

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

IASI monitoring team

02/06/2026 00:00:00 - 03/06/2026 00:00:00

1 Introduction

This report provides summary monitoring plots and figures from IASI instrument on the Metop-B satellite retrieved from the IASI L0 and L1 ENG product (3 minutes data packet) for 02/06/2026 00:00:00 - 03/06/2026 00:00:00 .

The monitoring data are extracted on PDU basis.

2 Data quantity 02/06/2026 00:00:00 - 03/06/2026 00:00:00

Product Type	Number	Action
L0 HKTM PDUs	481	-
L0 IASI PDUs	481	-
L1 ENG PDUs	480	-
L1 ENG distinct GEPSGranule	479	-
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)	11196	11216	20260602122347.089	20260602122352.952
PX1 (130)	11299	11505	20260602122413.925	20260602122509.057
PX1 (130)	11505	11507	20260602122509.057	20260602122509.491
PX1 (130)	11543	11545	20260602122518.788	20260602122520.733
PX2 (135)	11196	11216	20260602122347.089	20260602122352.952
PX2 (135)	11299	11506	20260602122413.925	20260602122509.276
PX2 (135)	11507	11509	20260602122509.491	20260602122509.925
PX3 (140)	11196	11216	20260602122347.089	20260602122352.952
PX3 (140)	11216	11219	20260602122352.952	20260602122353.604
PX3 (140)	11296	11298	20260602122413.276	20260602122413.710
PX3 (140)	11298	11506	20260602122413.710	20260602122509.276
PX4 (145)	11197	11216	20260602122347.304	20260602122352.952
PX4 (145)	11297	11506	20260602122413.495	20260602122509.276
PX4 (145)	11506	11508	20260602122509.276	20260602122509.710
IMG (150)	11189	11209	20260602122347.304	20260602122352.085
IMG (150)	11209	11212	20260602122352.085	20260602122352.952
IMG (150)	11300	11302	20260602122413.276	20260602122413.710
IMG (150)	11302	11537	20260602122413.710	20260602122509.057
IMG (150)	11578	11580	20260602122518.573	20260602122519.003
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Table 2 – continued from previous page

APID	Seq from	Seq to	Time from	Time to
IMG (150)	11581	11583	20260602122519.436	20260602122520.085
VER (160)	16381	3	20260602122342.972	20260602122359.007
VER (160)	12	48	20260602122407.007	20260602122511.007
VER (160)	53	57	20260602122519.003	20260602122519.003
AUX (180)	0	8	20260602122407.440	20260602122511.436

Table 2: L0 data gaps

3 Instrument modes

Time	Transition from	Transition to
02/06/2026 00:00:53	-	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	479	-
GQisFlagQual set (PX1)	99.68 %	-
GQisFlagQual set (PX2)	99.75 %	-
GQisFlagQual set (PX3)	99.76 %	-
GQisFlagQual set (PX4)	99.66 %	-
GQisFlagQual set (all)	99.71 %	-

Table 4: Quality flags

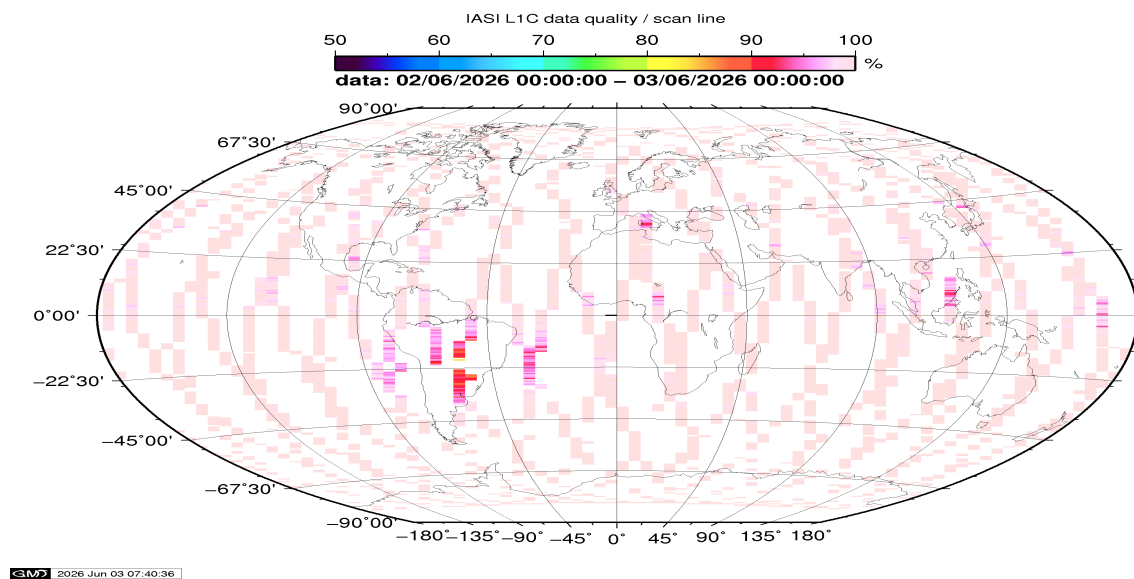


Figure 1: L1C data quality

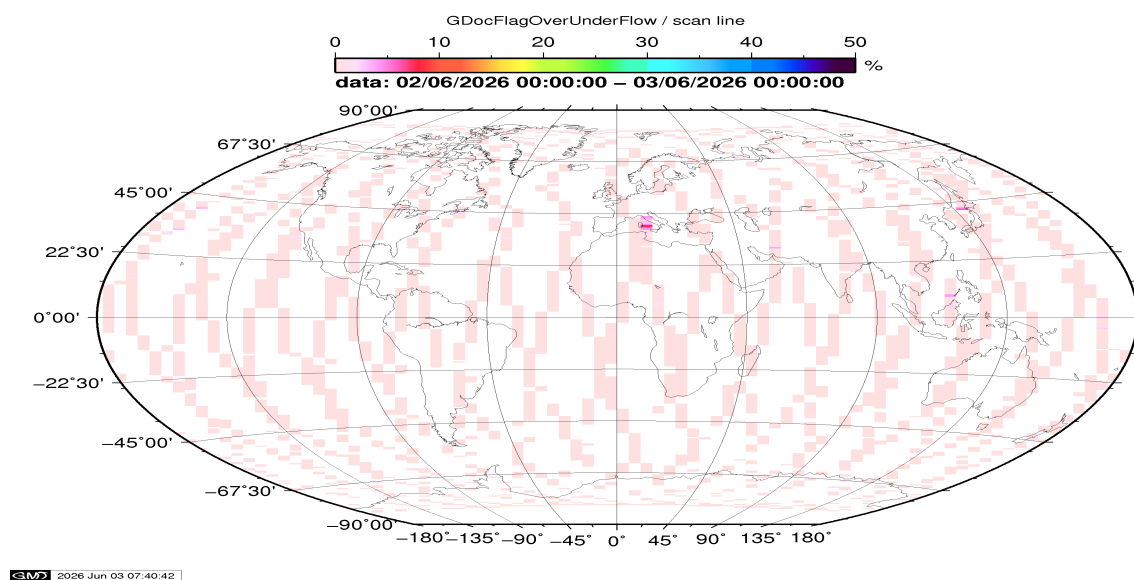


Figure 2: Flag of Over and Under Flows

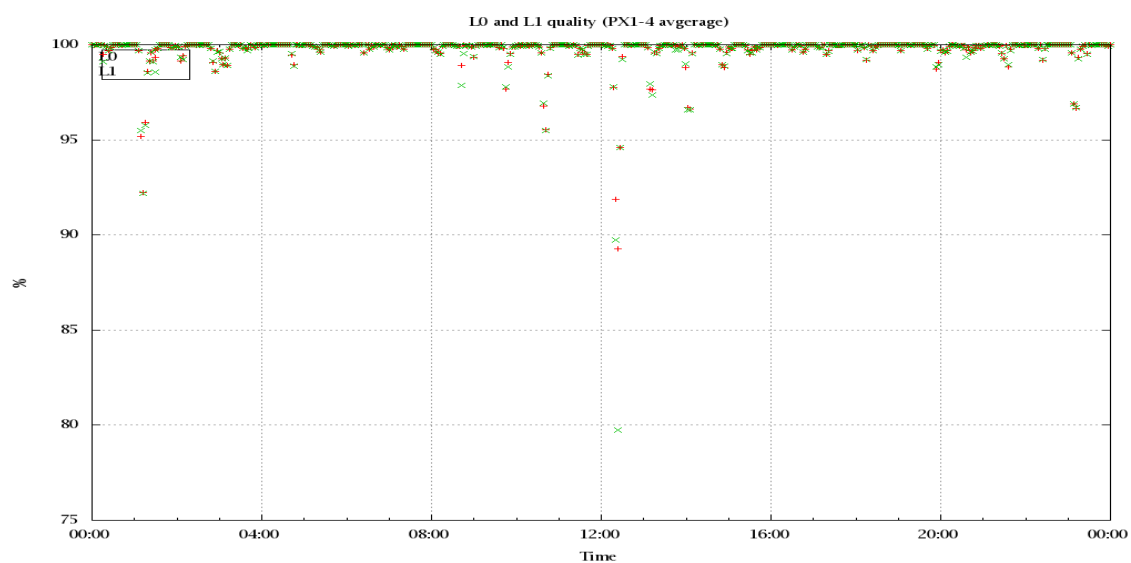


Figure 3: Level 0 and 1C overall quality

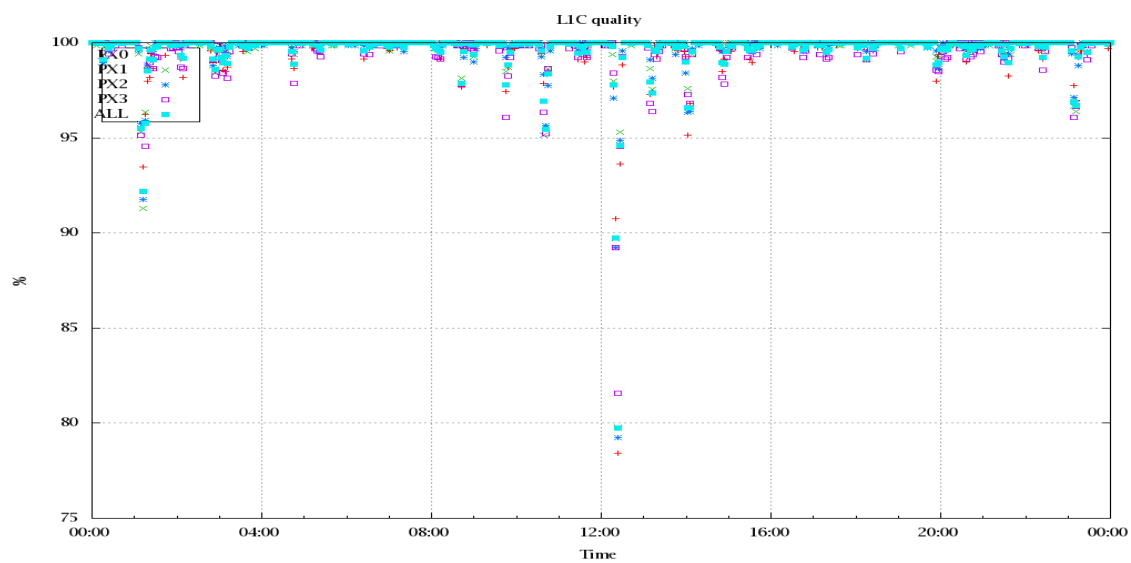


Figure 4: Level 1C quality

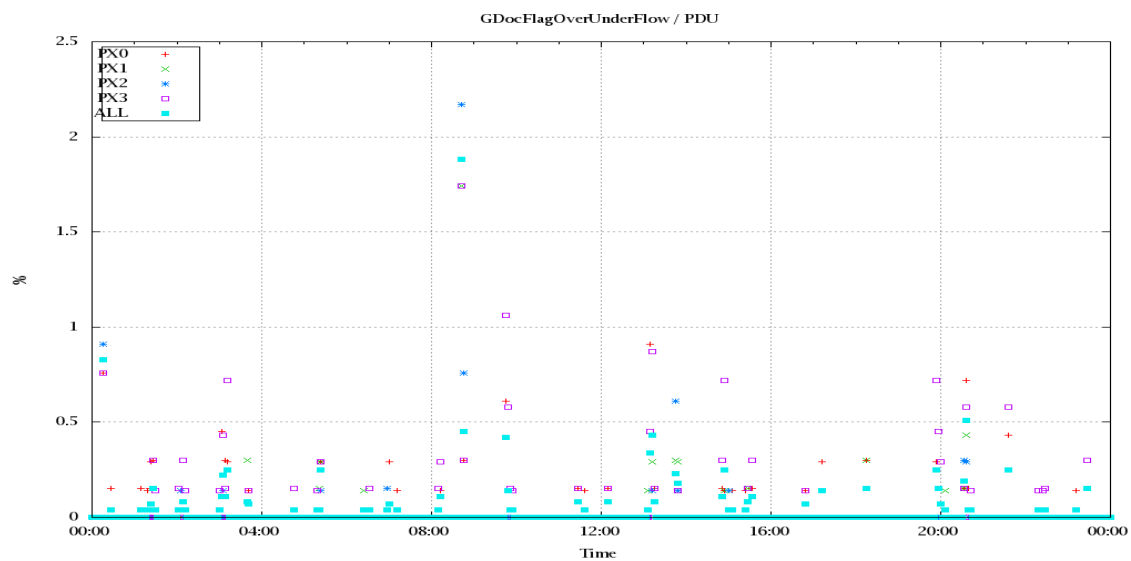


Figure 5: Timeseries of flag of Over and Under Flows

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.

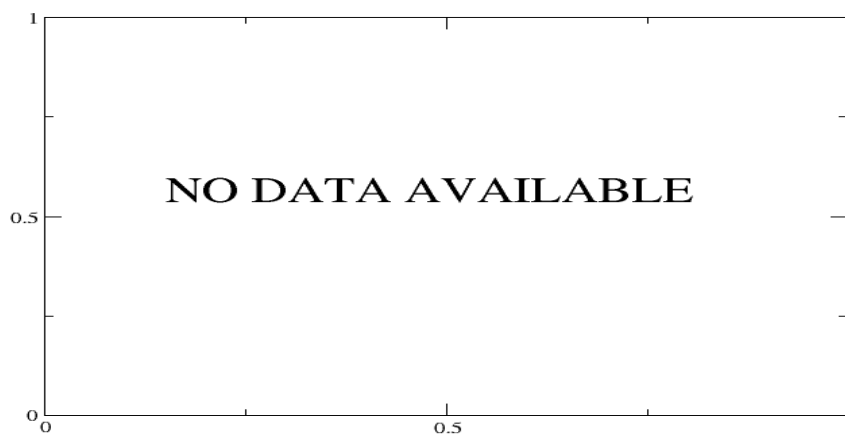


Figure 6: Average Radiance differences: OBS-CAL

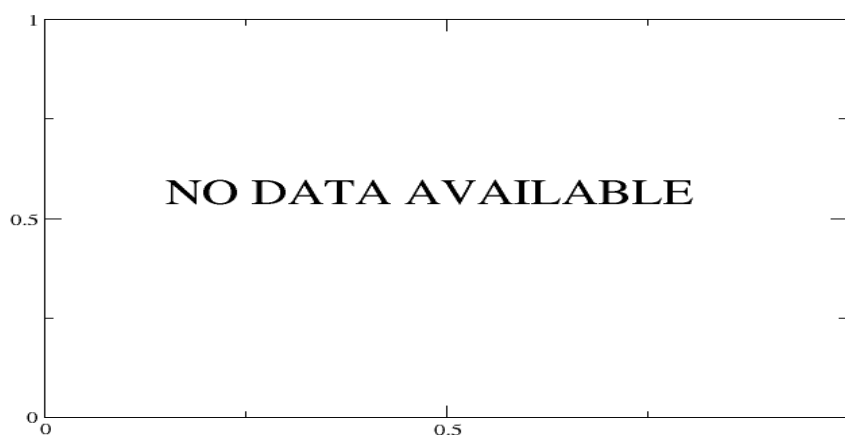


Figure 7: Standard Deviation of Radiance differences



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

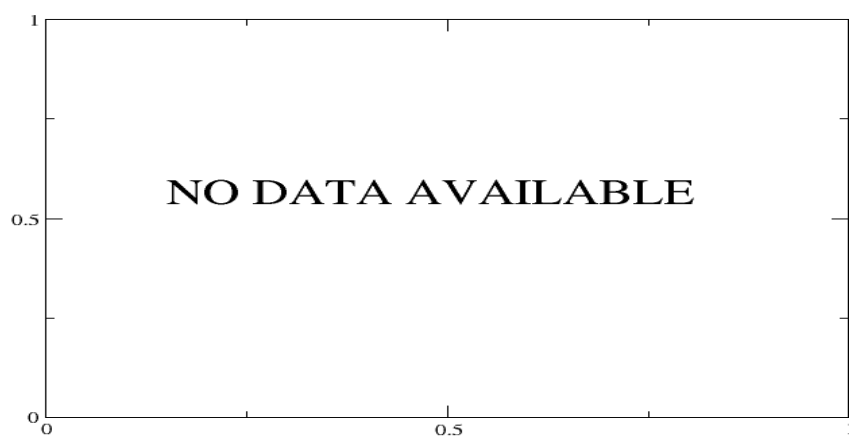


Figure 14: Radiance Anomaly in BT: CO2 14



Figure 15: Radiance Anomaly in BT: CO2 4.3



Figure 16: Radiance Anomaly in BT: O3

6 IASI-HIRS radiance comparison Channel 1-19

The radiance comparison of IASI and HIRS/4 on-board Metop is performed on all pixels with distances smaller than 3 km between IASI and HIRS. All sky conditions are covered. The radiance differences IASI - HIRS are given in brightness temperatures at 280K reference NeDT. All conditions (clear, cloudy, day and night) are given in red in the following figures. The clear sky conditions at night are given in green and the clear sky cases during daylight are displayed in blue.

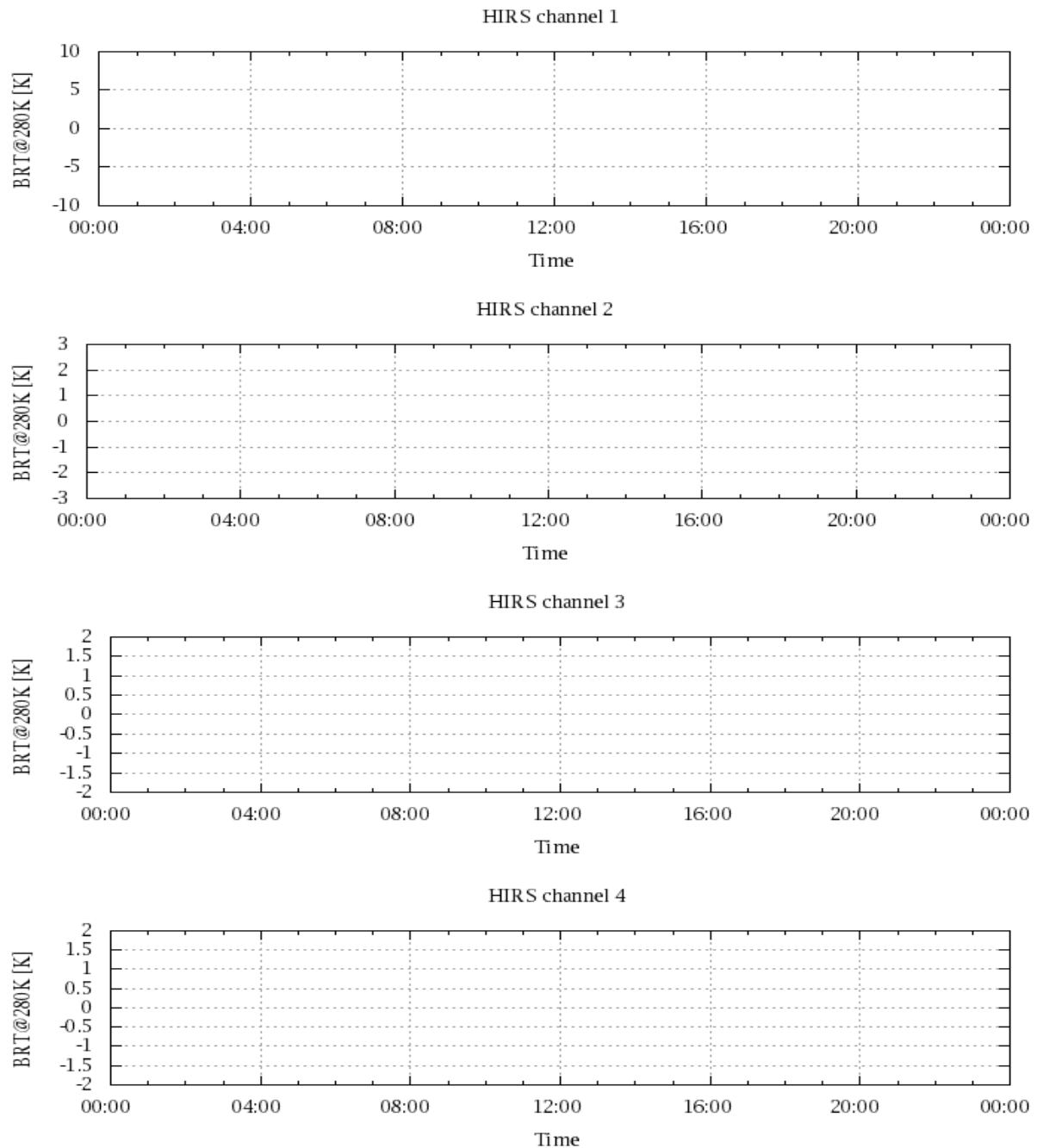


Figure 17: Radiance Differences in BT



Figure 18: Radiance Differences in BT



Figure 19: Radiance Differences in BT



Figure 20: Radiance Differences in BT



Figure 21: Radinace Differences in BT