

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

IASI monitoring team

28/05/2026 00:00:00 - 29/05/2026 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 28/05/2026 00:00:00 - 29/05/2026 00:00:00 .

The monitoring data are extracted on PDU basis.

2 Data quantity 28/05/2026 00:00:00 - 29/05/2026 00:00:00

Product Type	Number	Action
L0 HKTU 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)	14026	14071	20260528122724.661	20260528122737.419
PX1 (130)	14103	14105	20260528122745.849	20260528122746.282
PX1 (130)	14165	14167	20260528122802.282	20260528122802.716
PX1 (130)	14169	14173	20260528122803.146	20260528122804.013
PX1 (130)	14173	14231	20260528122804.013	20260528122819.579
PX1 (130)	14238	14240	20260528122821.095	20260528122821.525
PX1 (130)	14292	14307	20260528122835.794	20260528122839.036
PX2 (135)	14026	14071	20260528122724.661	20260528122737.419
PX2 (135)	14171	14173	20260528122803.579	20260528122804.013
PX2 (135)	14173	14231	20260528122804.013	20260528122819.579
PX2 (135)	14231	14233	20260528122819.579	20260528122820.013
PX2 (135)	14238	14240	20260528122821.095	20260528122821.525
PX2 (135)	14292	14307	20260528122835.794	20260528122839.036
PX3 (140)	14025	14071	20260528122724.447	20260528122737.419
PX3 (140)	14172	14233	20260528122803.798	20260528122820.013
PX3 (140)	14236	14238	20260528122820.661	20260528122821.095
PX3 (140)	14292	14307	20260528122835.794	20260528122839.036
PX4 (145)	14026	14071	20260528122724.661	20260528122737.419
PX4 (145)	14166	14169	20260528122802.501	20260528122803.146

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Table 2 – continued from previous page

APID	Seq from	Seq to	Time from	Time to
PX4 (145)	14170	14176	20260528122803.364	20260528122804.661
PX4 (145)	14176	14230	20260528122804.661	20260528122819.364
PX4 (145)	14230	14232	20260528122819.364	20260528122819.798
PX4 (145)	14233	14235	20260528122820.013	20260528122820.443
PX4 (145)	14235	14237	20260528122820.443	20260528122820.876
PX4 (145)	14292	14307	20260528122835.794	20260528122839.036
IMG (150)	11118	11167	20260528122724.661	20260528122736.122
IMG (150)	11270	11272	20260528122800.337	20260528122800.986
IMG (150)	11279	11281	20260528122802.716	20260528122803.146
IMG (150)	11282	11284	20260528122803.364	20260528122803.798
IMG (150)	11285	11352	20260528122804.013	20260528122819.798
IMG (150)	11353	11355	20260528122820.013	20260528122820.443
IMG (150)	11355	11357	20260528122820.443	20260528122820.876
IMG (150)	11419	11434	20260528122835.579	20260528122838.821
VER (160)	8660	8668	20260528122719.689	20260528122724.661
VER (160)	8685	8696	20260528122759.689	20260528122823.689
AUX (180)	11560	11562	20260528122720.122	20260528122736.122
AUX (180)	11565	11568	20260528122800.118	20260528122824.122

Table 2: L0 data gaps

3 Instrument modes

Time	Transition from	Transition to
28/05/2026 00:00:06	-	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)	99.70 %	-
GQisFlagQual set (PX2)	99.74 %	-
GQisFlagQual set (PX3)	99.75 %	-
GQisFlagQual set (PX4)	99.68 %	-
GQisFlagQual set (all)	99.72 %	-

Table 4: Quality flags

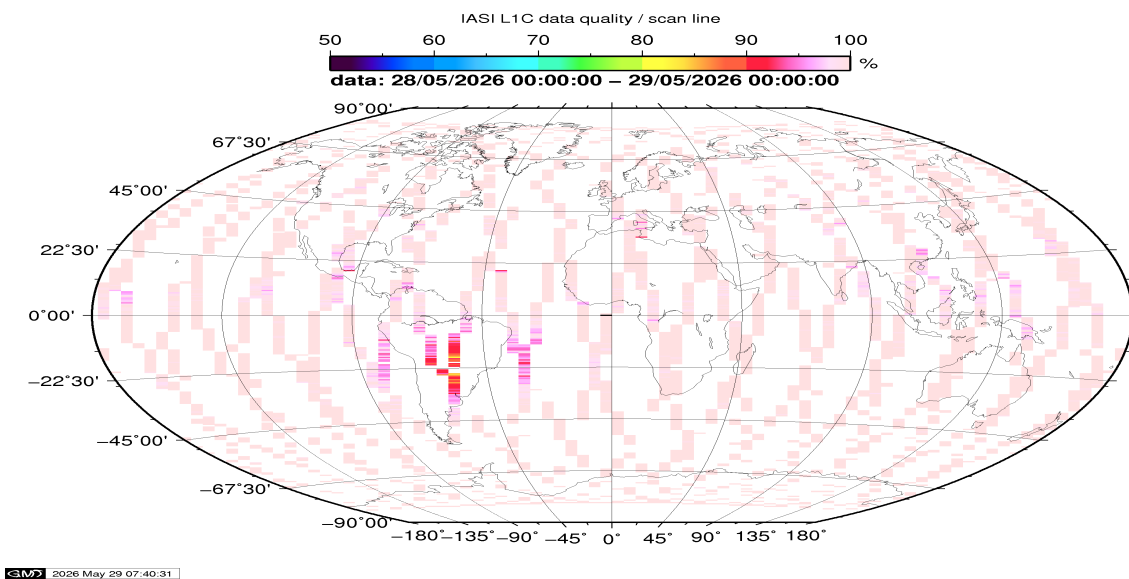


Figure 1: L1C data quality

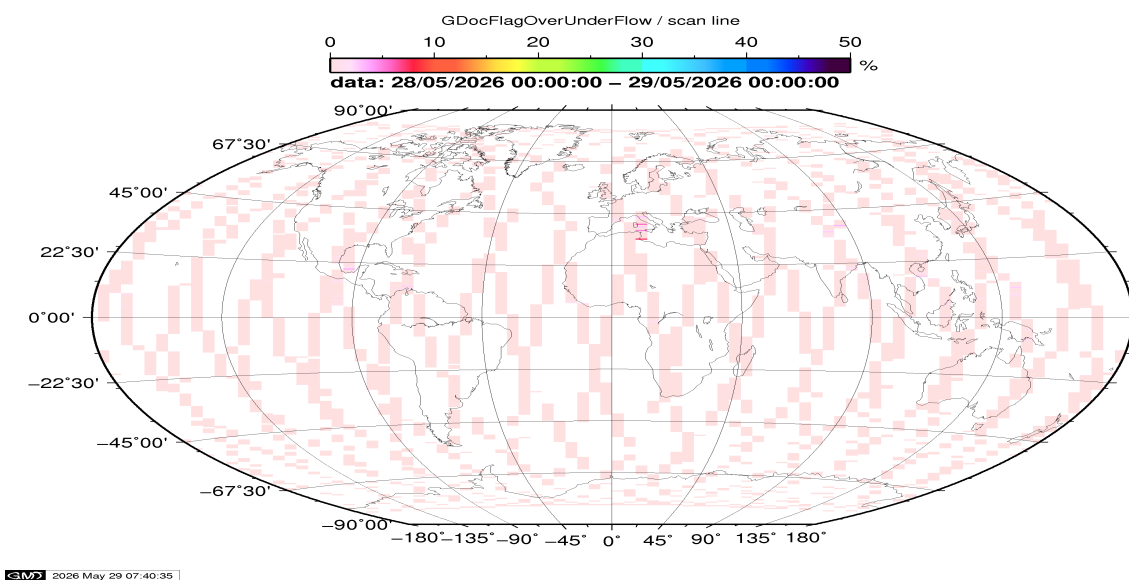


Figure 2: Flag of Over and Under Flows

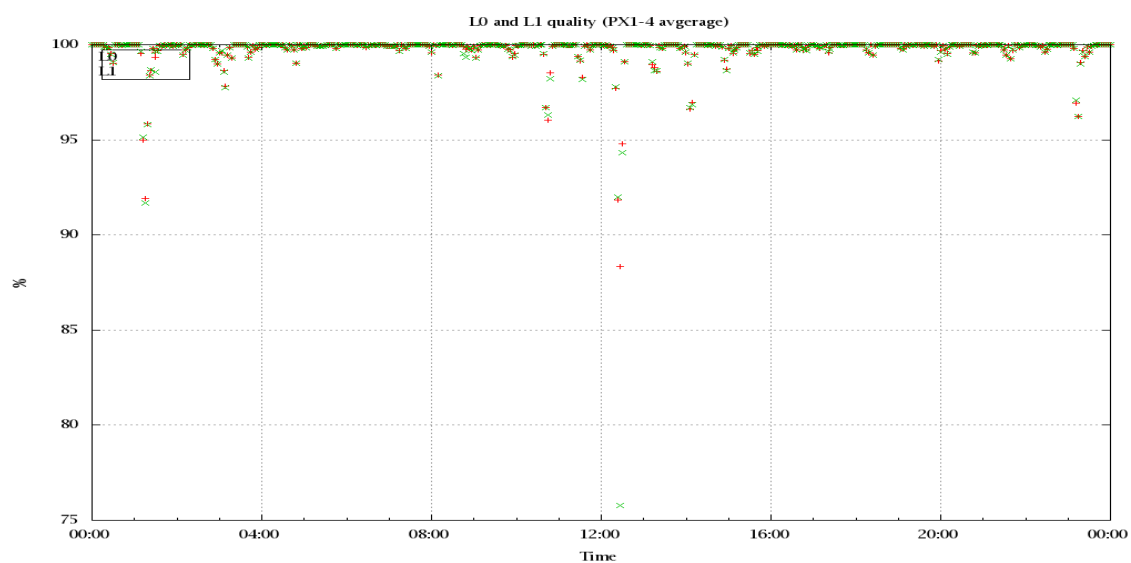


Figure 3: Level 0 and 1C overall quality

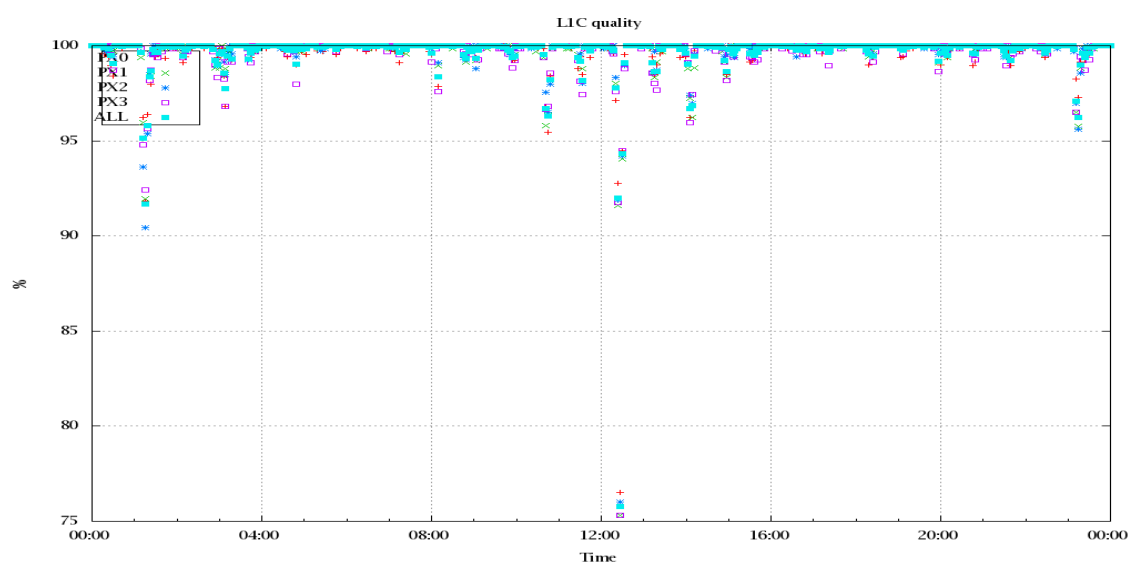


Figure 4: Level 1C quality

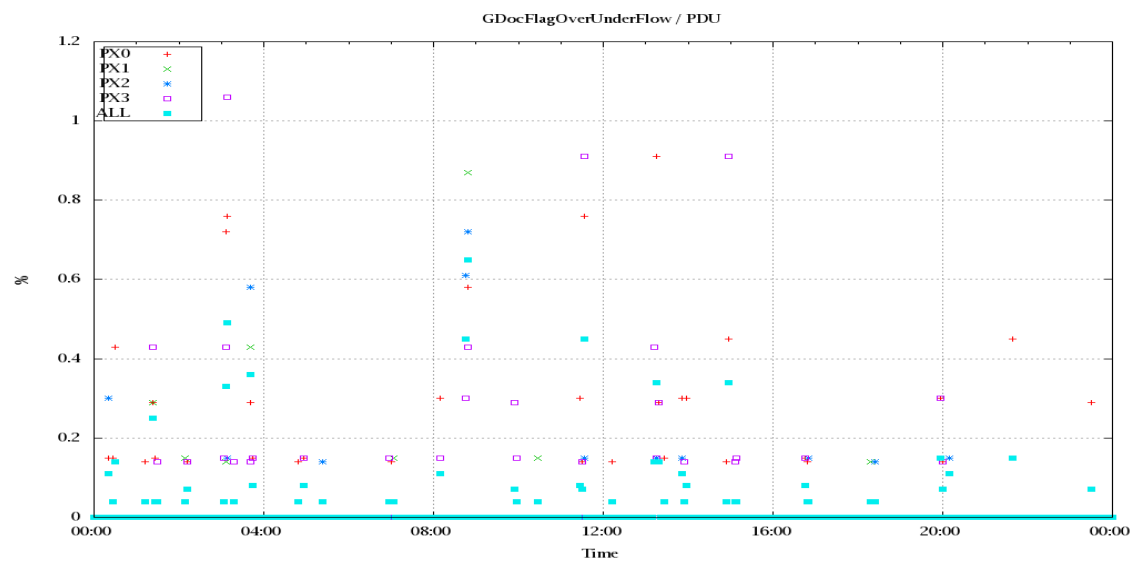


Figure 5: Timeseries of flag of Over and Under Flows

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.

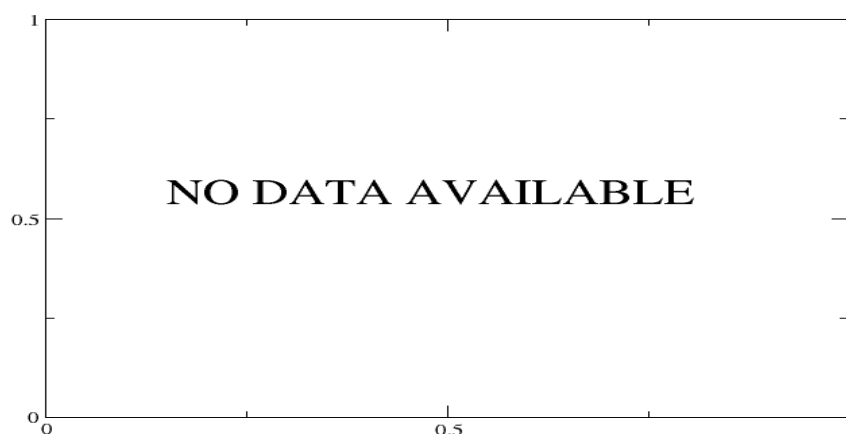


Figure 6: Average Radiance differences: OBS-CAL

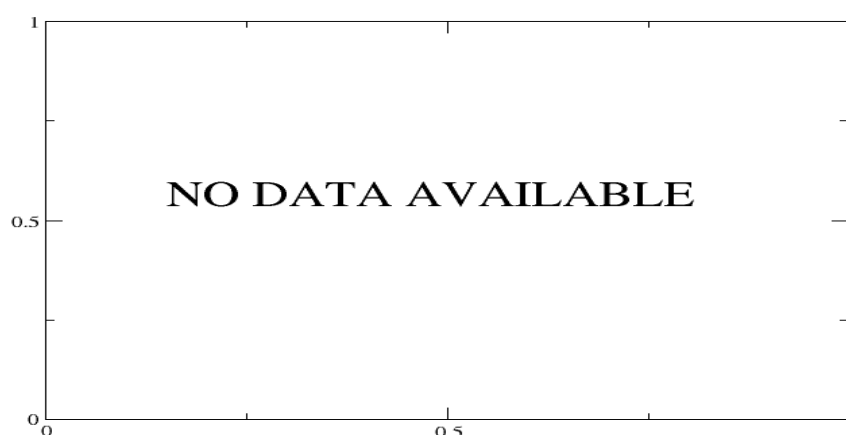


Figure 7: Standard Deviation of Radiance differences



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

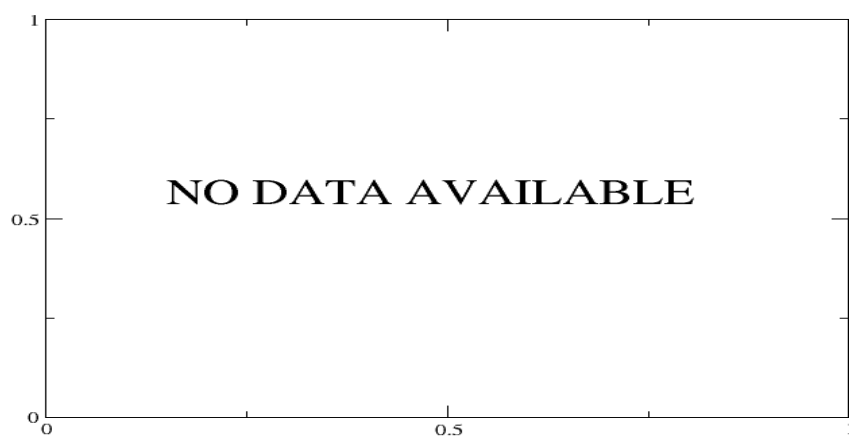


Figure 14: Radiance Anomaly in BT: CO2 14



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.

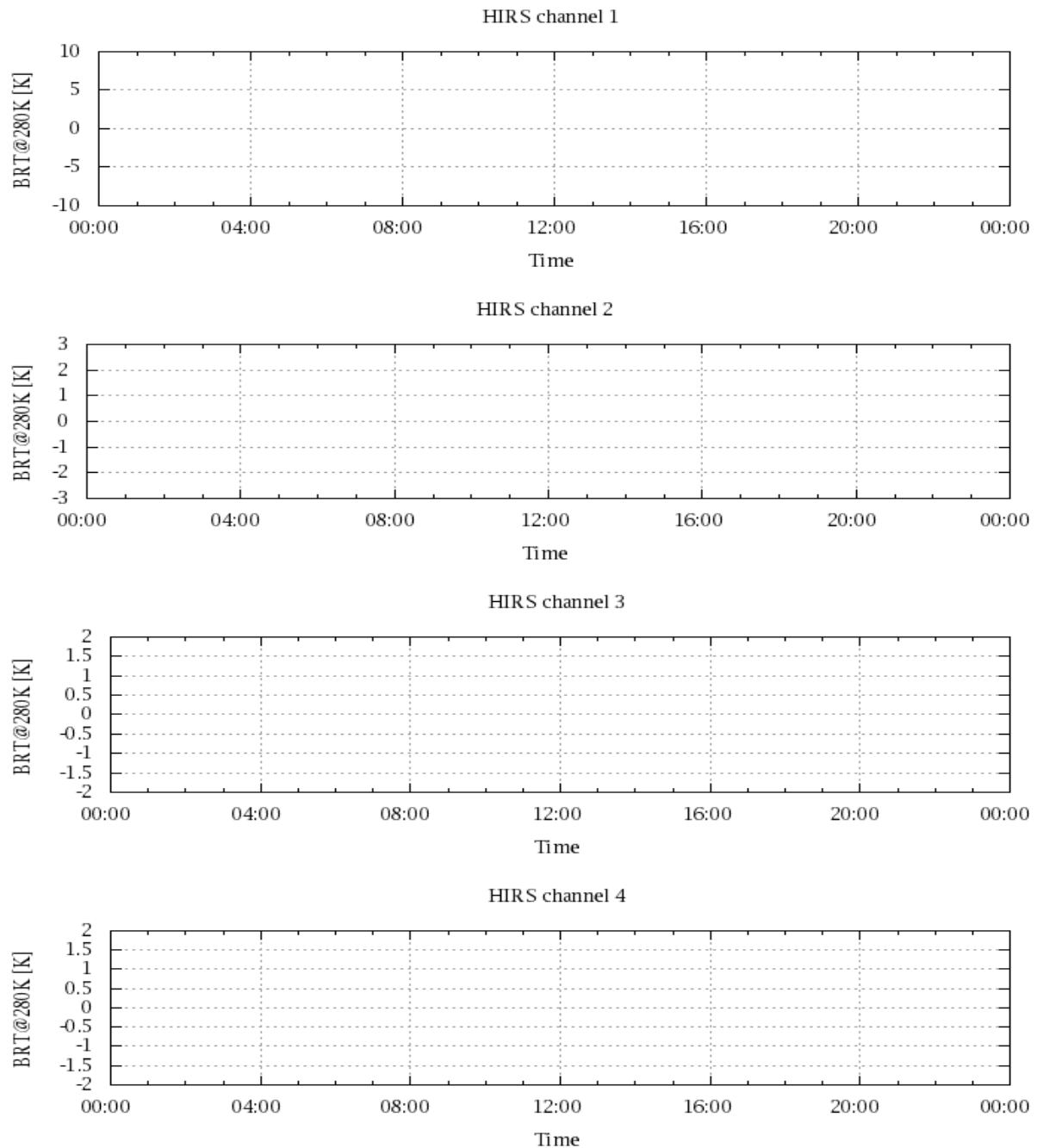


Figure 17: Radiance Differences in BT



Figure 18: Radiance Differences in BT



Figure 19: Radiance Differences in BT



Figure 20: Radiance Differences in BT



Figure 21: Radinace Differences in BT