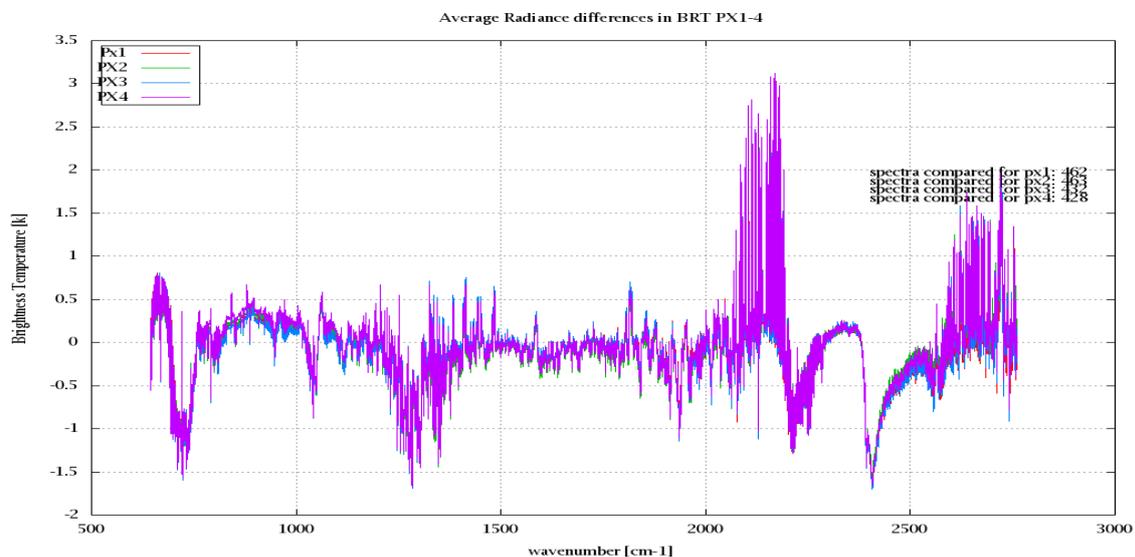


Figure 8: Average Radiance differences: OBS-CAL

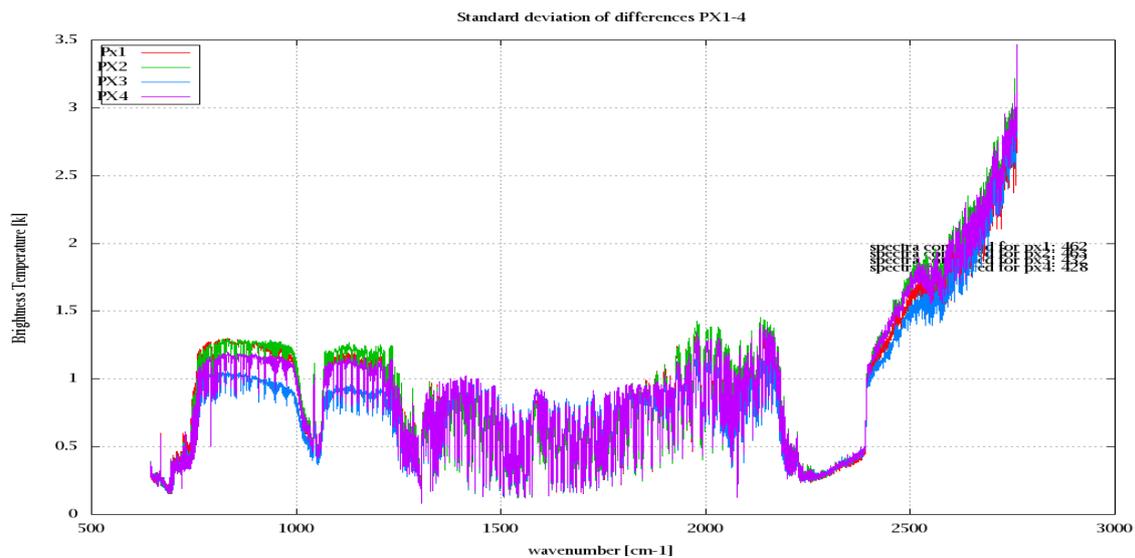


Figure 9: Standard Deviation of Radiance differences

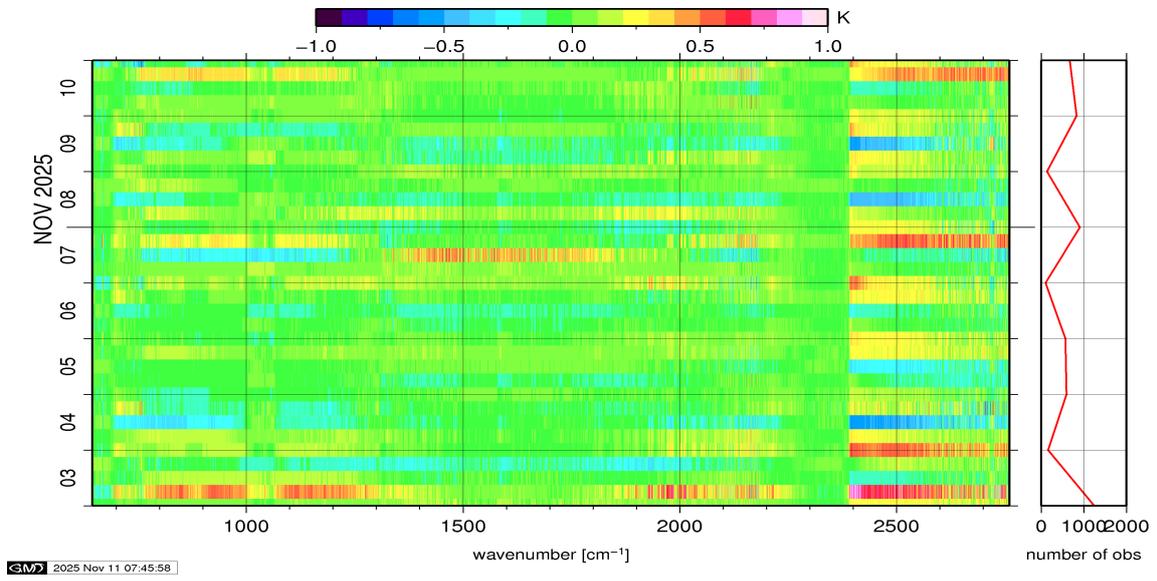


Figure 10: Radiance Anomaly in BT: All Channels

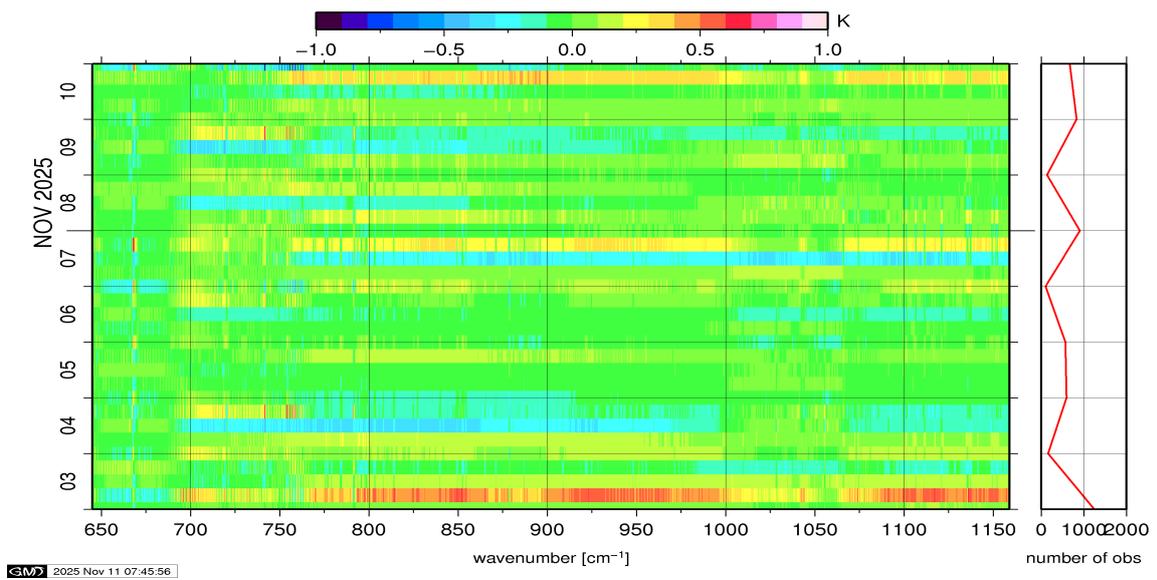


Figure 11: Radiance Anomaly in BT: IASI Band 1

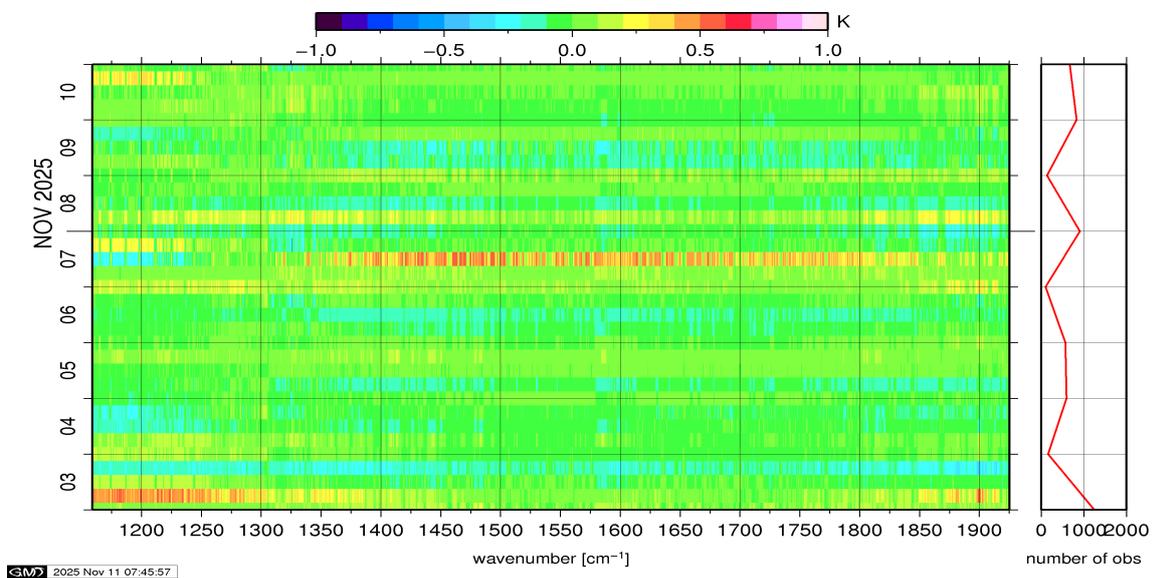


Figure 12: Radiance Anomaly in BT: IASI Band 2

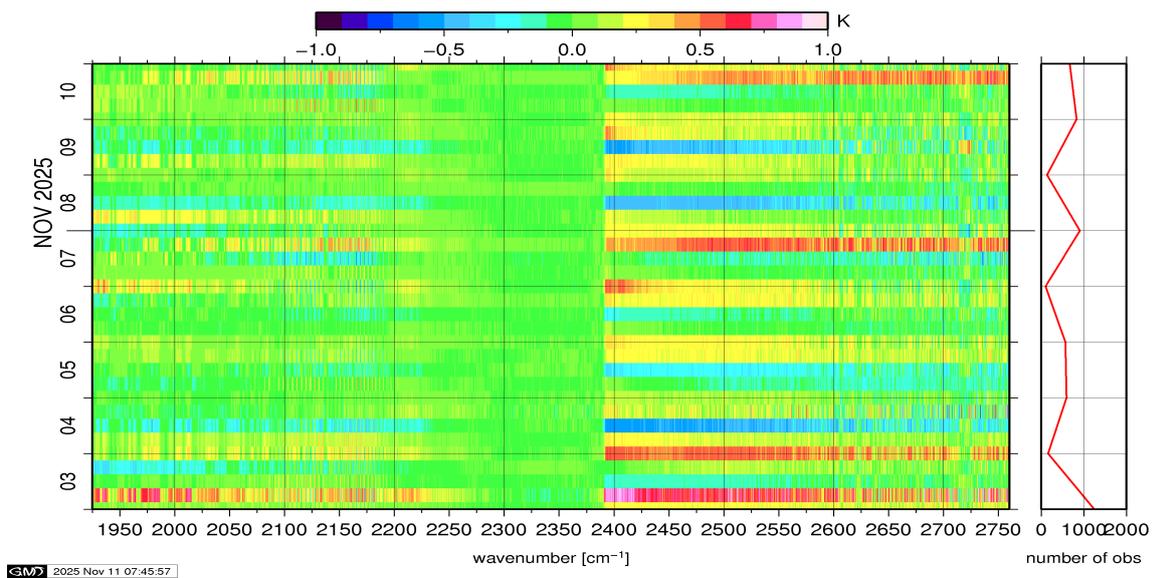


Figure 13: Radiance Anomaly in BT: IASI Band 3

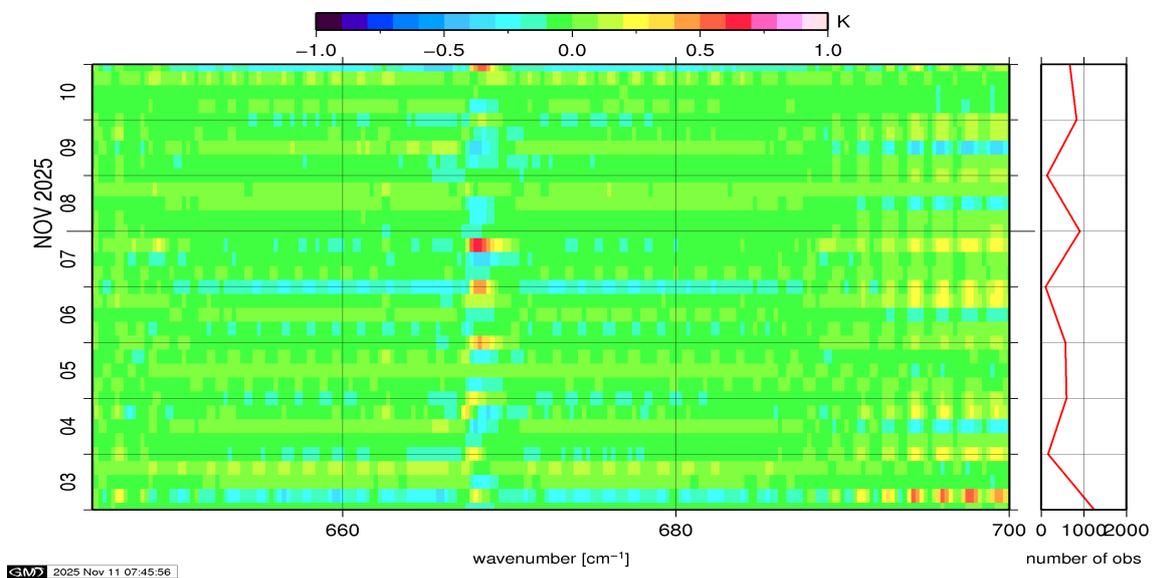


Figure 14: Radiance Anomaly in BT: CO2 14

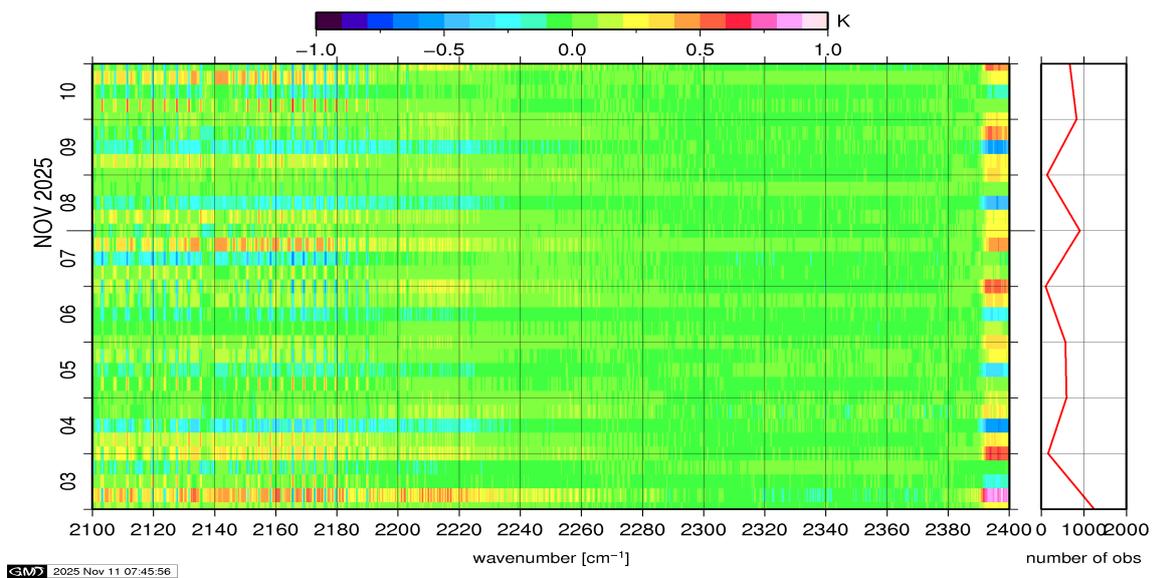


Figure 15: Radiance Anomaly in BT: CO2 4.3

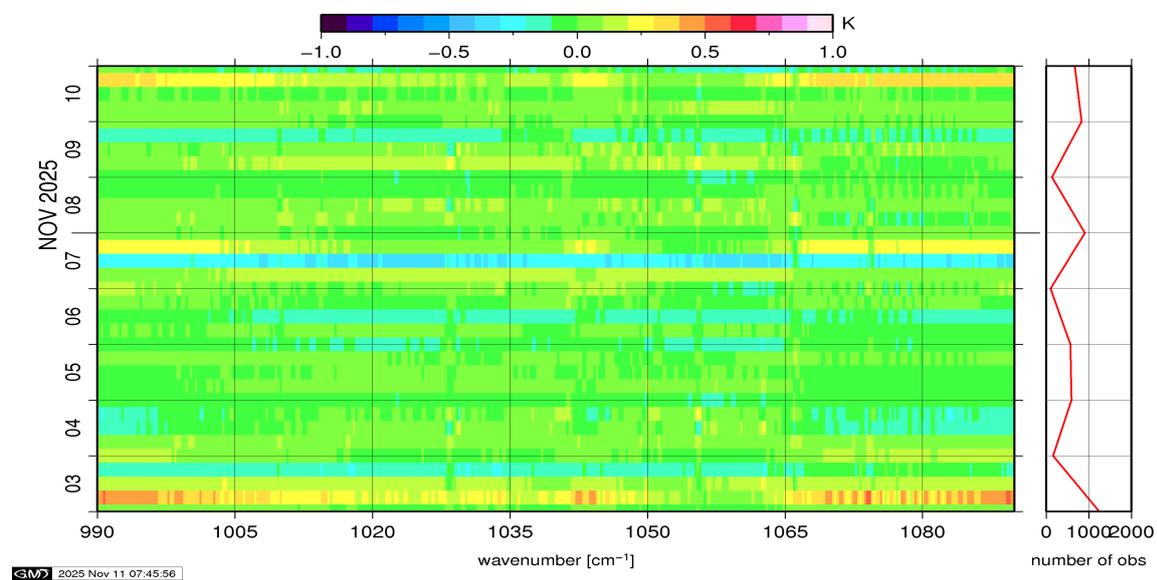


Figure 16: Radiance Anomaly in BT: O3