

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

IASI monitoring team

09/06/2026 00:00:00 - 10/06/2026 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 09/06/2026 00:00:00 - 10/06/2026 00:00:00 .

The monitoring data are extracted on PDU basis.

2 Data quantity 09/06/2026 00:00:00 - 10/06/2026 00:00:00

Product Type	Number	Action
L0 HKTM PDUs	481	-
L0 IASI PDUs	481	-
L1 ENG PDUs	480	-
L1 ENG distinct GEPSGranule	477	-
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)	11152	11154	20260609103936.823	20260609103937.253
PX1 (130)	11159	11165	20260609103938.335	20260609103939.632
PX1 (130)	11165	11169	20260609103939.632	20260609103940.499
PX1 (130)	11169	11171	20260609103940.499	20260609103940.929
PX1 (130)	11171	11173	20260609103940.929	20260609103941.362
PX1 (130)	11173	11175	20260609103941.362	20260609103941.796
PX1 (130)	11175	11272	20260609103941.796	20260609104008.819
PX2 (135)	11152	11154	20260609103936.823	20260609103937.253
PX2 (135)	11156	11158	20260609103937.686	20260609103938.120
PX2 (135)	11158	11166	20260609103938.120	20260609103939.847
PX2 (135)	11166	11169	20260609103939.847	20260609103940.499
PX2 (135)	11170	11172	20260609103940.714	20260609103941.147
PX2 (135)	11172	11175	20260609103941.147	20260609103941.796
PX2 (135)	11175	11271	20260609103941.796	20260609104008.604
PX2 (135)	11271	11274	20260609104008.604	20260609104009.253
PX3 (140)	11151	11155	20260609103936.604	20260609103937.472
PX3 (140)	11158	11160	20260609103938.120	20260609103938.550
PX3 (140)	11160	11165	20260609103938.550	20260609103939.632
PX3 (140)	11165	11167	20260609103939.632	20260609103940.065
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Table 2 – continued from previous page

APID	Seq from	Seq to	Time from	Time to
PX3 (140)	11167	11171	20260609103940.065	20260609103940.929
PX3 (140)	11171	11173	20260609103940.929	20260609103941.362
PX3 (140)	11174	11271	20260609103941.577	20260609104008.604
PX4 (145)	11153	11155	20260609103937.038	20260609103937.472
PX4 (145)	11156	11159	20260609103937.686	20260609103938.335
PX4 (145)	11159	11167	20260609103938.335	20260609103940.065
PX4 (145)	11169	11173	20260609103940.499	20260609103941.362
PX4 (145)	11175	11271	20260609103941.796	20260609104008.604
IMG (150)	15514	15523	20260609103938.120	20260609103940.065
IMG (150)	15523	15525	20260609103940.065	20260609103940.499
IMG (150)	15525	15527	20260609103940.499	20260609103940.929
IMG (150)	15528	15530	20260609103941.147	20260609103941.577
IMG (150)	15531	15642	20260609103941.796	20260609104008.390
IMG (150)	15643	15645	20260609104008.604	20260609104009.038
VER (160)	13644	13665	20260609103934.011	20260609104014.011
AUX (180)	9281	9285	20260609103942.444	20260609104014.440

Table 2: L0 data gaps

3 Instrument modes

Time	Transition from	Transition to
09/06/2026 00:00:04	-	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	477	-
GQisFlagQual set (PX1)	99.67 %	-
GQisFlagQual set (PX2)	99.75 %	-
GQisFlagQual set (PX3)	99.74 %	-
GQisFlagQual set (PX4)	99.65 %	-
GQisFlagQual set (all)	99.70 %	-

Table 4: Quality flags

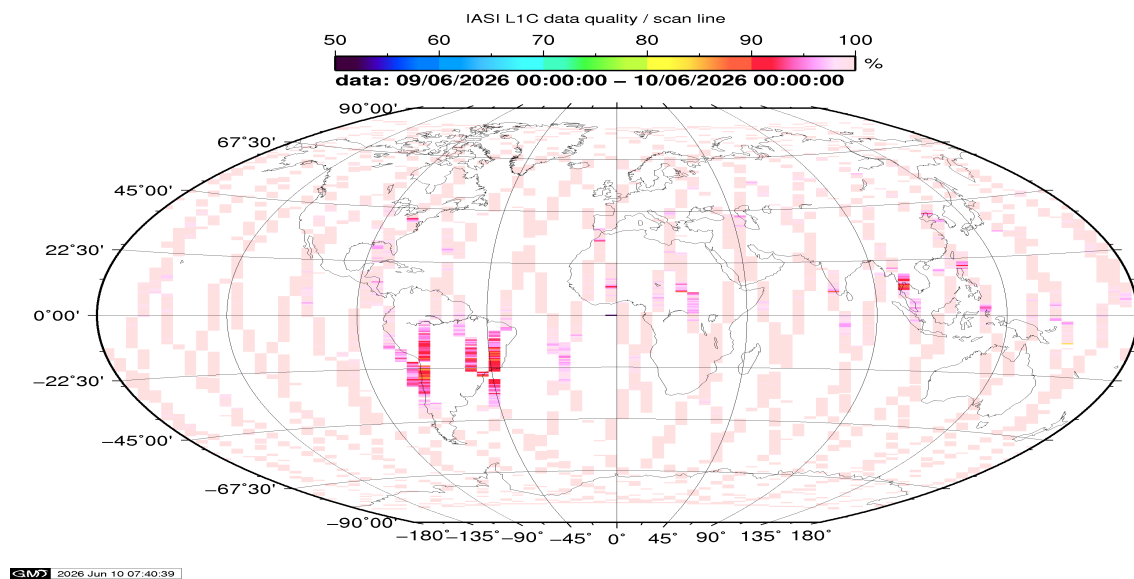


Figure 1: L1C data quality

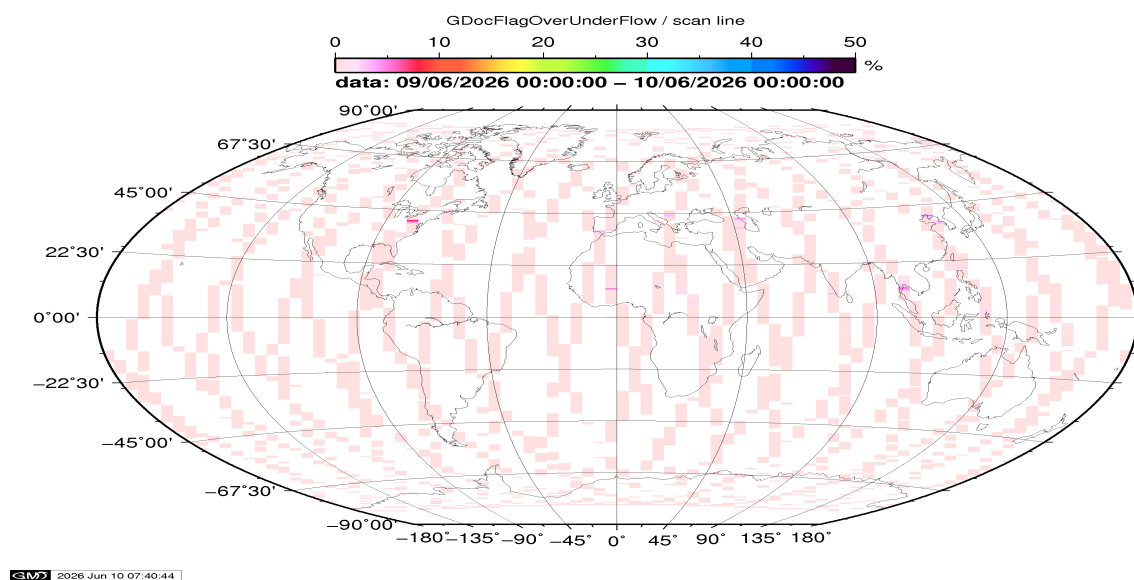


Figure 2: Flag of Over and Under Flows

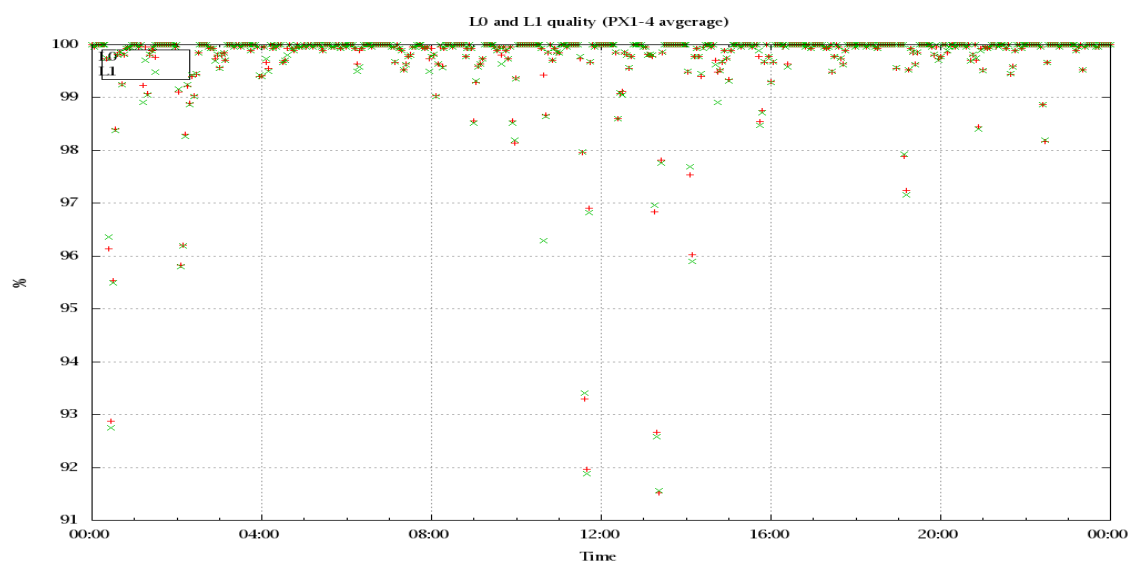


Figure 3: Level 0 and 1C overall quality

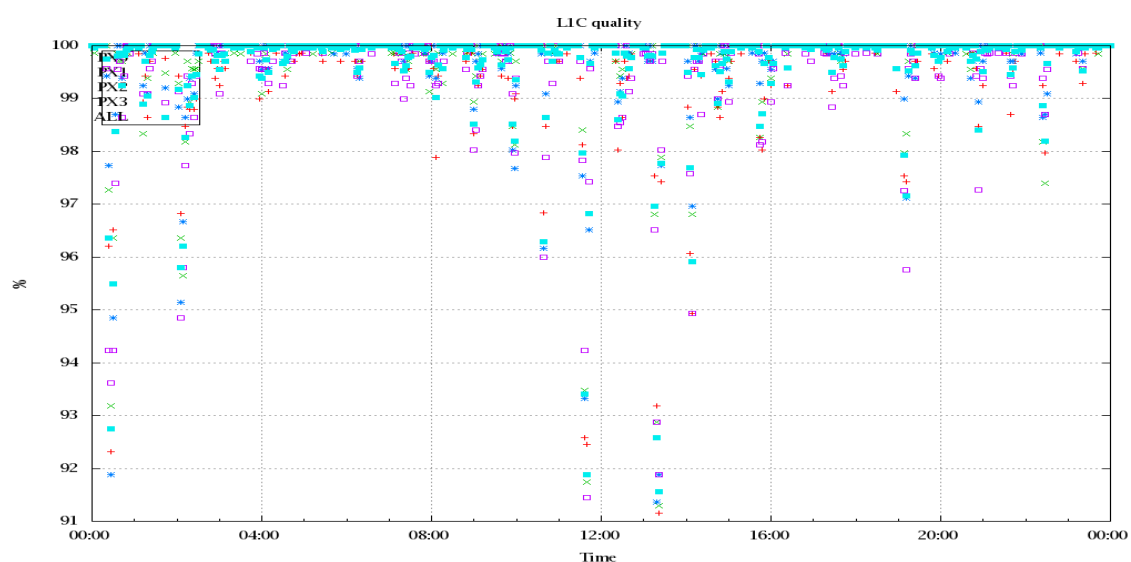


Figure 4: Level 1C quality

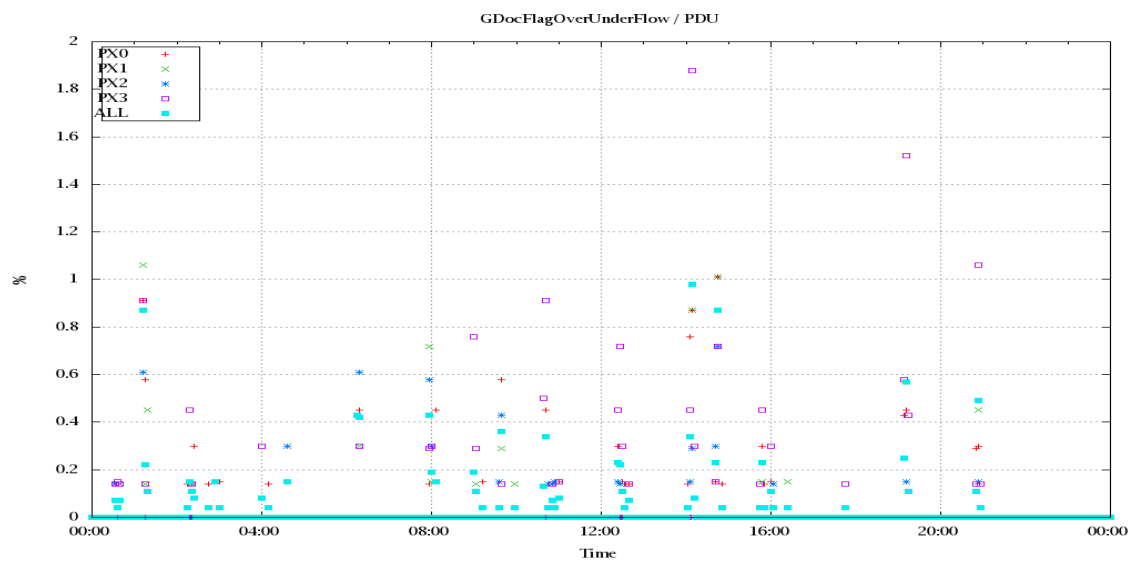


Figure 5: Timeseries of flag of Over and Under Flows

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.

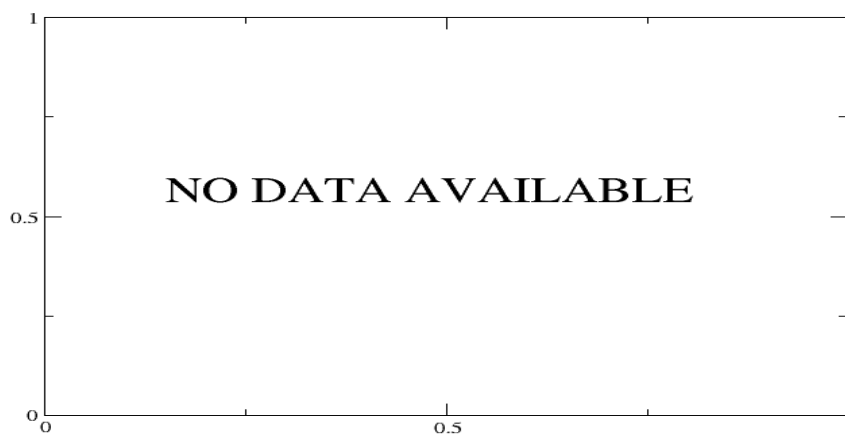


Figure 6: Average Radiance differences: OBS-CAL

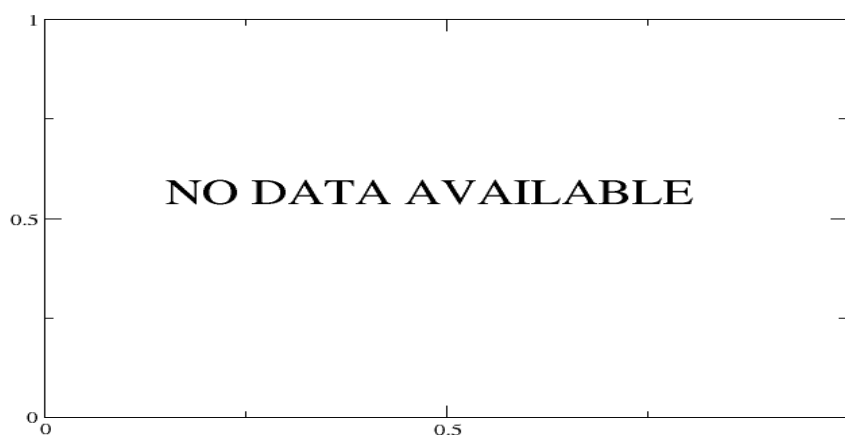


Figure 7: Standard Deviation of Radiance differences



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

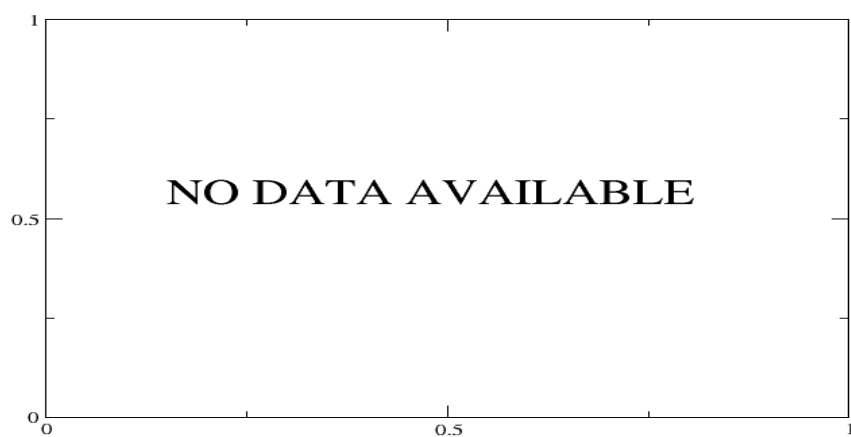


Figure 14: Radiance Anomaly in BT: CO2 14

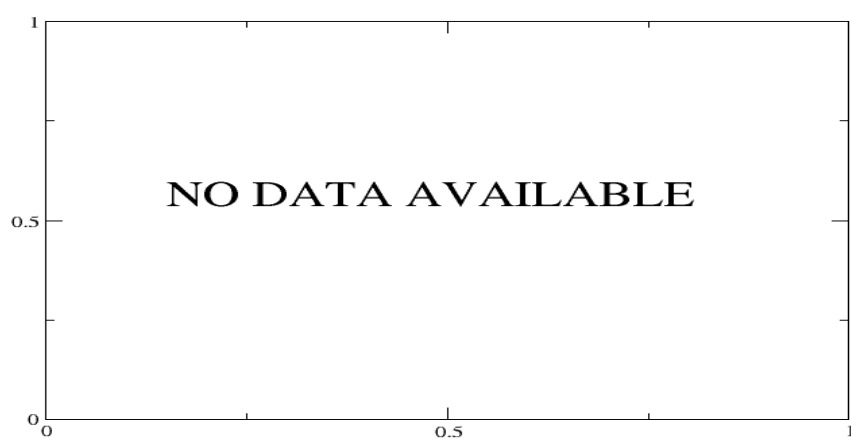


Figure 15: Radiance Anomaly in BT: CO2 4.3



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.

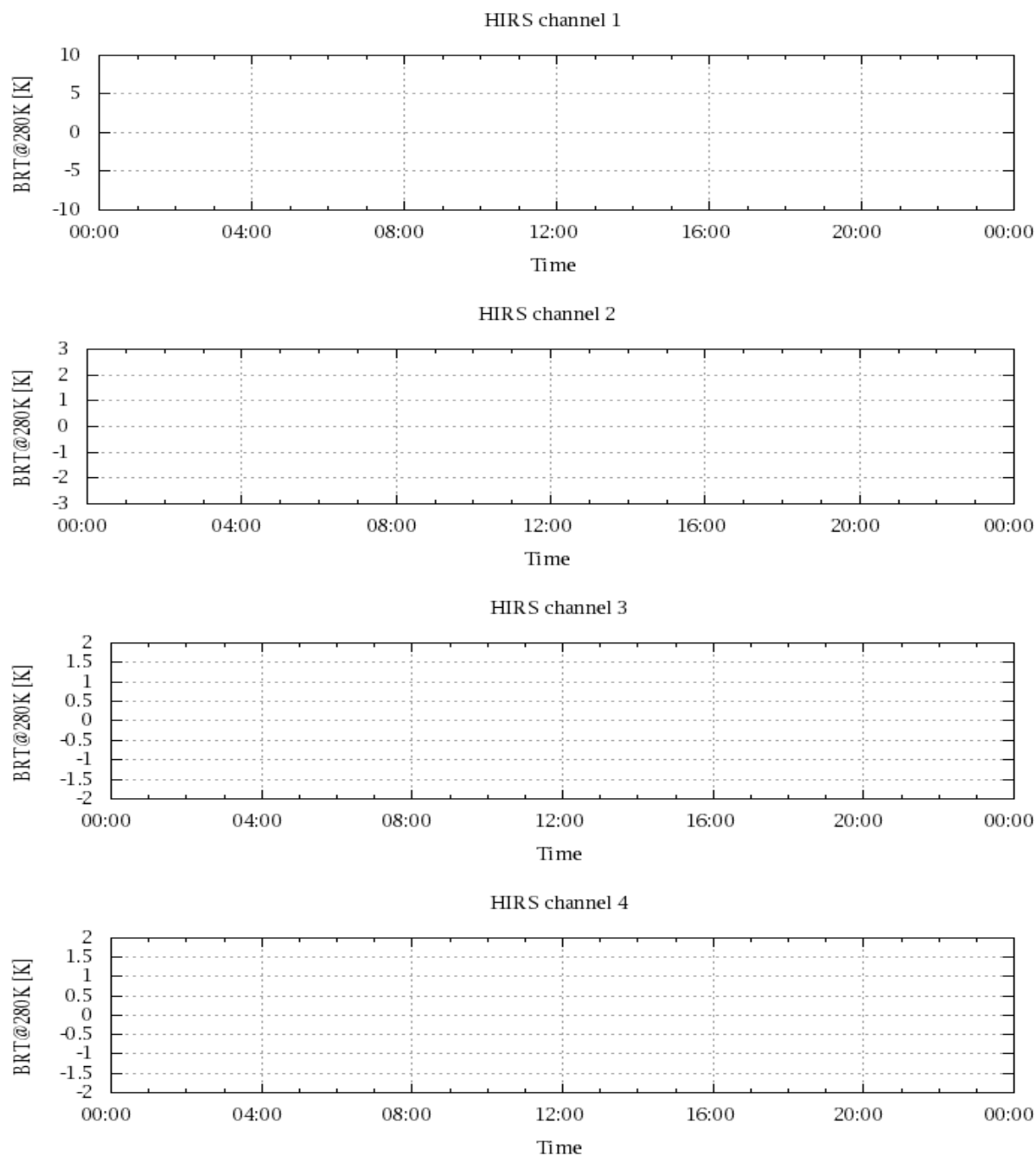


Figure 17: Radiance Differences in BT



Figure 18: Radiance Differences in BT



Figure 19: Radiance Differences in BT



Figure 20: Radiance Differences in BT



Figure 21: Radinace Differences in BT