

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

IASI monitoring team

20/02/2026 00:00:00 - 21/02/2026 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 20/02/2026 00:00:00 - 21/02/2026 00:00:00 .

The monitoring data are extracted on PDU basis.

2 Data quantity 20/02/2026 00:00:00 - 21/02/2026 00:00:00

Product Type	Number	Action
L0 HKTМ PDUs	481	-
L0 IASI PDUs	481	-
L1 ENG PDUs	479	-
L1 ENG distinct GEPSTGranule	472	-
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)	15346	15379	20260220122745.313	20260220122753.962
PX1 (130)	15438	15440	20260220122809.747	20260220122810.181
PX1 (130)	15440	15605	20260220122810.181	20260220122854.934
PX1 (130)	15628	15636	20260220122859.907	20260220122903.149
PX1 (130)	1398	1424	20260220172951.539	20260220172958.676
PX2 (135)	15345	15377	20260220122745.099	20260220122753.532
PX2 (135)	15439	15605	20260220122809.962	20260220122854.934
PX2 (135)	15628	15636	20260220122859.907	20260220122903.149
PX2 (135)	1398	1424	20260220172951.539	20260220172958.676
PX3 (140)	15345	15377	20260220122745.099	20260220122753.532
PX3 (140)	15437	15439	20260220122809.528	20260220122809.962
PX3 (140)	15439	15605	20260220122809.962	20260220122854.934
PX3 (140)	15627	15635	20260220122859.692	20260220122902.934
PX3 (140)	1398	1424	20260220172951.539	20260220172958.676
PX4 (145)	15345	15378	20260220122745.099	20260220122753.747
PX4 (145)	15439	15605	20260220122809.962	20260220122854.934
PX4 (145)	15628	15635	20260220122859.907	20260220122902.934
PX4 (145)	1398	1424	20260220172951.539	20260220172958.676
IMG (150)	9341	9377	20260220122745.099	20260220122753.532

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Table 2 – continued from previous page

APID	Seq from	Seq to	Time from	Time to
IMG (150)	9446	9637	20260220122809.747	20260220122854.934
IMG (150)	9660	9671	20260220122859.907	20260220122902.934
IMG (150)	4457	4486	20260220172951.324	20260220172958.028
VER (160)	692	698	20260220122740.989	20260220122756.989
VER (160)	707	743	20260220122804.989	20260220122908.989
VER (160)	12022	12028	20260220172948.945	20260220173004.945
AUX (180)	6690	6692	20260220122741.423	20260220122757.423
AUX (180)	6693	6701	20260220122805.423	20260220122909.423
AUX (180)	8956	8958	20260220172949.379	20260220173005.379

Table 2: L0 data gaps

3 Instrument modes

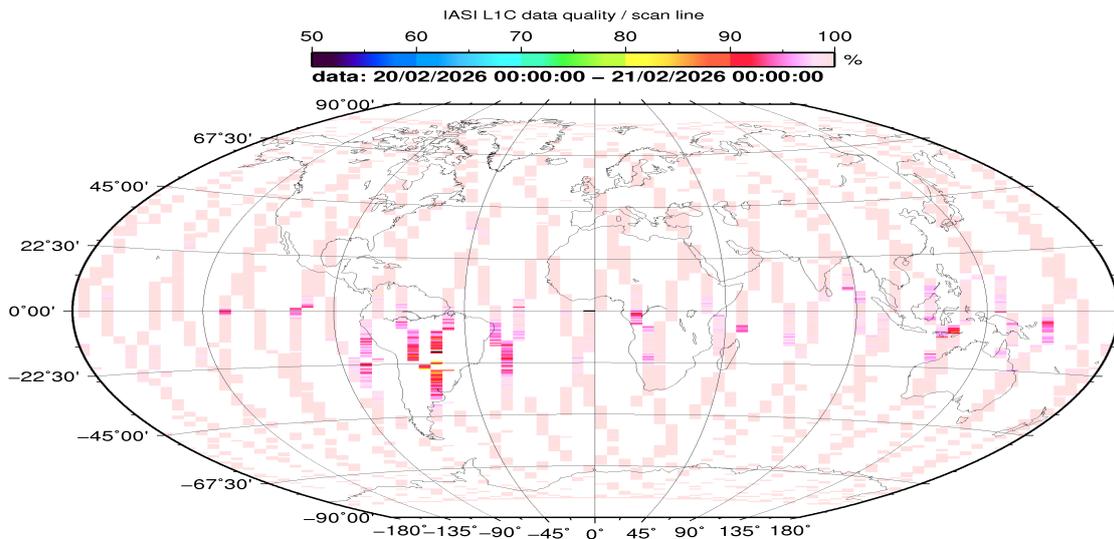
Time	Transition from	Transition to
20/02/2026 00:00:03	-	Normal operation

Table 3: Instrument modes

4 L0 and L1 Data Quality

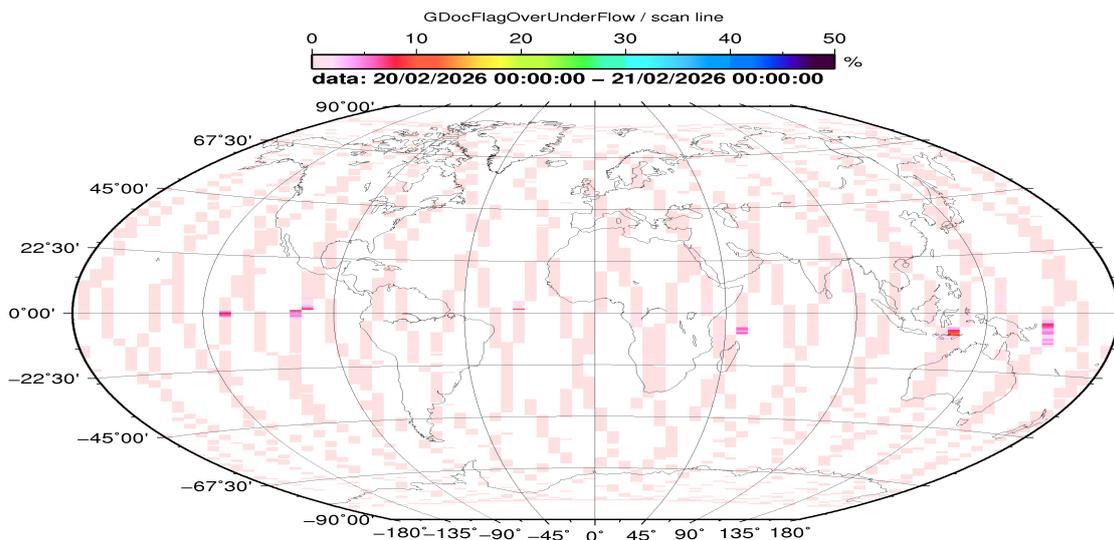
Flag	Value	Action
L0 IASI PDUs	481	-
L1 ENG PDUs	479	-
L1 ENG distinct GEPSGranule	472	-
GQisFlagQual set (PX1)	99.65 %	-
GQisFlagQual set (PX2)	99.71 %	-
GQisFlagQual set (PX3)	99.71 %	-
GQisFlagQual set (PX4)	99.63 %	-
GQisFlagQual set (all)	99.68 %	-

Table 4: Quality flags



CM 2026 Feb 21 07:40:51

Figure 1: L1C data quality



CM 2026 Feb 21 07:40:57

Figure 2: Flag of Over and Under Flows

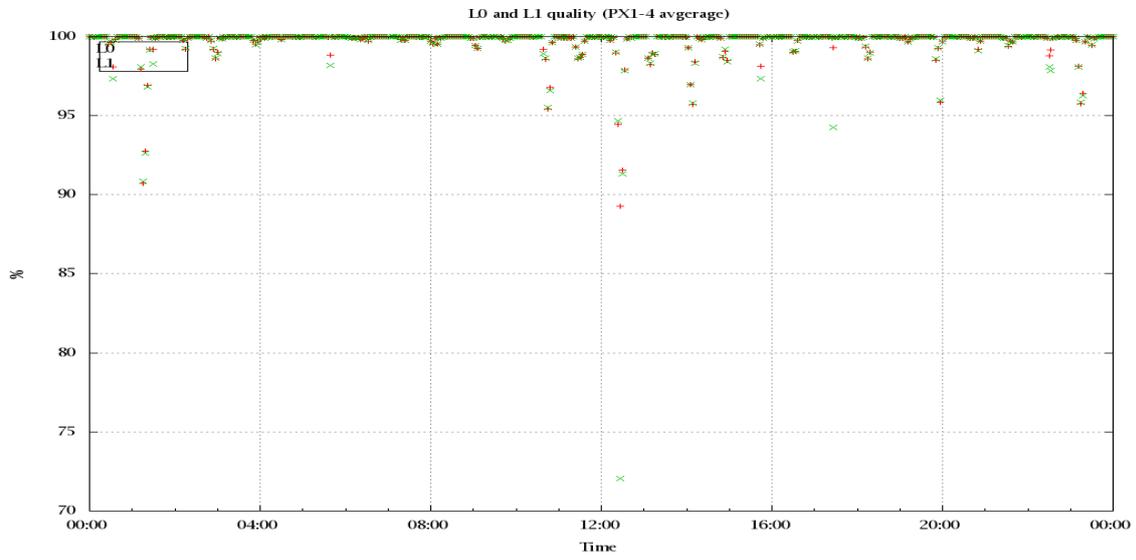


Figure 3: Level 0 and 1C overall quality

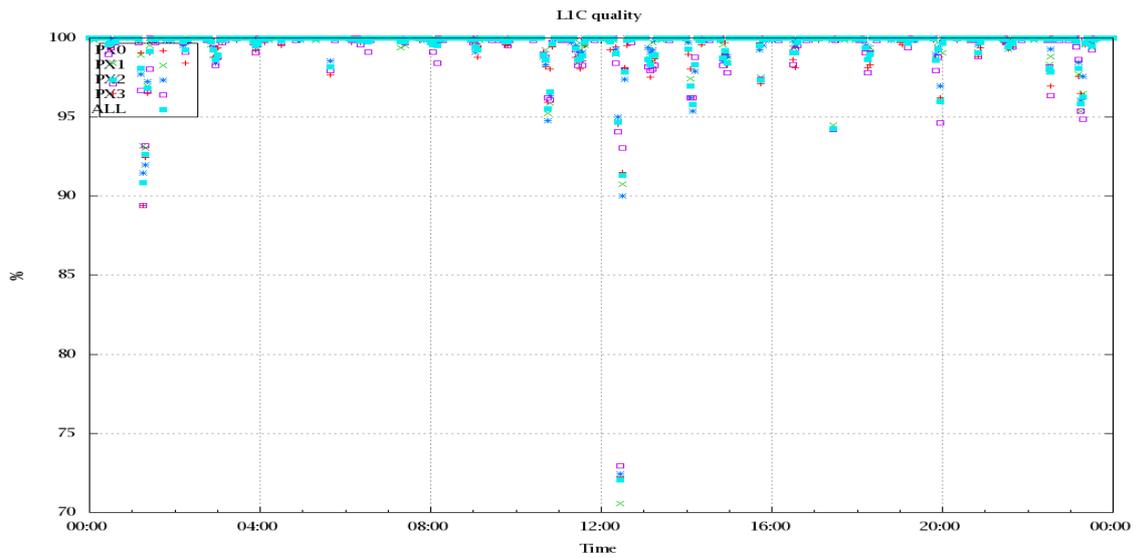


Figure 4: Level 1C quality

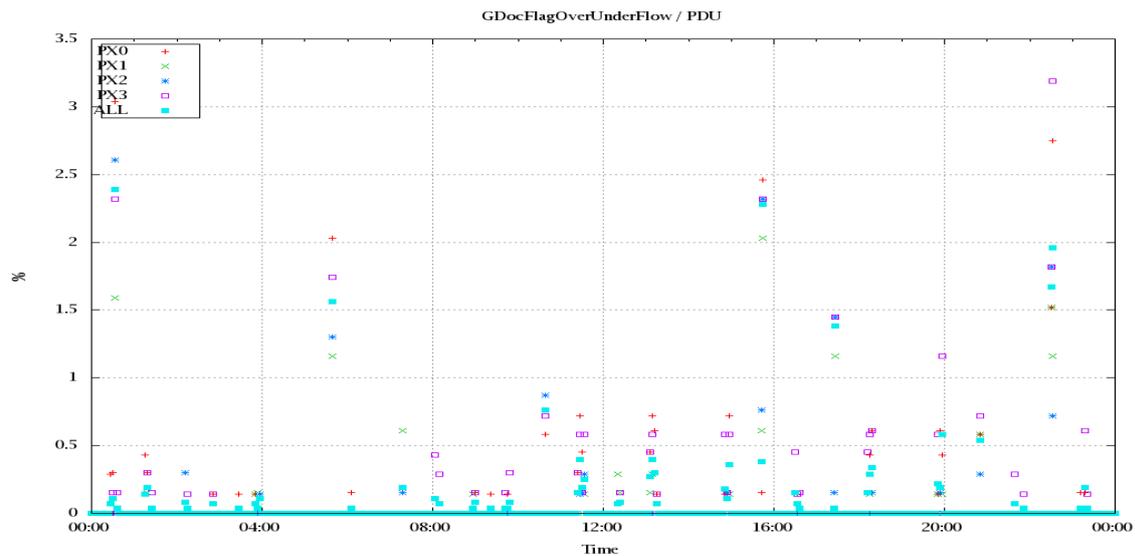


Figure 5: Timeseries of flag of Over and Under Flows

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.

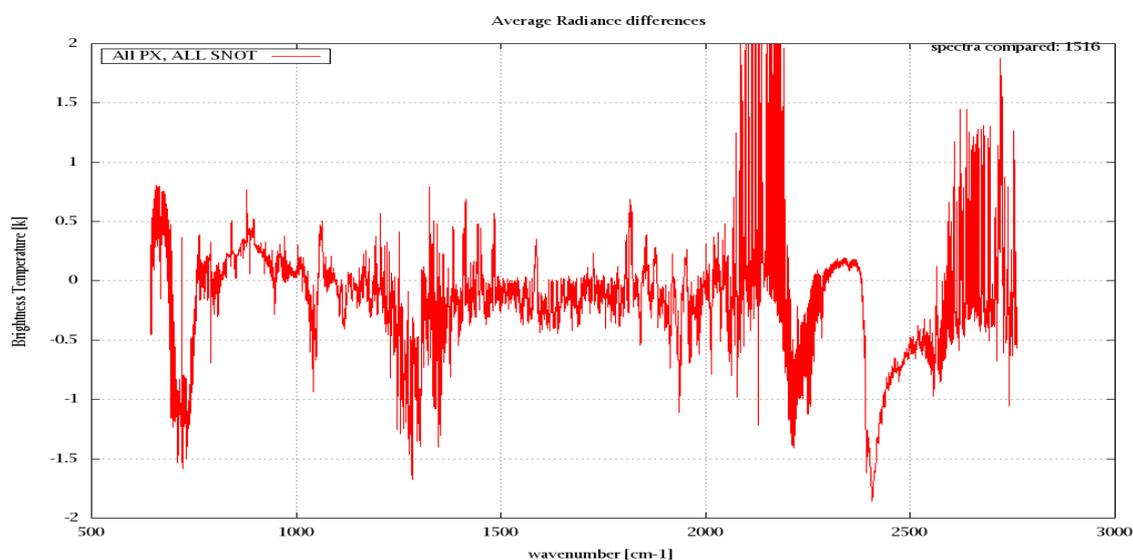


Figure 6: Average Radiance differences: OBS-CAL

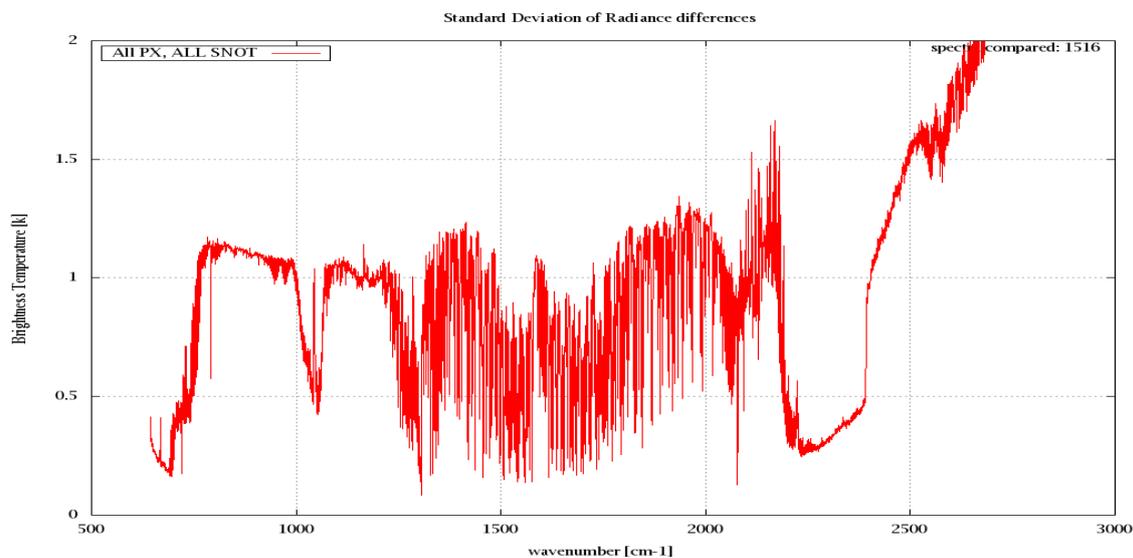


Figure 7: Standard Deviation of Radiance differences

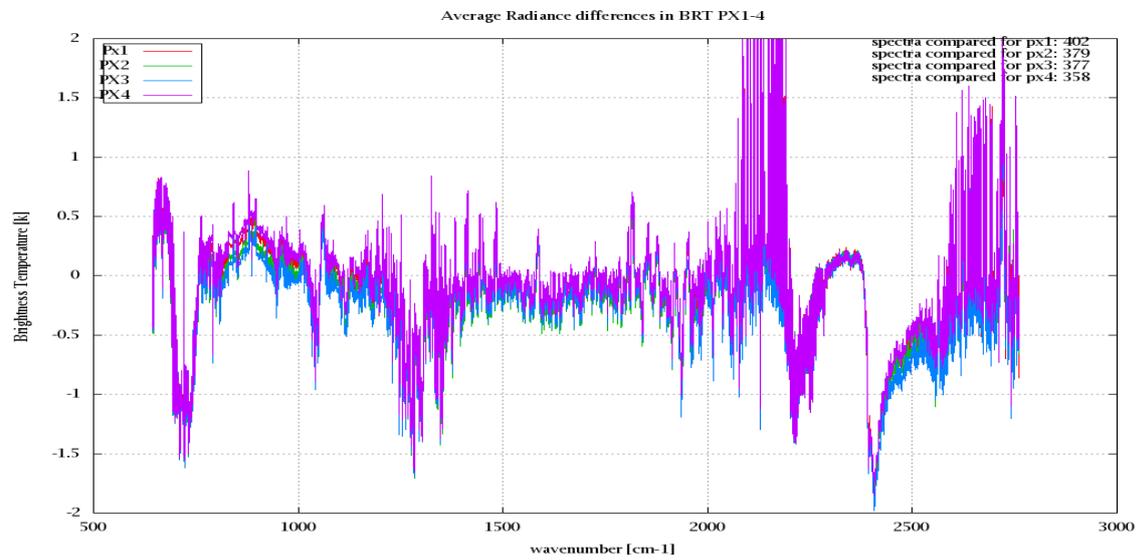


Figure 8: Average Radiance differences: OBS-CAL

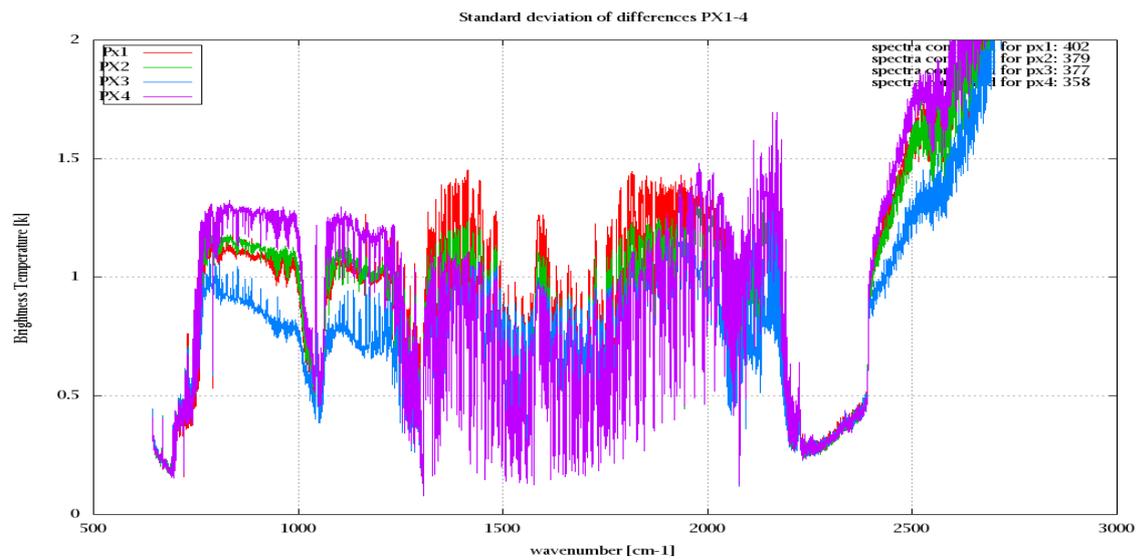


Figure 9: Standard Deviation of Radiance differences

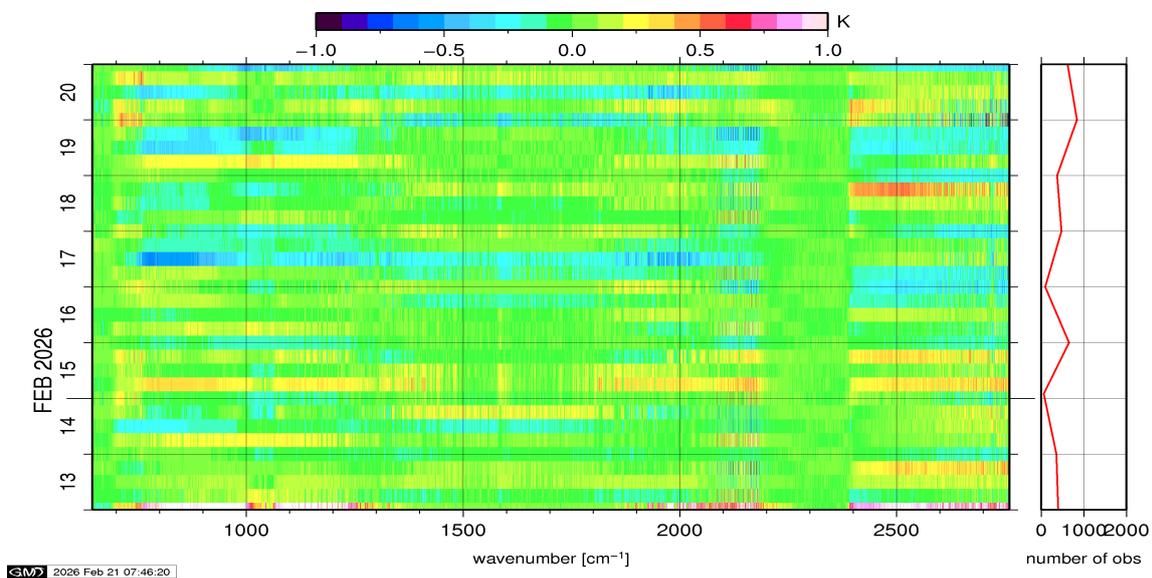


Figure 10: Radiance Anomaly in BT: All Channels

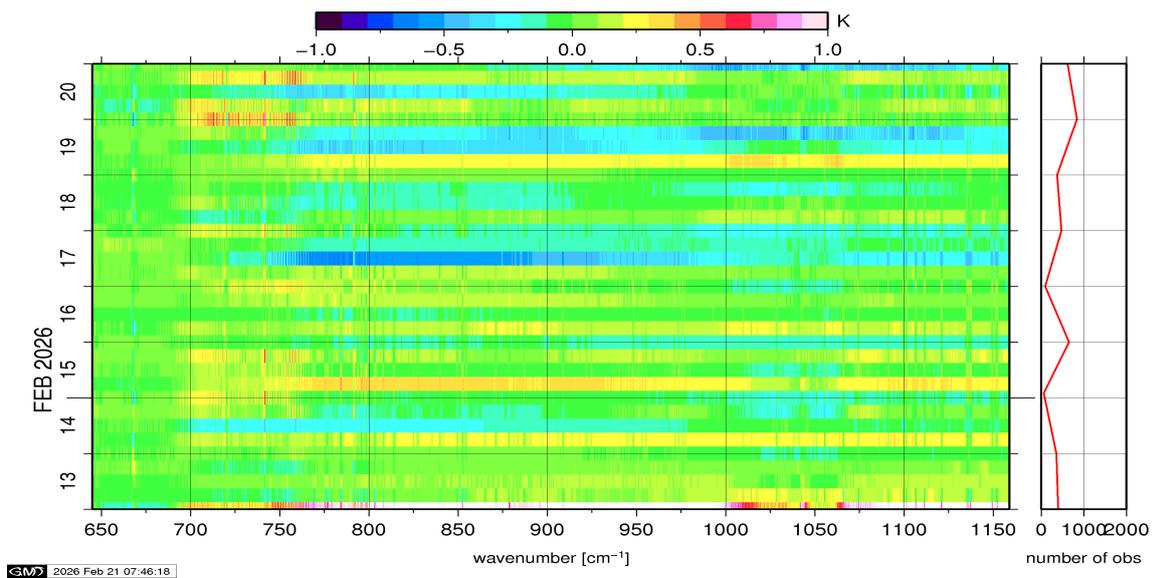


Figure 11: Radiance Anomaly in BT: IASI Band 1

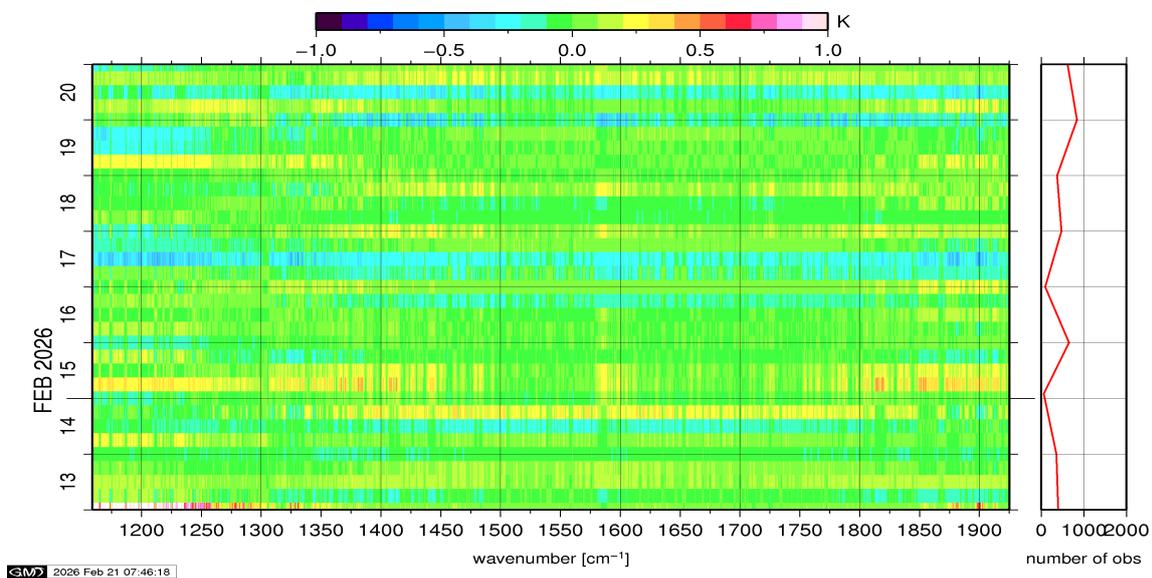


Figure 12: Radiance Anomaly in BT: IASI Band 2

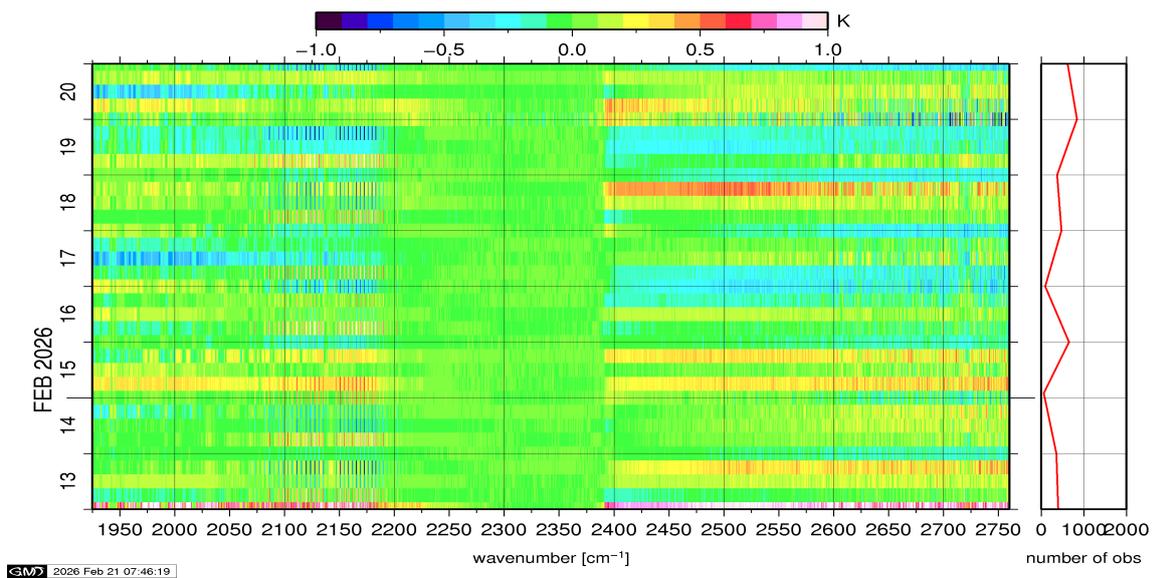


Figure 13: Radiance Anomaly in BT: IASI Band 3

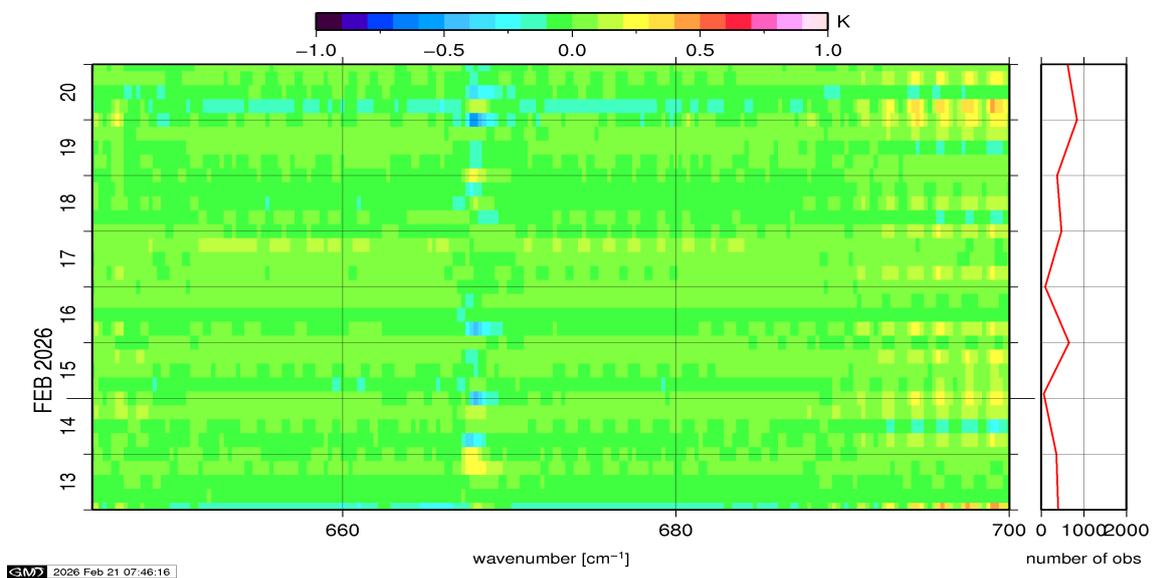


Figure 14: Radiance Anomaly in BT: CO2 14

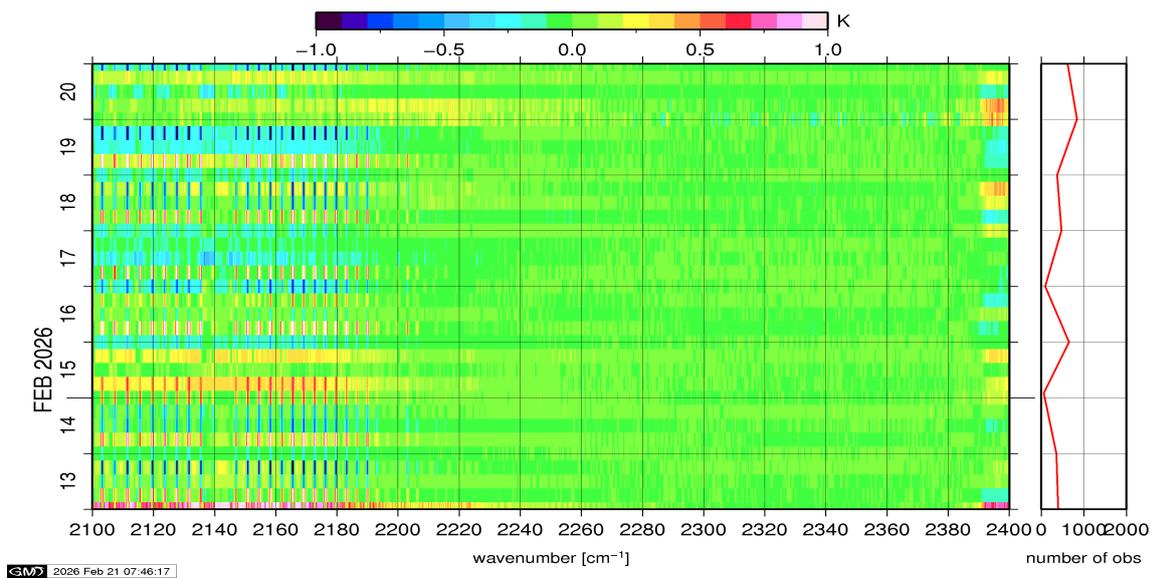


Figure 15: Radiance Anomaly in BT: CO2 4.3

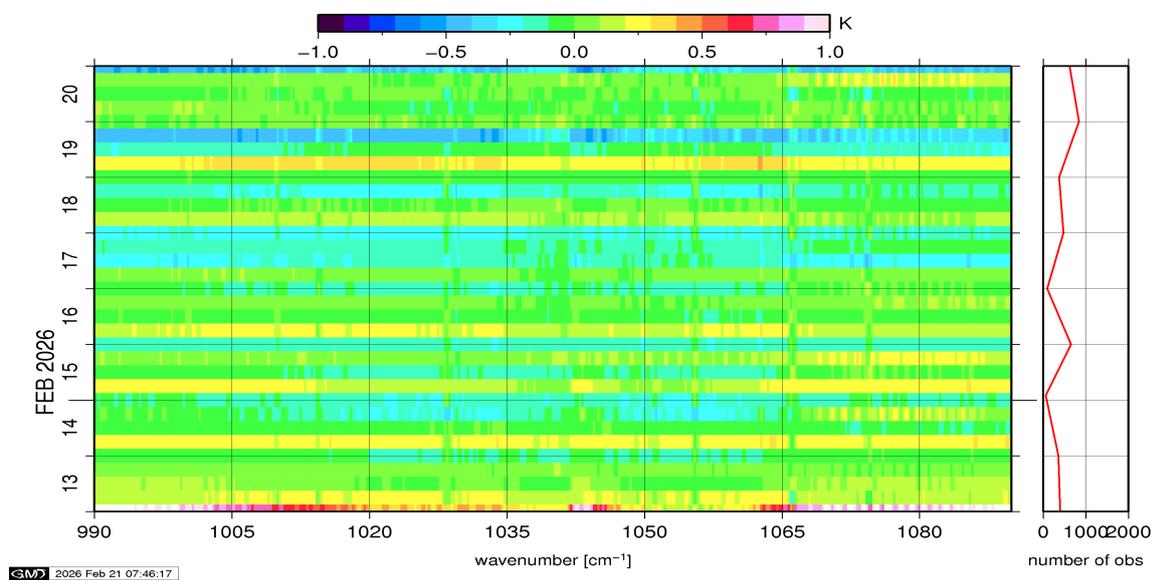


Figure 16: Radiance Anomaly in BT: O3

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.

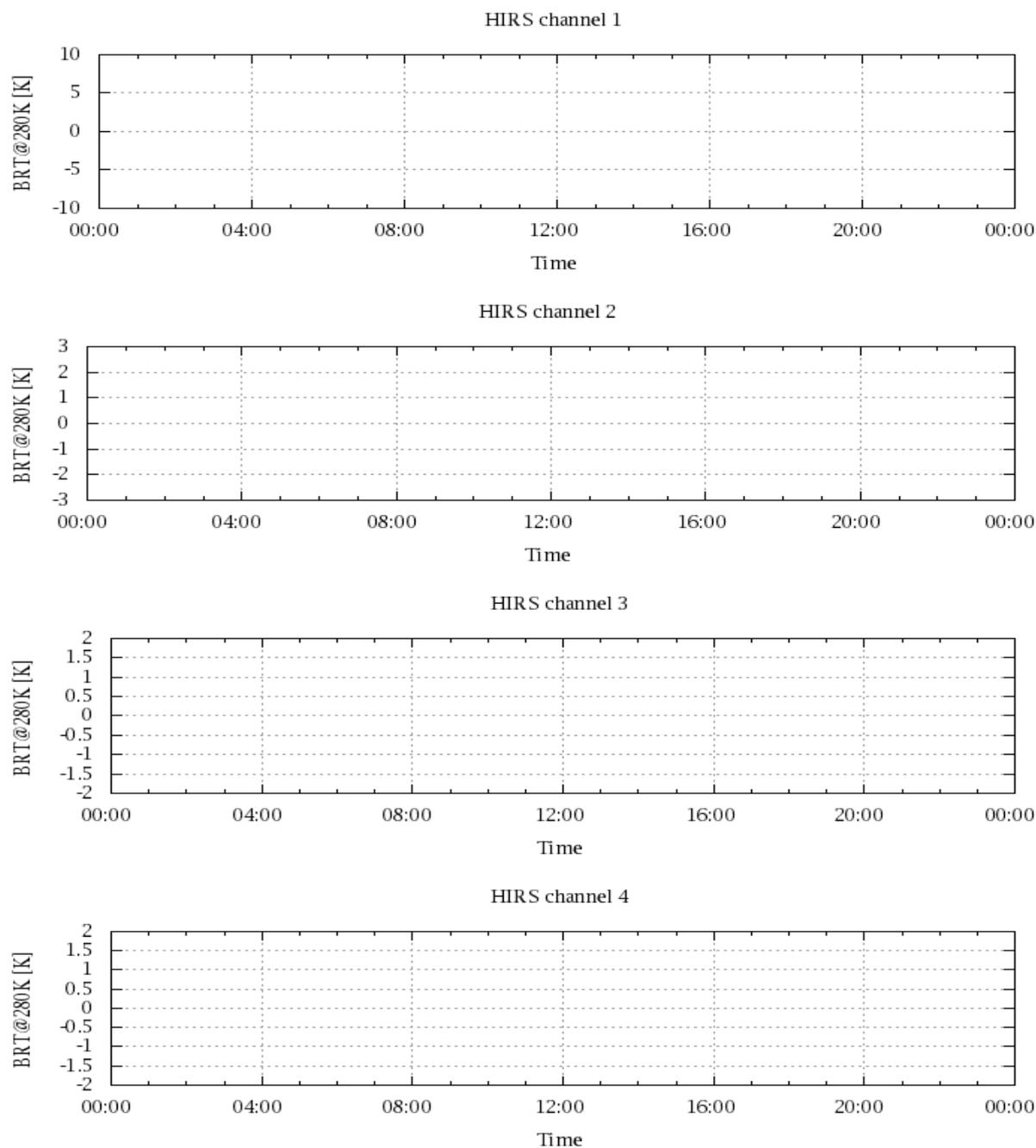


Figure 17: Radiance Differences in BT

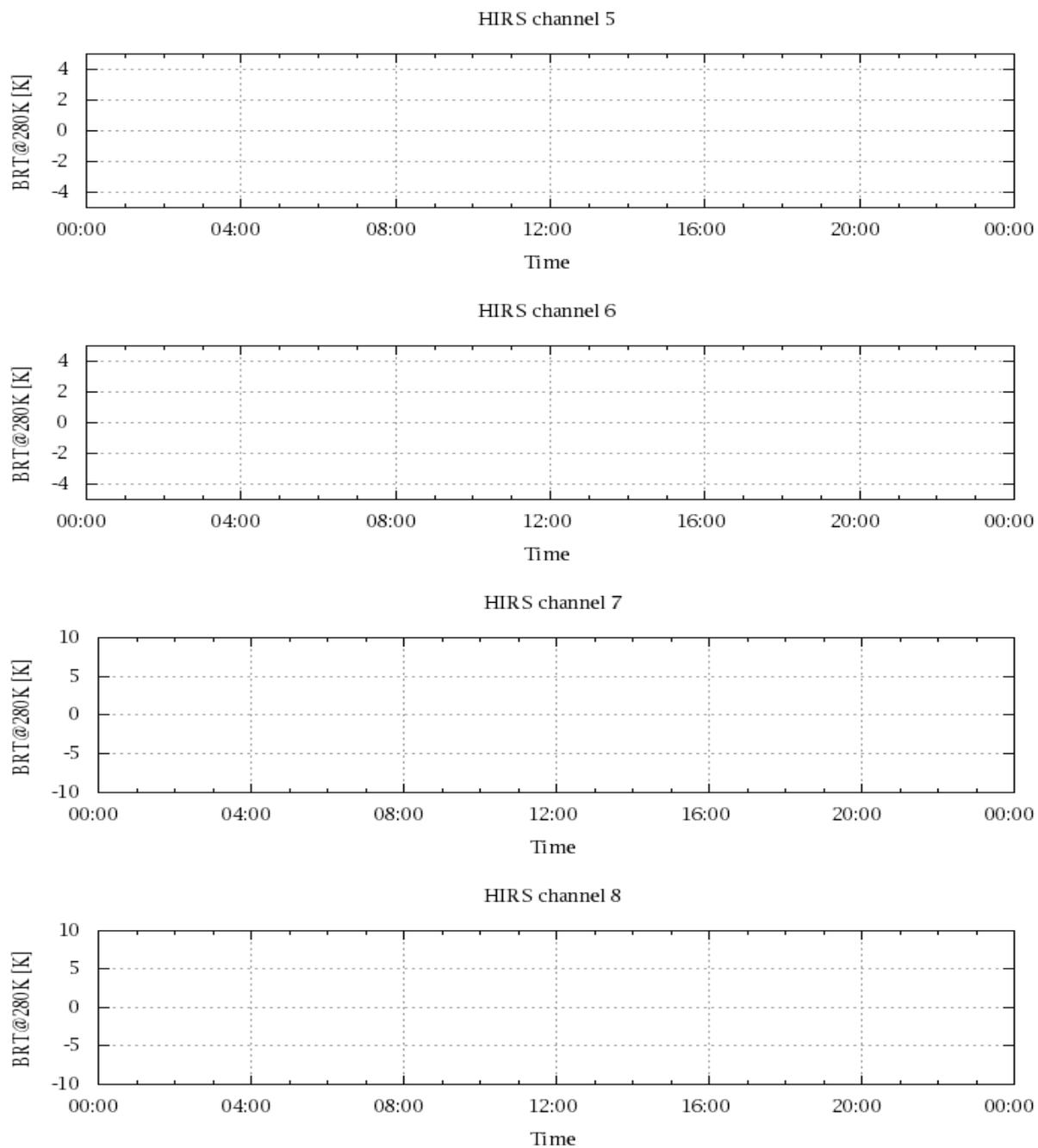


Figure 18: Radiance Differences in BT

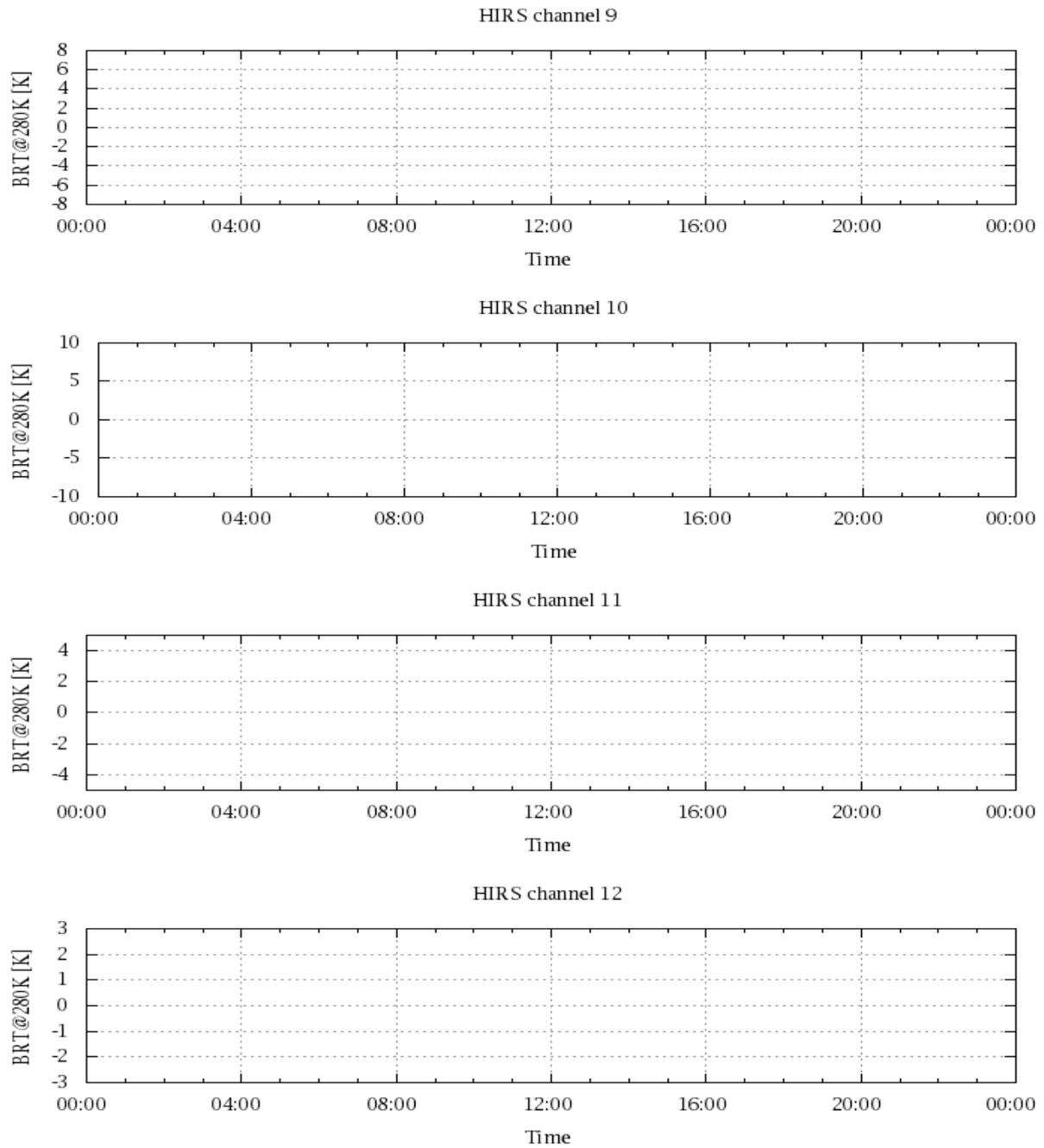


Figure 19: Radiance Differences in BT

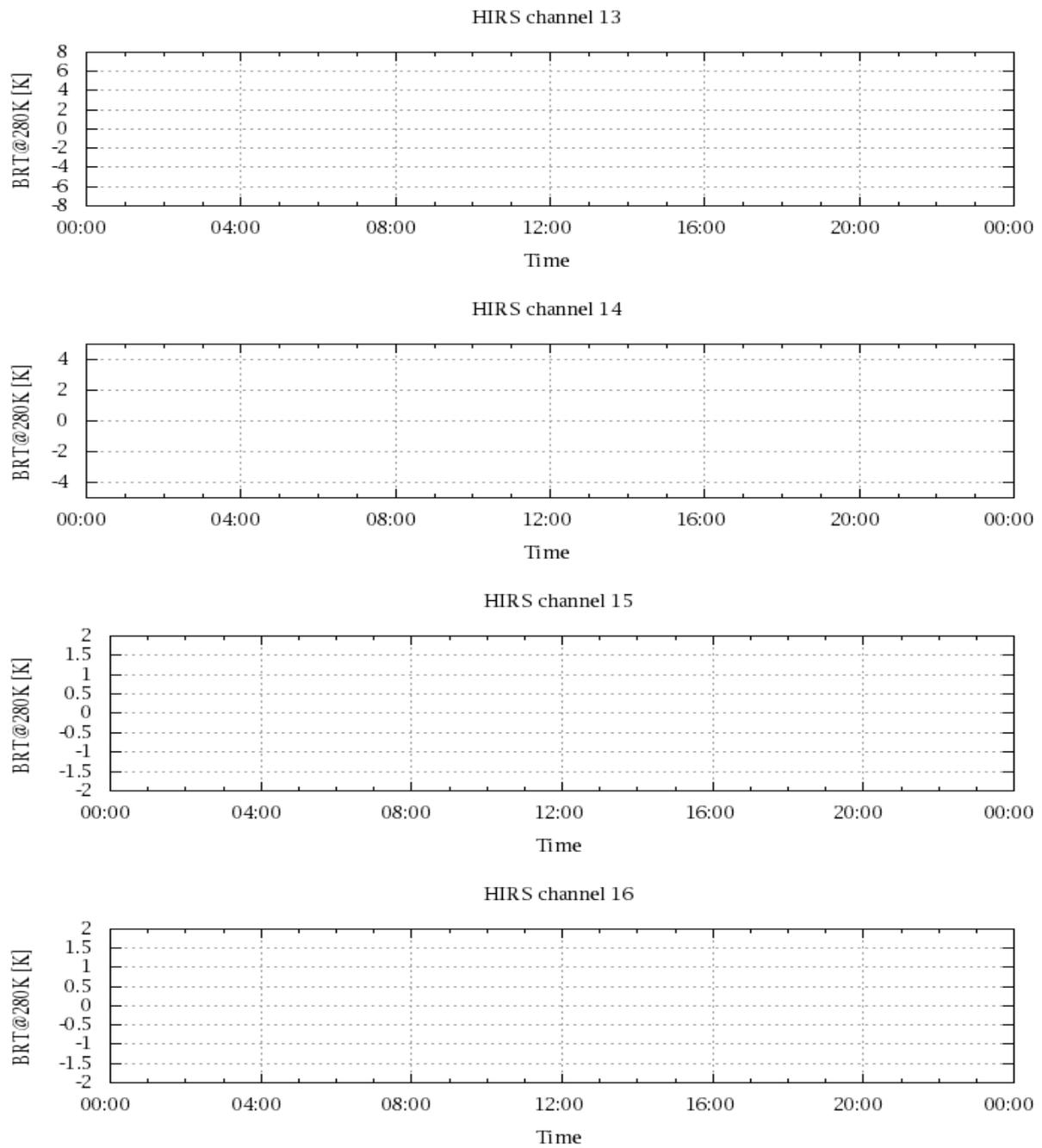


Figure 20: Radiance Differences in BT

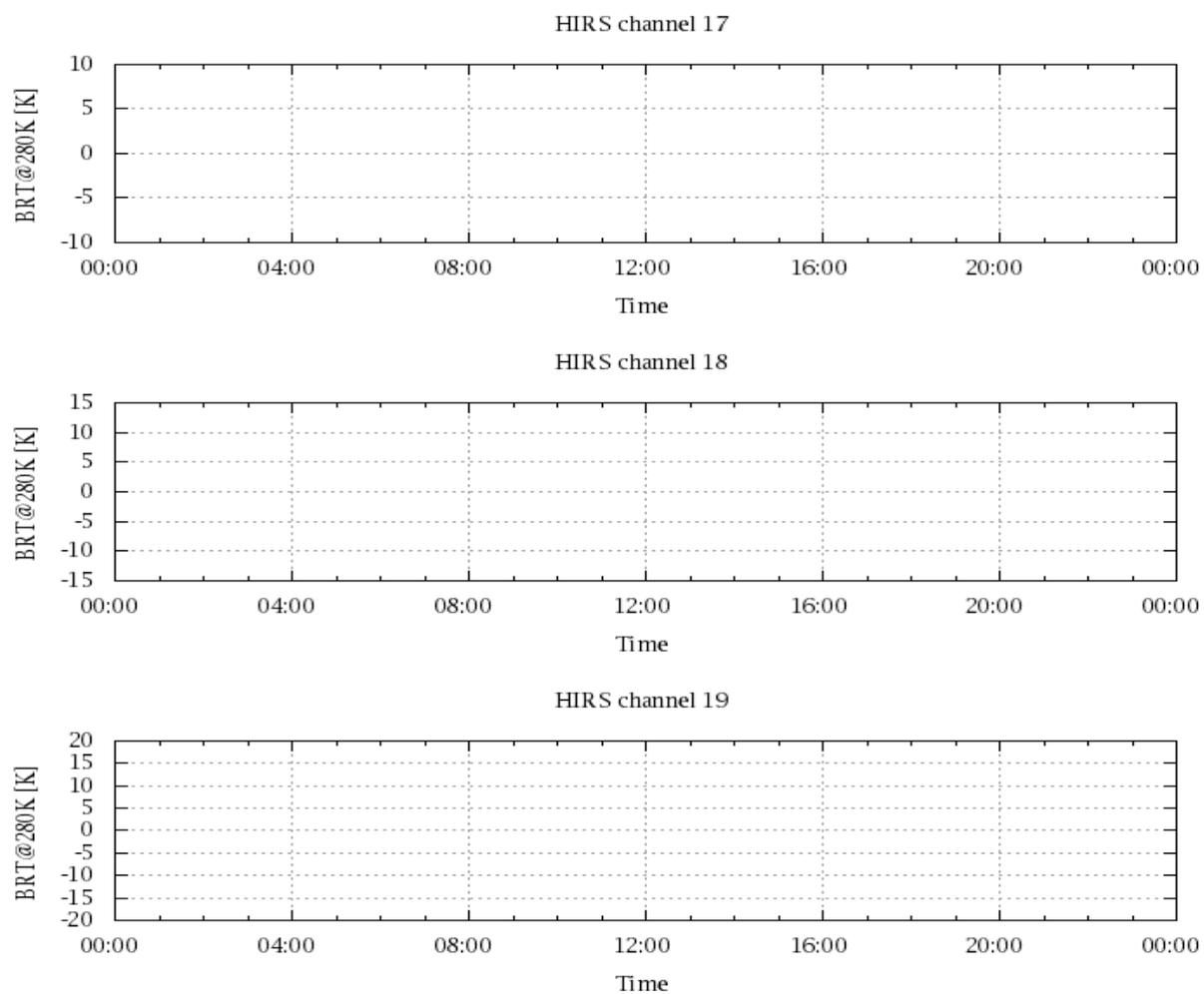


Figure 21: Radinace Differences in BT