

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

IASI monitoring team

28/07/2026 00:00:00 - 29/07/2026 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 28/07/2026 00:00:00 - 29/07/2026 00:00:00 .

The monitoring data are extracted on PDU basis.

2 Data quantity 28/07/2026 00:00:00 - 29/07/2026 00:00:00

Product Type	Number	Action
L0 HKTM PDUs	479	-
L0 IASI PDUs	479	-
L1 ENG PDUs	479	-
L1 ENG distinct GEPSGranule	477	-
L1 DPX PDUs (RM: IASI-HIRS)	0	e
L1 DPS Files (RM: OBS-CAL NWP based)	479	-

Table 1: Data quantity

APID	Seq from	Seq to	Time from	Time to
PX1 (130)	9752	9771	20260728125233.566	20260728125237.675
PX1 (130)	9977	11947	20260728125332.808	20260728130218.632
PX1 (130)	11974	11977	20260728130225.983	20260728130226.632
PX2 (135)	9752	9771	20260728125233.566	20260728125237.675
PX2 (135)	9975	9977	20260728125332.375	20260728125332.808
PX2 (135)	9977	11947	20260728125332.808	20260728130218.632
PX2 (135)	11974	11977	20260728130225.983	20260728130226.632
PX3 (140)	9751	9770	20260728125233.351	20260728125237.457
PX3 (140)	9975	11947	20260728125332.375	20260728130218.632
PX3 (140)	11974	11977	20260728130225.983	20260728130226.632
PX4 (145)	9751	9769	20260728125233.351	20260728125237.242
PX4 (145)	9974	9976	20260728125332.160	20260728125332.593
PX4 (145)	9976	11946	20260728125332.593	20260728130218.417
PX4 (145)	11974	11977	20260728130225.983	20260728130226.632
IMG (150)	12152	12170	20260728125233.566	20260728125237.457
IMG (150)	12402	12404	20260728125332.160	20260728125332.593
IMG (150)	12406	14638	20260728125333.023	20260728130218.417
IMG (150)	14669	14673	20260728130225.768	20260728130226.632
VER (160)	16379	0	20260728060414.336	20260728060422.336

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Table 2 – continued from previous page

APID	Seq from	Seq to	Time from	Time to
VER (160)	0	16380	20260728060422.336	20260728060422.336
VER (160)	-1	1	20260728060422.336	20260728060430.336
VER (160)	15340	15671	20260728125326.320	20260728130222.307
VER (160)	16380	0	20260728132110.314	20260728132118.314
VER (160)	1	16381	20260728132118.314	20260728132118.314
VER (160)	-1	2	20260728132118.314	20260728132126.314
AUX (180)	12894	12961	20260728125326.753	20260728130222.741

Table 2: L0 data gaps

3 Instrument modes

Time	Transition from	Transition to
28/07/2026 00:00:15	-	Normal operation
28/07/2026 15:10:07	Normal operation	Auxiliary ASE synchronised
28/07/2026 15:12:15	Auxiliary ASE synchronised	Normal operation

Table 3: Instrument modes

4 L0 and L1 Data Quality

Flag	Value	Action
L0 IASI PDUs	479	-
L1 ENG PDUs	479	-
L1 ENG distinct GEPSGranule	477	-
GQisFlagQual set (PX1)	99.56 %	-
GQisFlagQual set (PX2)	99.58 %	-
GQisFlagQual set (PX3)	99.59 %	-
GQisFlagQual set (PX4)	99.52 %	-
GQisFlagQual set (all)	99.56 %	-

Table 4: Quality flags

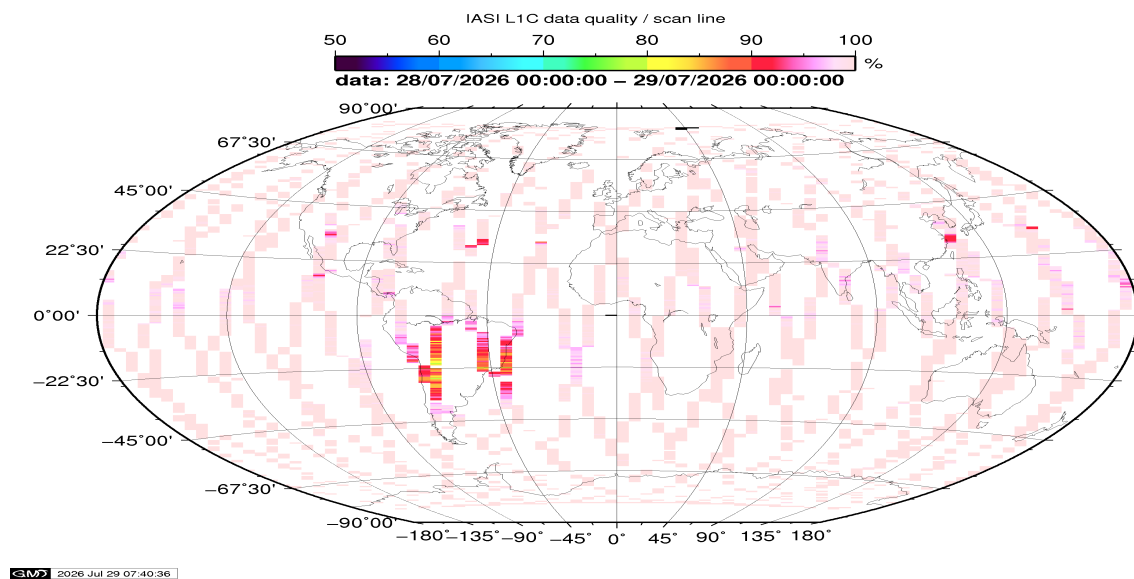


Figure 1: L1C data quality

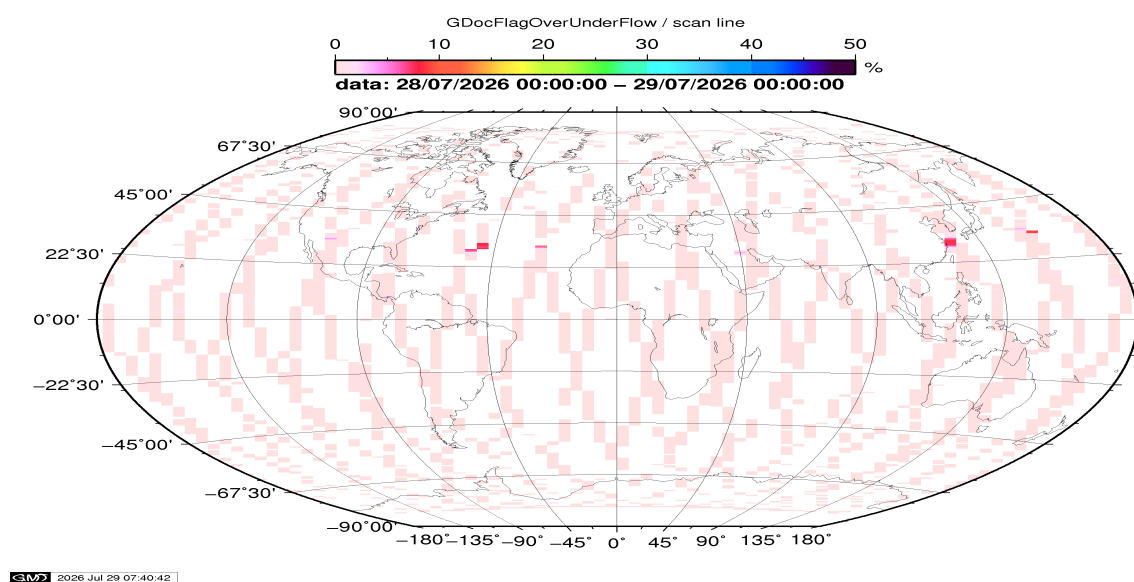


Figure 2: Flag of Over and Under Flows

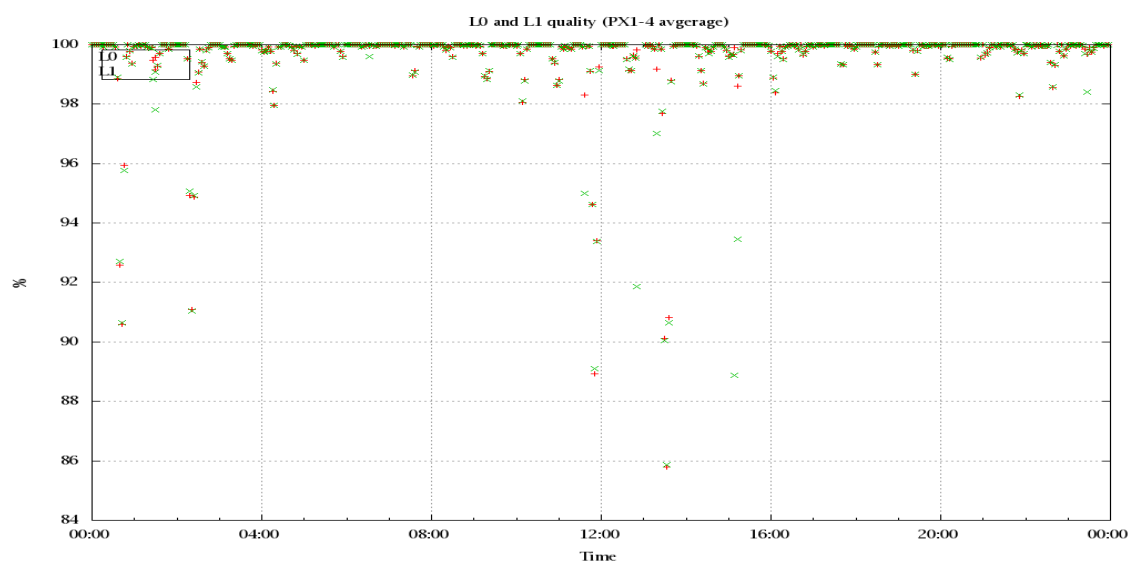


Figure 3: Level 0 and 1C overall quality

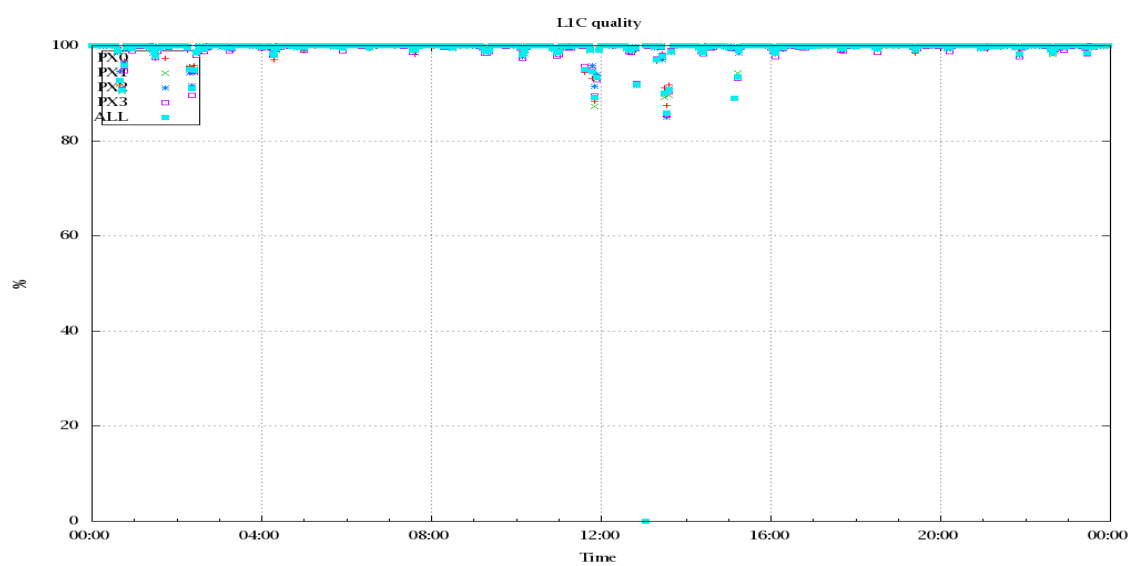


Figure 4: Level 1C quality

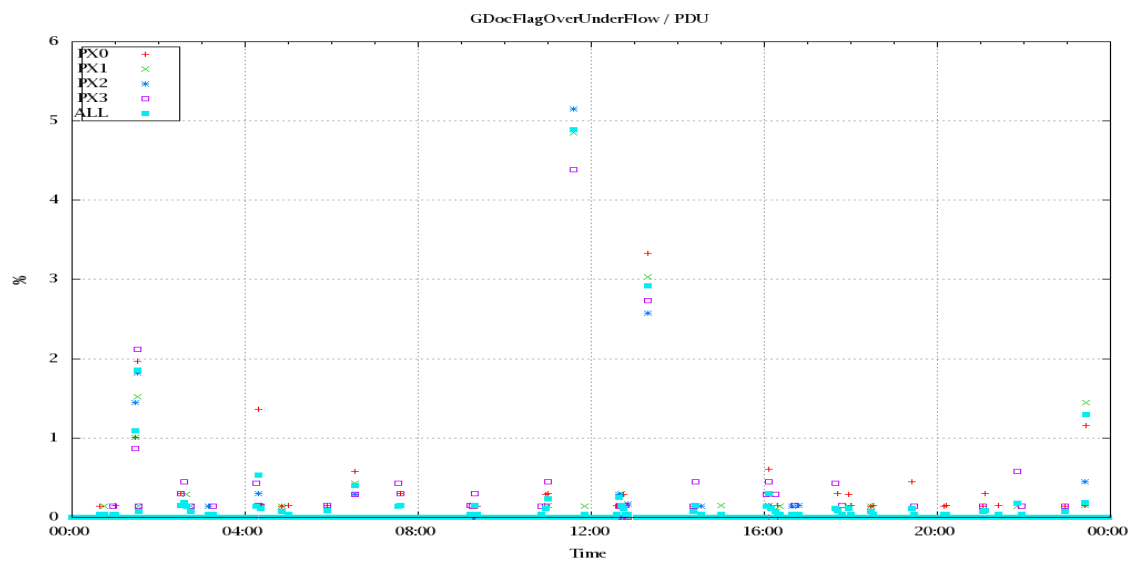


Figure 5: Timeseries of flag of Over and Under Flows

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.

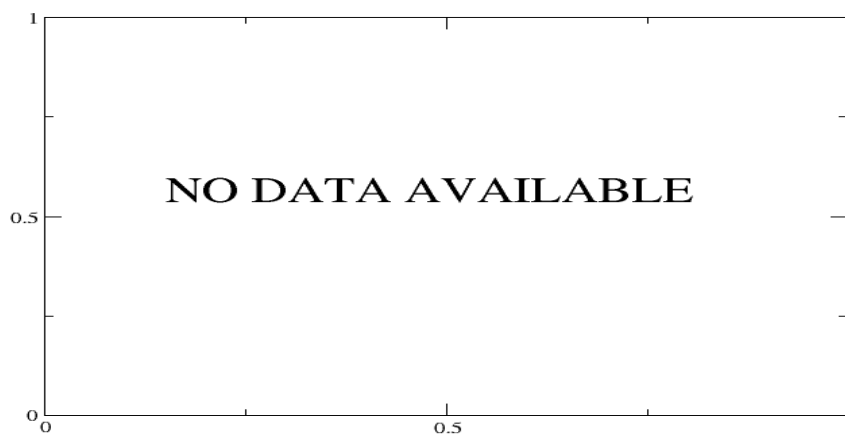


Figure 6: Average Radiance differences: OBS-CAL

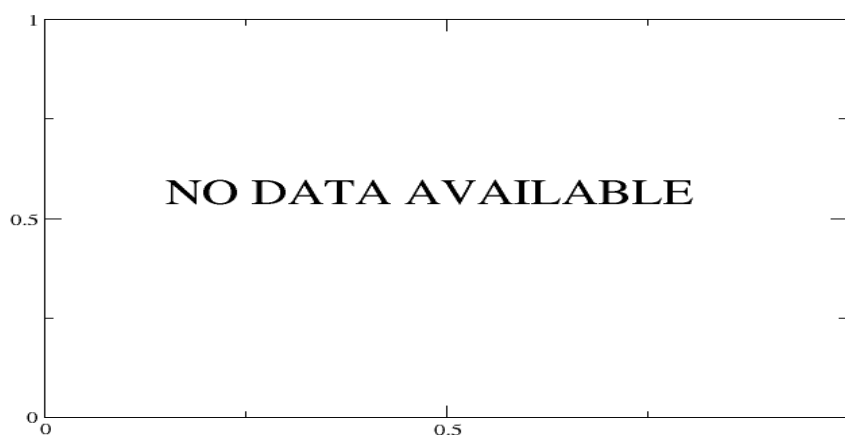


Figure 7: Standard Deviation of Radiance differences



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

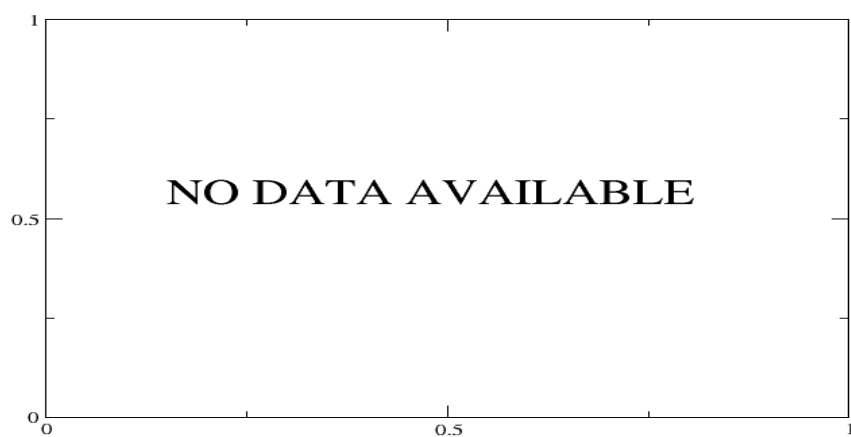


Figure 14: Radiance Anomaly in BT: CO2 14

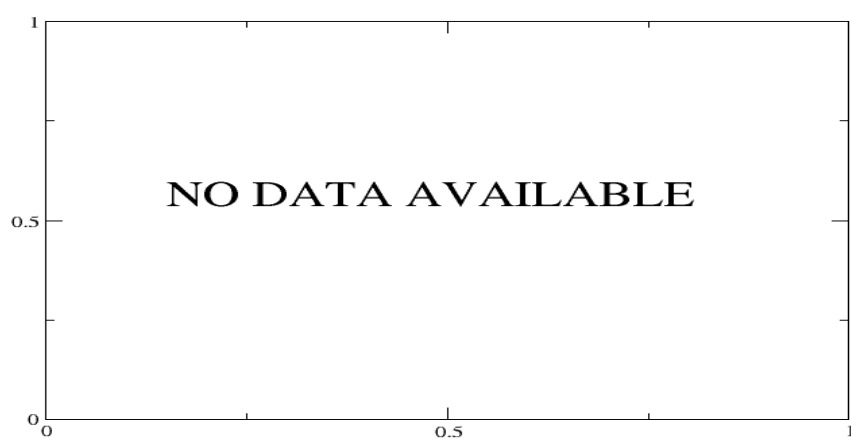


Figure 15: Radiance Anomaly in BT: CO2 4.3

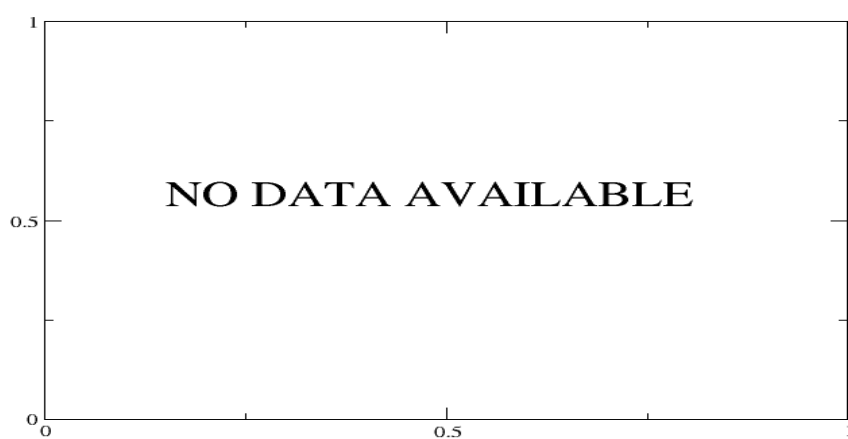


Figure 16: Radiance Anomaly in BT: O3