

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

IASI monitoring team

15/02/2026 00:00:00 - 16/02/2026 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 15/02/2026 00:00:00 - 16/02/2026 00:00:00 .

The monitoring data are extracted on PDU basis.

2 Data quantity 15/02/2026 00:00:00 - 16/02/2026 00:00:00

Product Type	Number	Action
L0 HKTМ PDUs	477	-
L0 IASI PDUs	477	-
L1 ENG PDUs	477	-
L1 ENG distinct GEPSTGranule	466	-
L1 DPX PDUs (RM: IASI-HIRS)	0	e
L1 DPS Files (RM: OBS-CAL NWP based)	462	-

Table 1: Data quantity

APID	Seq from	Seq to	Time from	Time to
PX1 (130)	9335	9342	20260215164321.725	20260215164323.237
PX1 (130)	9342	9446	20260215164323.237	20260215164351.780
PX1 (130)	9446	9449	20260215164351.780	20260215164352.424
PX1 (130)	9449	9451	20260215164352.424	20260215164352.858
PX2 (135)	9335	9338	20260215164321.725	20260215164322.373
PX2 (135)	9338	9340	20260215164322.373	20260215164322.807
PX2 (135)	9340	9448	20260215164322.807	20260215164352.209
PX2 (135)	9457	9459	20260215164354.155	20260215164354.588
PX3 (140)	9338	9445	20260215164322.373	20260215164351.561
PX3 (140)	9445	9447	20260215164351.561	20260215164351.994
PX3 (140)	9447	9451	20260215164351.994	20260215164352.858
PX3 (140)	9457	9459	20260215164354.155	20260215164354.588
PX4 (145)	9336	9446	20260215164321.940	20260215164351.780
PX4 (145)	9446	9448	20260215164351.780	20260215164352.209
IMG (150)	7991	7994	20260215164321.725	20260215164322.373
IMG (150)	7995	8118	20260215164322.588	20260215164351.780
IMG (150)	8120	8122	20260215164352.209	20260215164352.643
VER (160)	2421	2441	20260215164317.616	20260215164323.237
AUX (180)	3759	3763	20260215164318.049	20260215164350.049

Table 2: L0 data gaps

3 Instrument modes

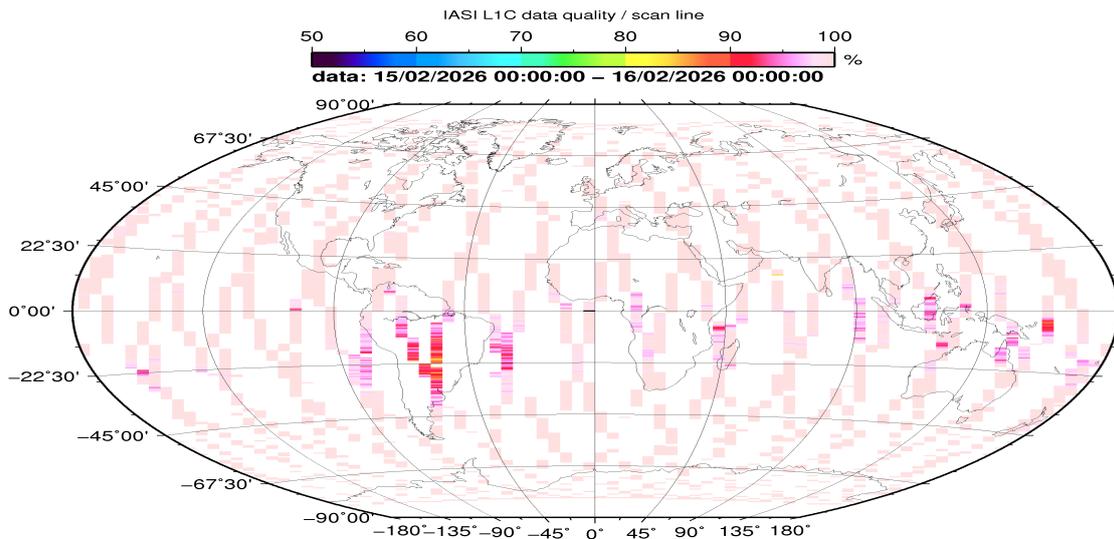
Time	Transition from	Transition to
15/02/2026 00:12:04	-	Normal operation

Table 3: Instrument modes

4 L0 and L1 Data Quality

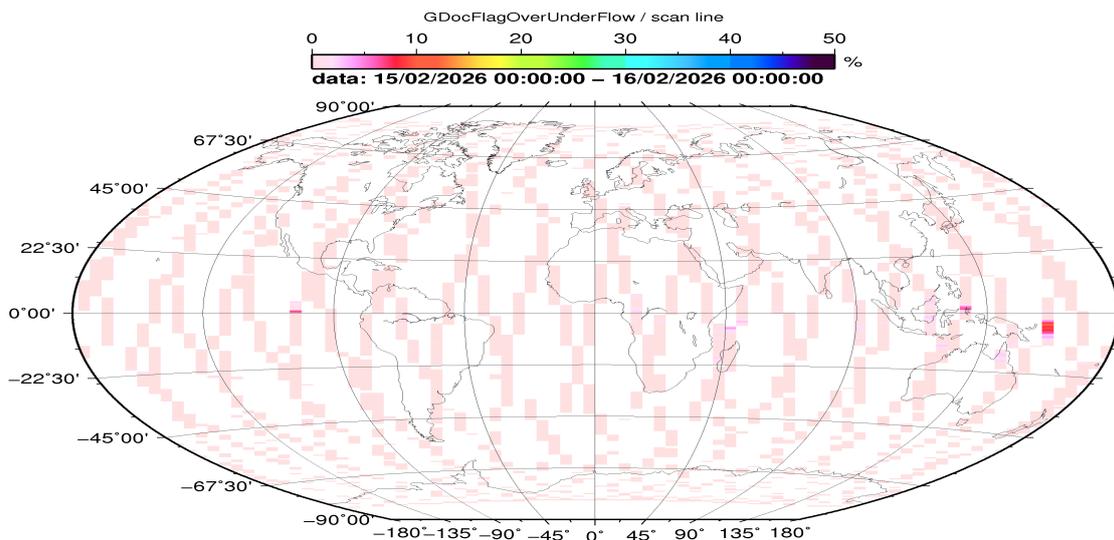
Flag	Value	Action
L0 IASI PDUs	477	-
L1 ENG PDUs	477	-
L1 ENG distinct GEPSGranule	466	-
GQisFlagQual set (PX1)	99.67 %	-
GQisFlagQual set (PX2)	99.73 %	-
GQisFlagQual set (PX3)	99.74 %	-
GQisFlagQual set (PX4)	99.65 %	-
GQisFlagQual set (all)	99.70 %	-

Table 4: Quality flags



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Figure 1: L1C data quality



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Figure 2: Flag of Over and Under Flows

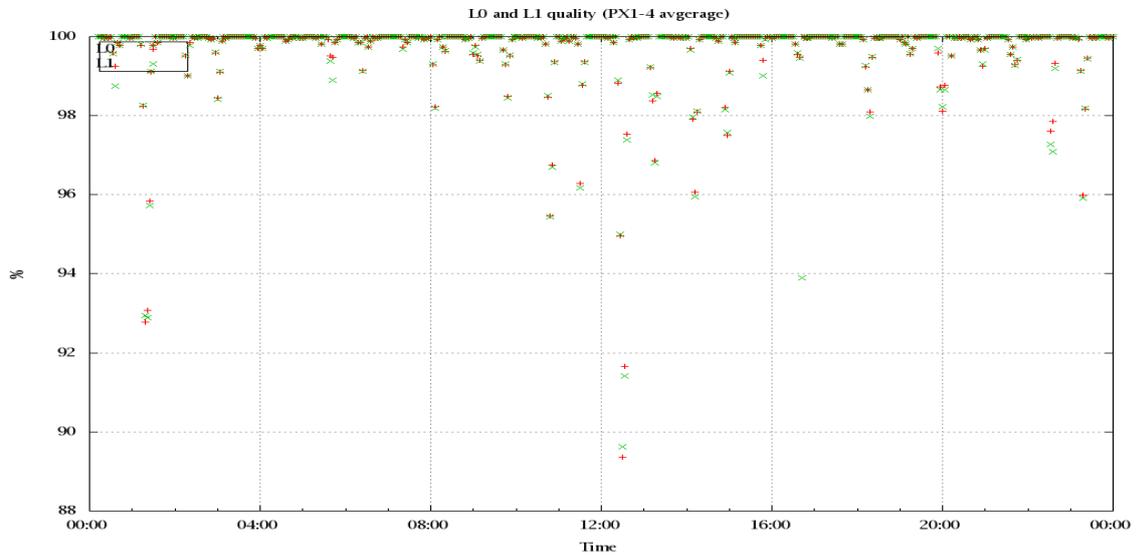


Figure 3: Level 0 and 1C overall quality

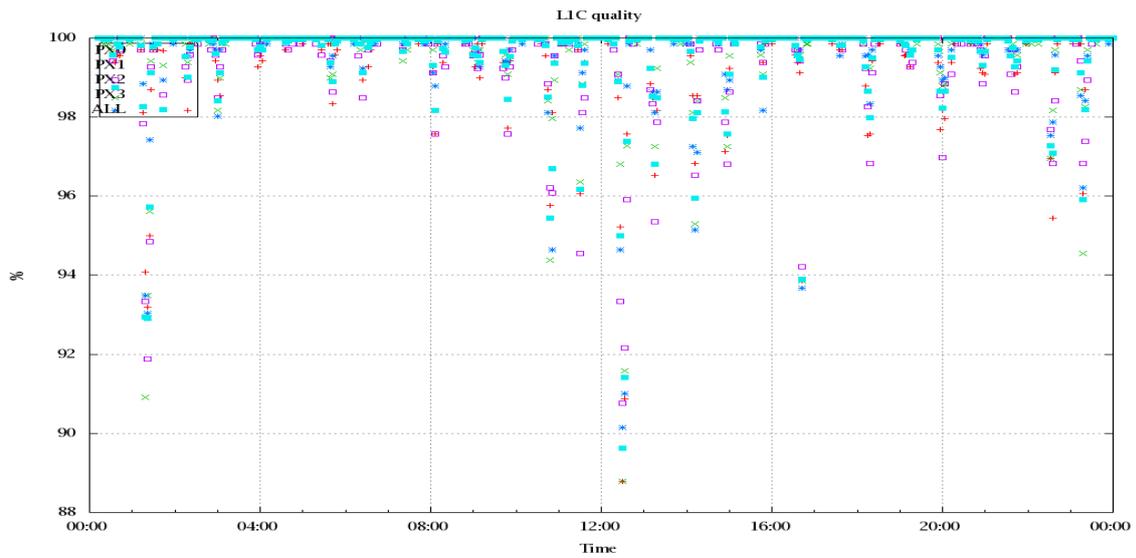


Figure 4: Level 1C quality

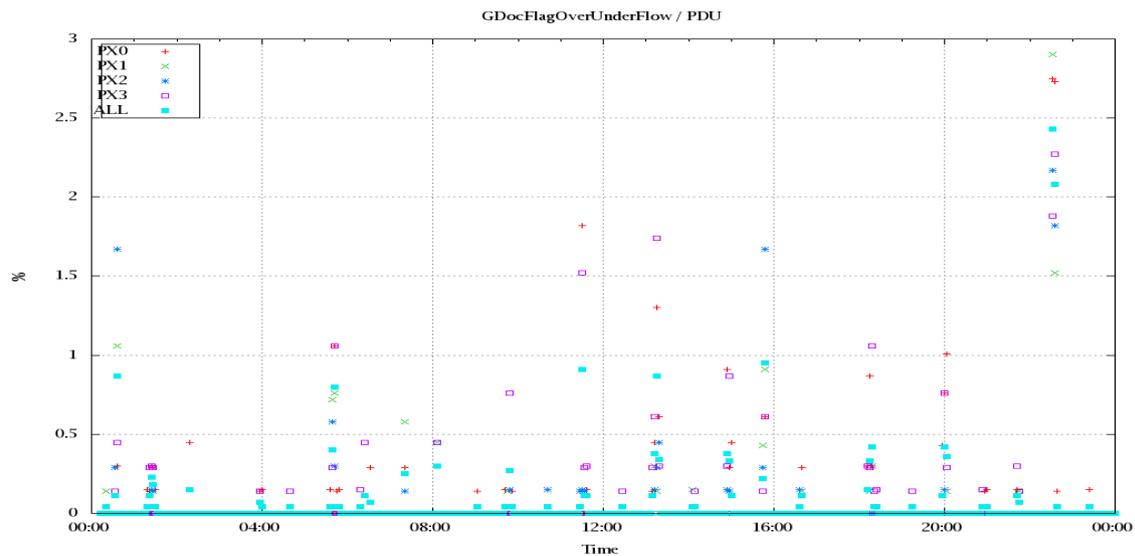


Figure 5: Timeseries of flag of Over and Under Flows

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.

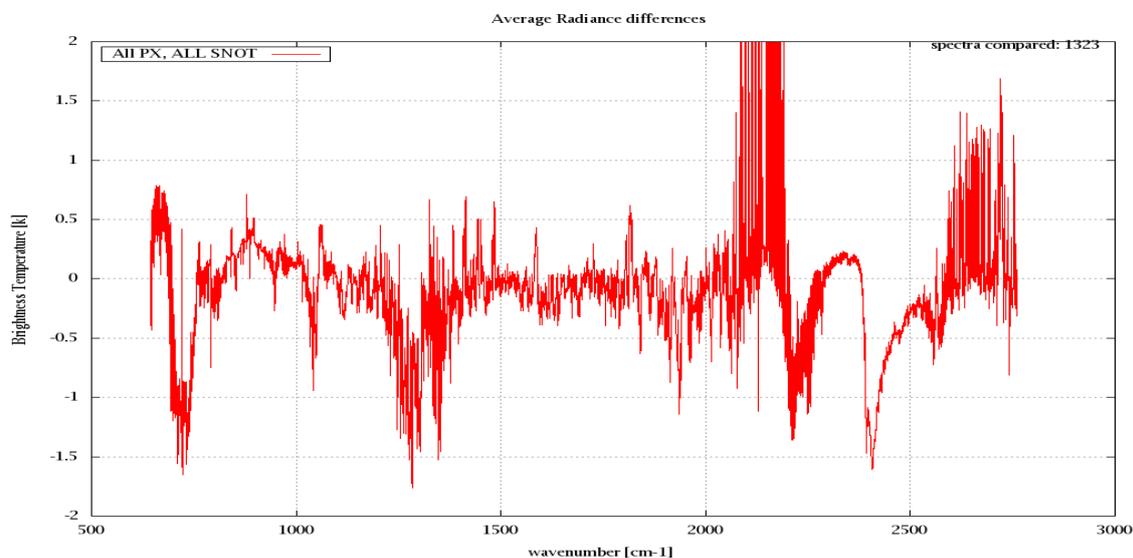


Figure 6: Average Radiance differences: OBS-CAL

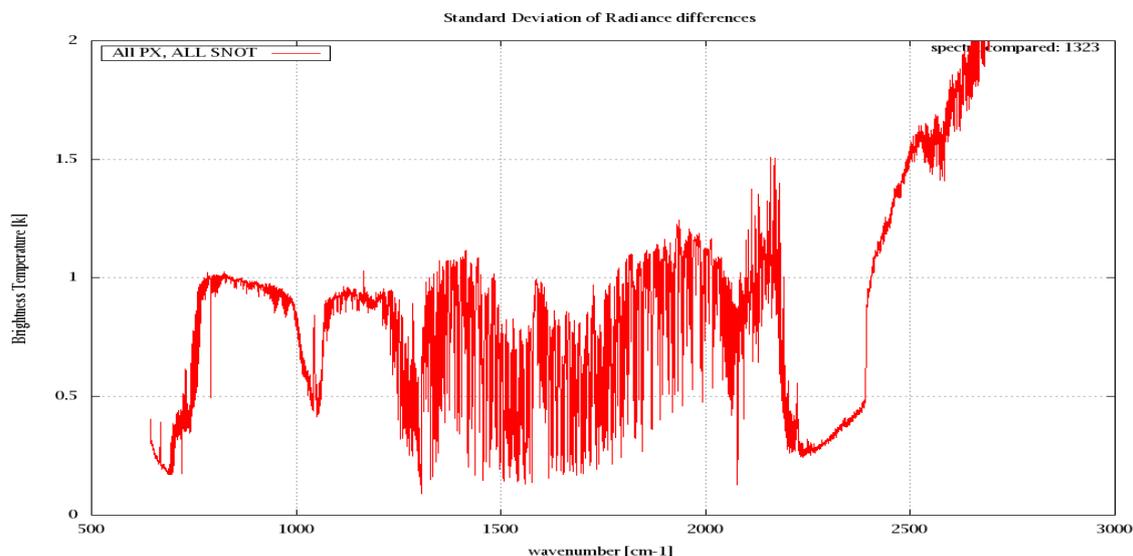


Figure 7: Standard Deviation of Radiance differences

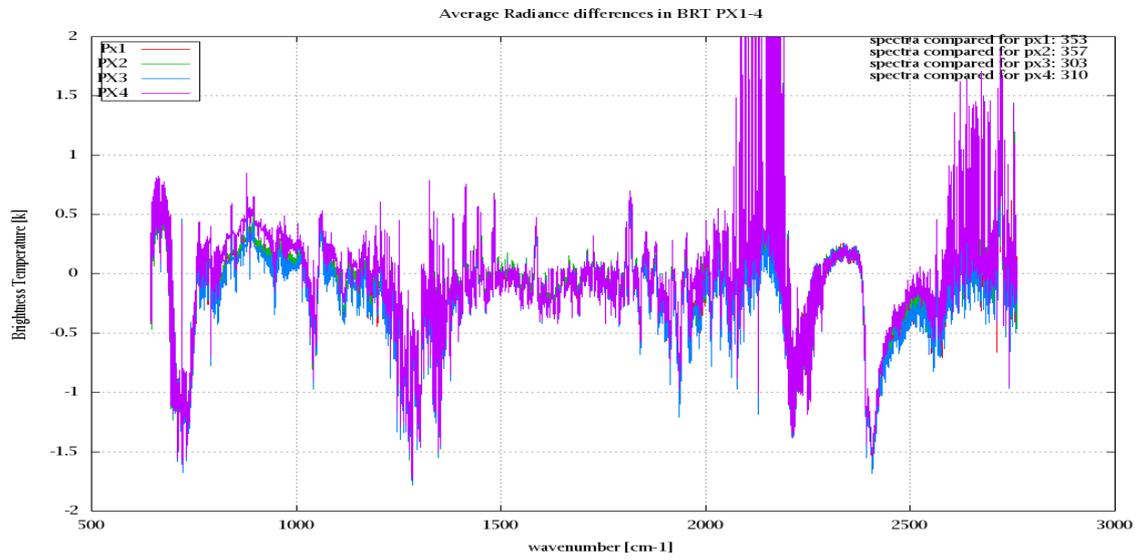


Figure 8: Average Radiance differences: OBS-CAL

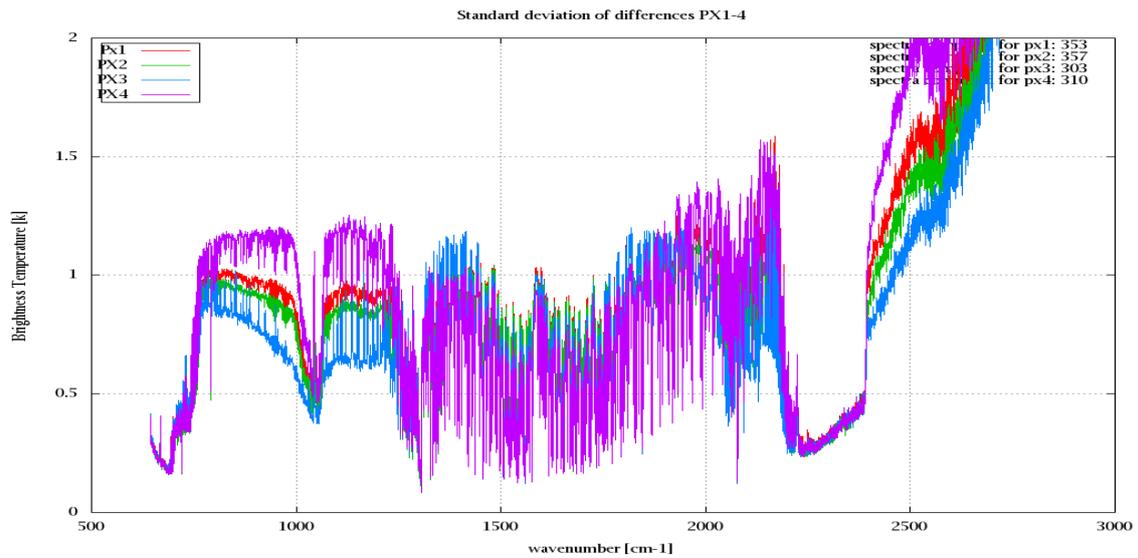


Figure 9: Standard Deviation of Radiance differences

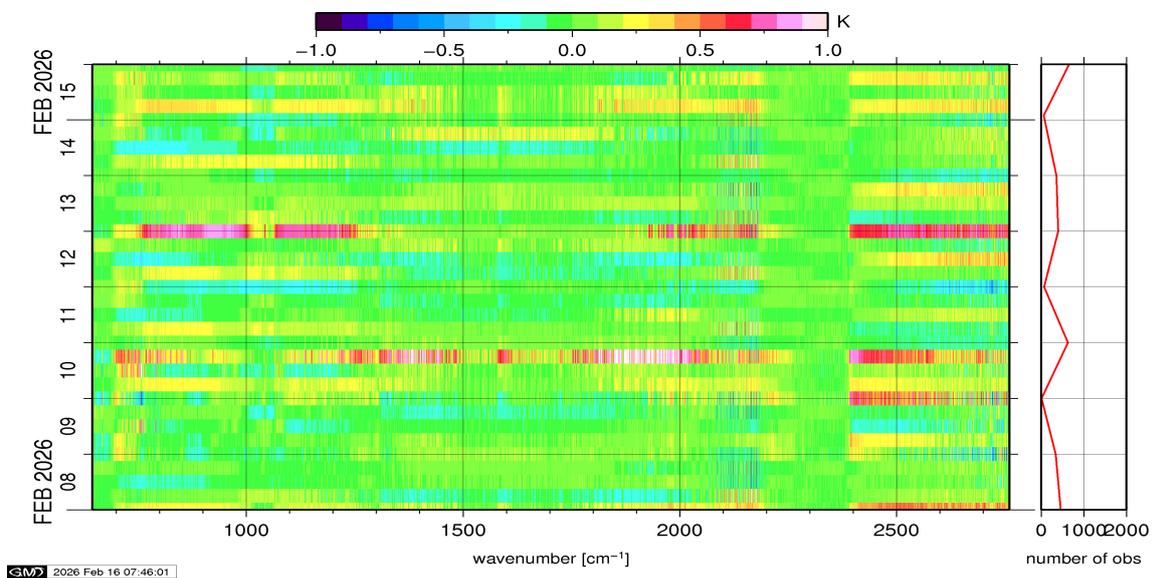


Figure 10: Radiance Anomaly in BT: All Channels

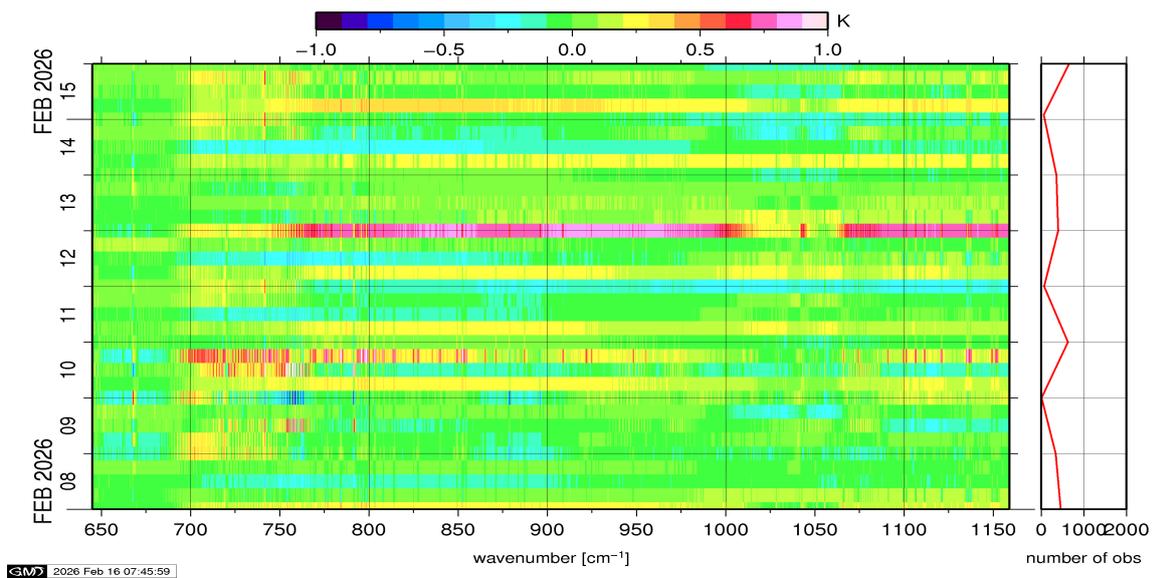


Figure 11: Radiance Anomaly in BT: IASI Band 1

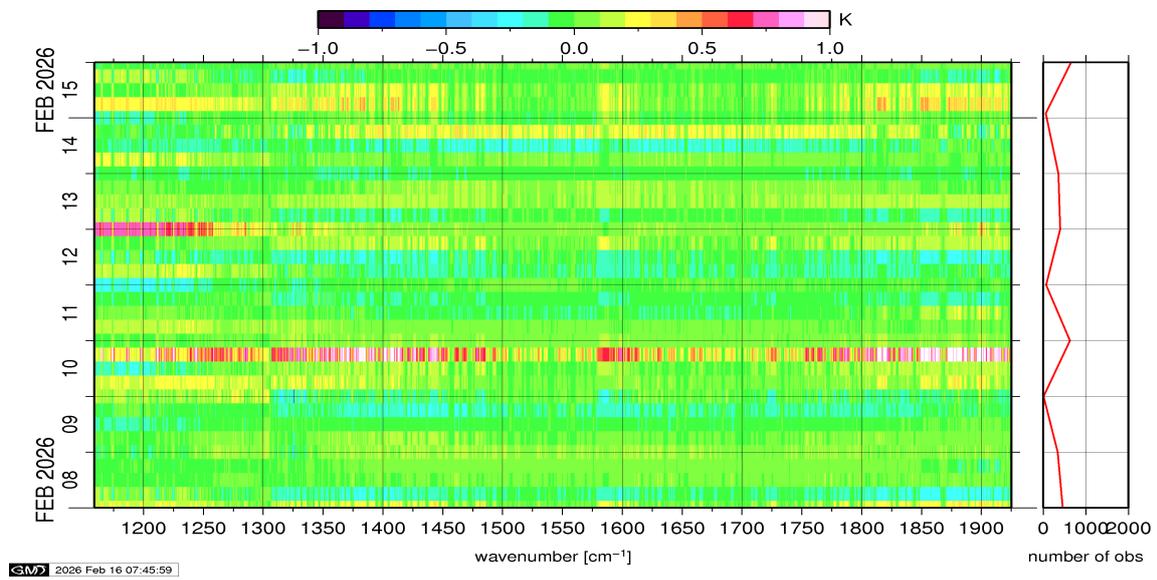


Figure 12: Radiance Anomaly in BT: IASI Band 2

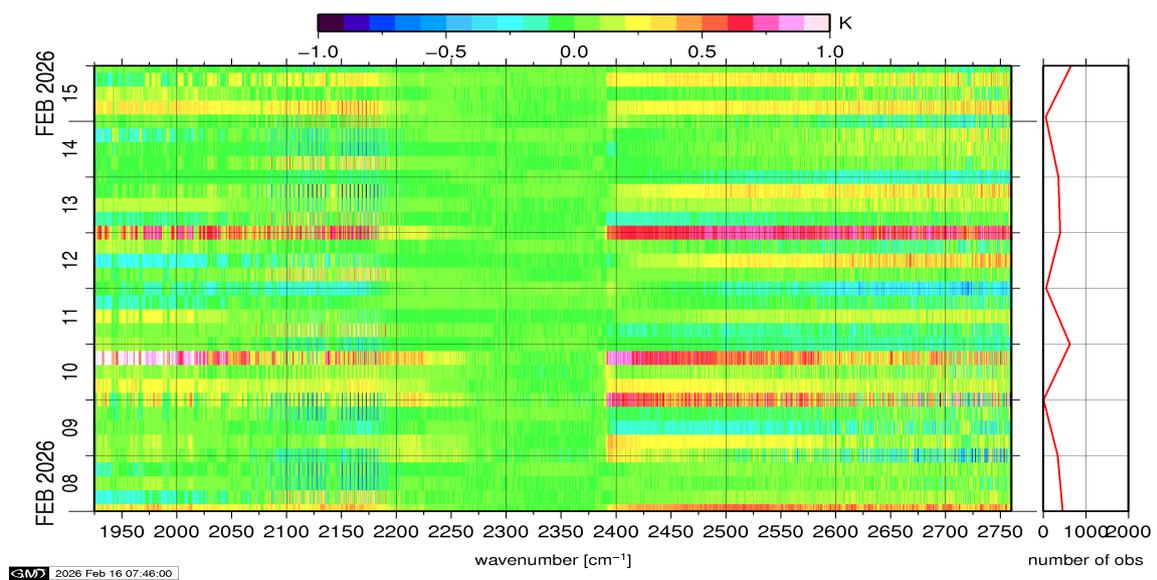


Figure 13: Radiance Anomaly in BT: IASI Band 3

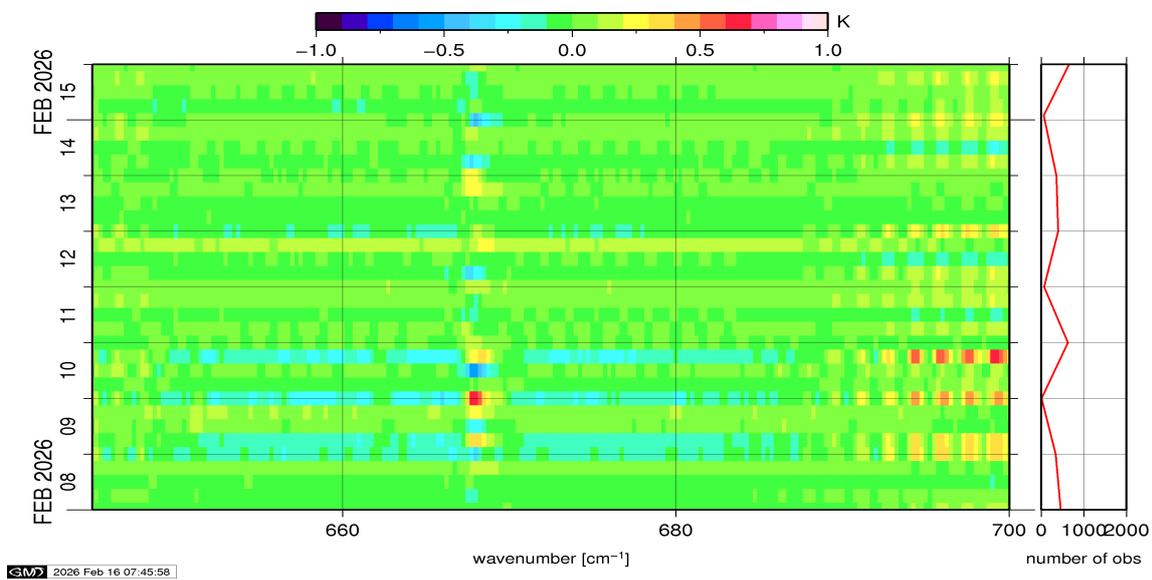


Figure 14: Radiance Anomaly in BT: CO2 14

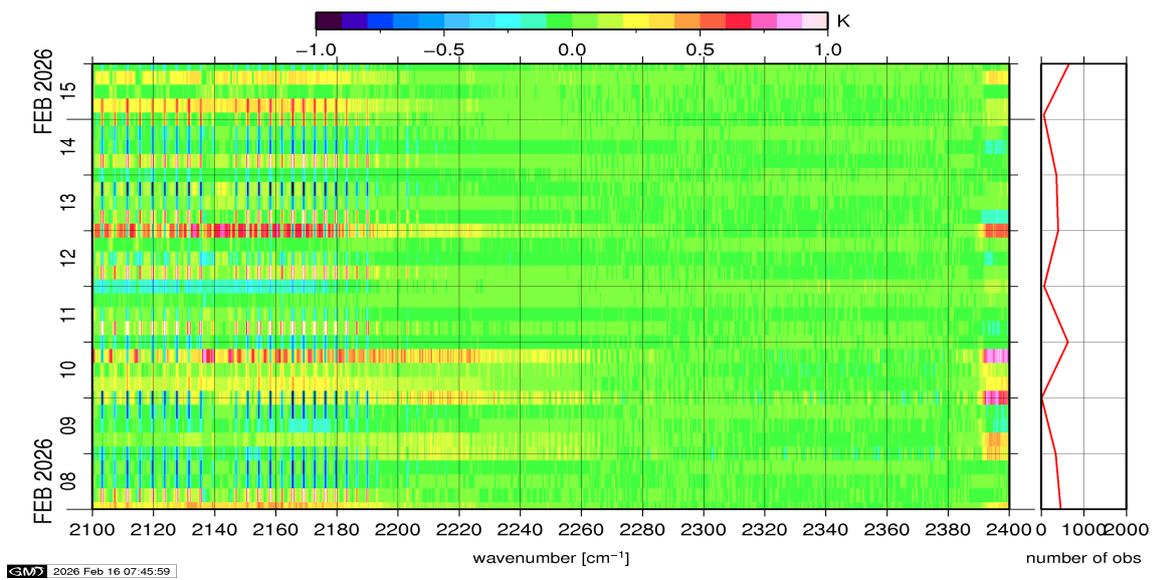


Figure 15: Radiance Anomaly in BT: CO2 4.3

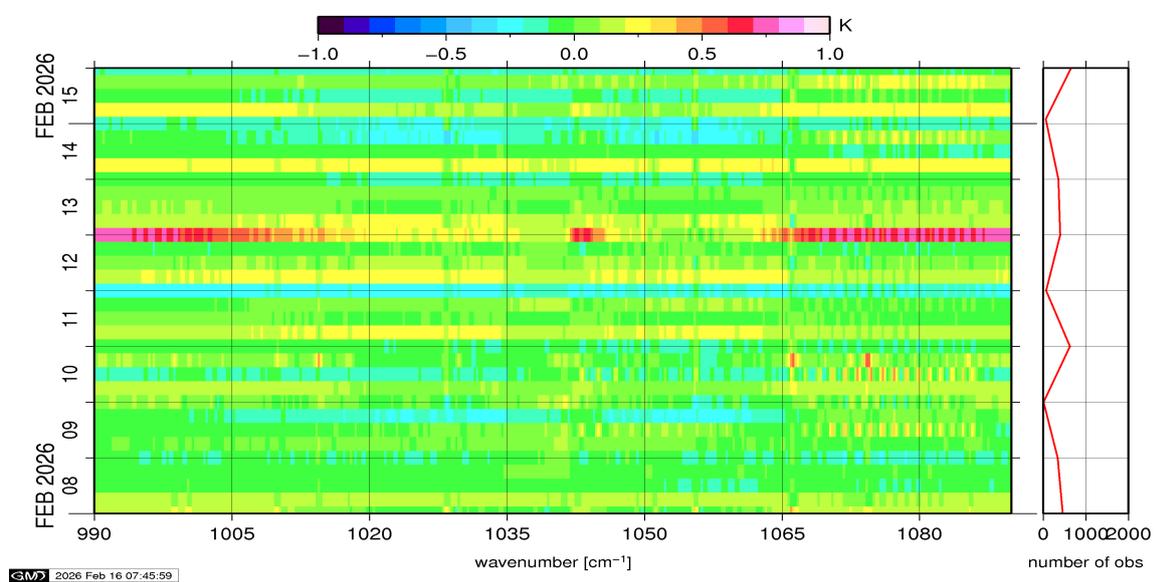


Figure 16: Radiance Anomaly in BT: O3

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.

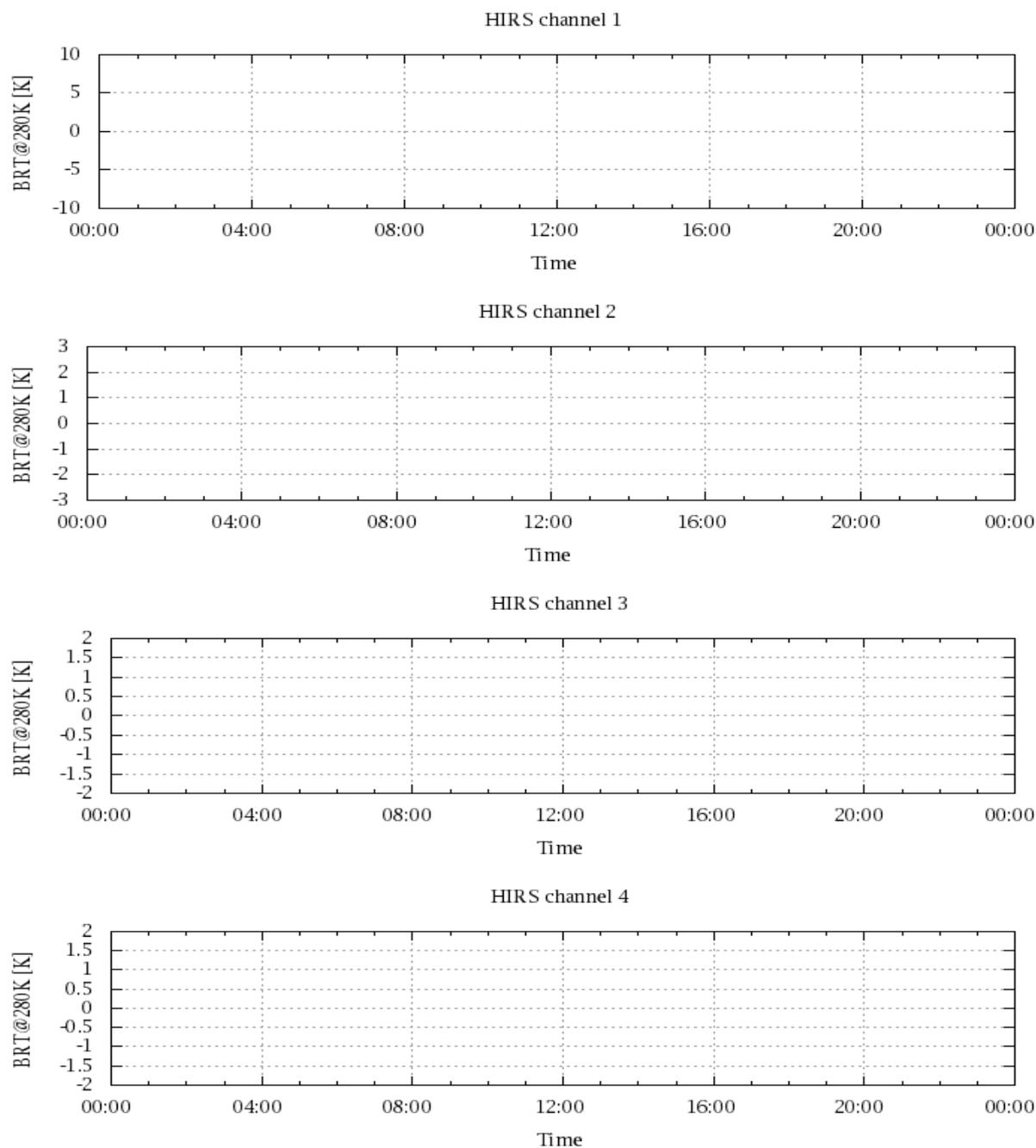


Figure 17: Radiance Differences in BT

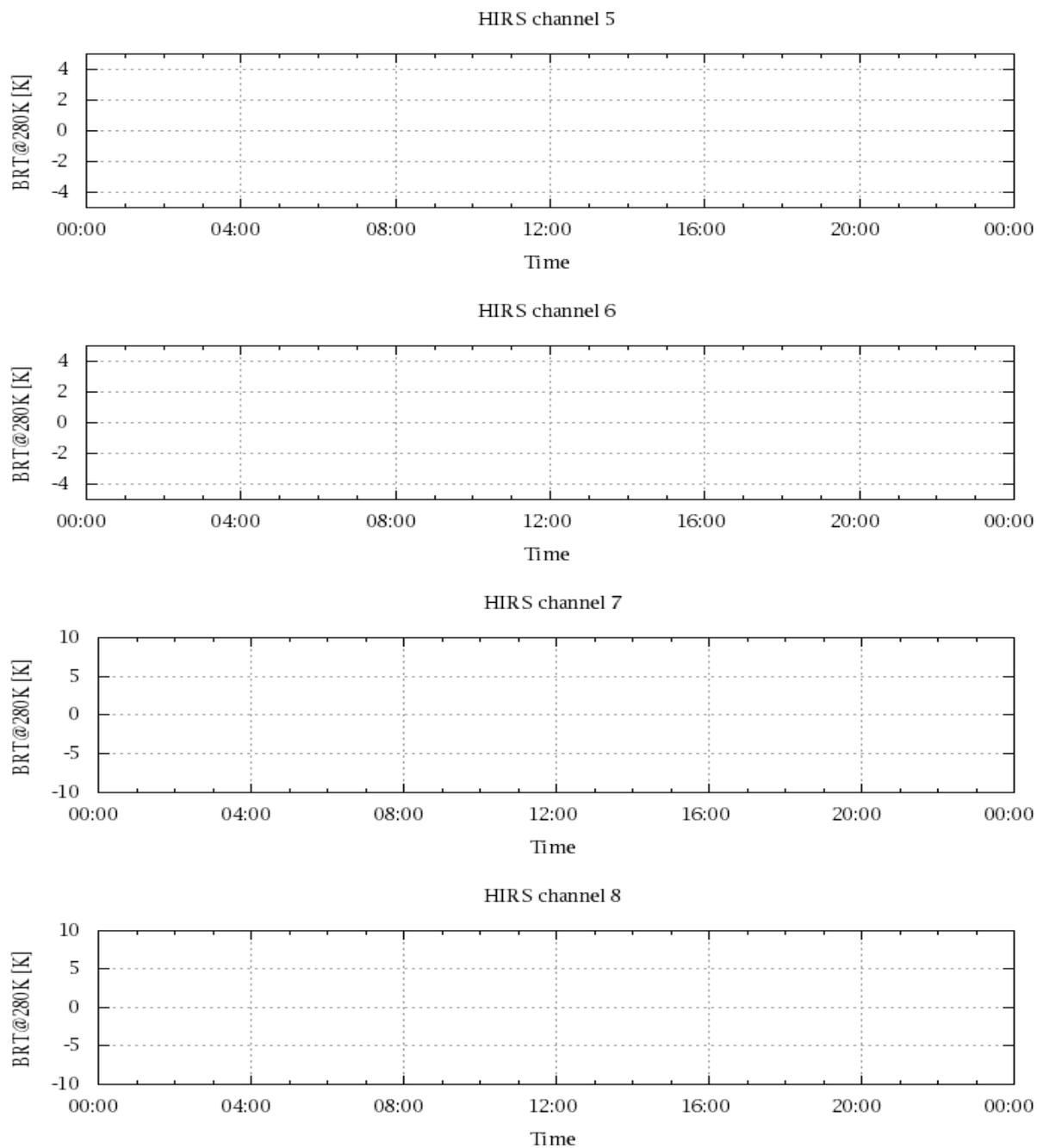


Figure 18: Radiance Differences in BT

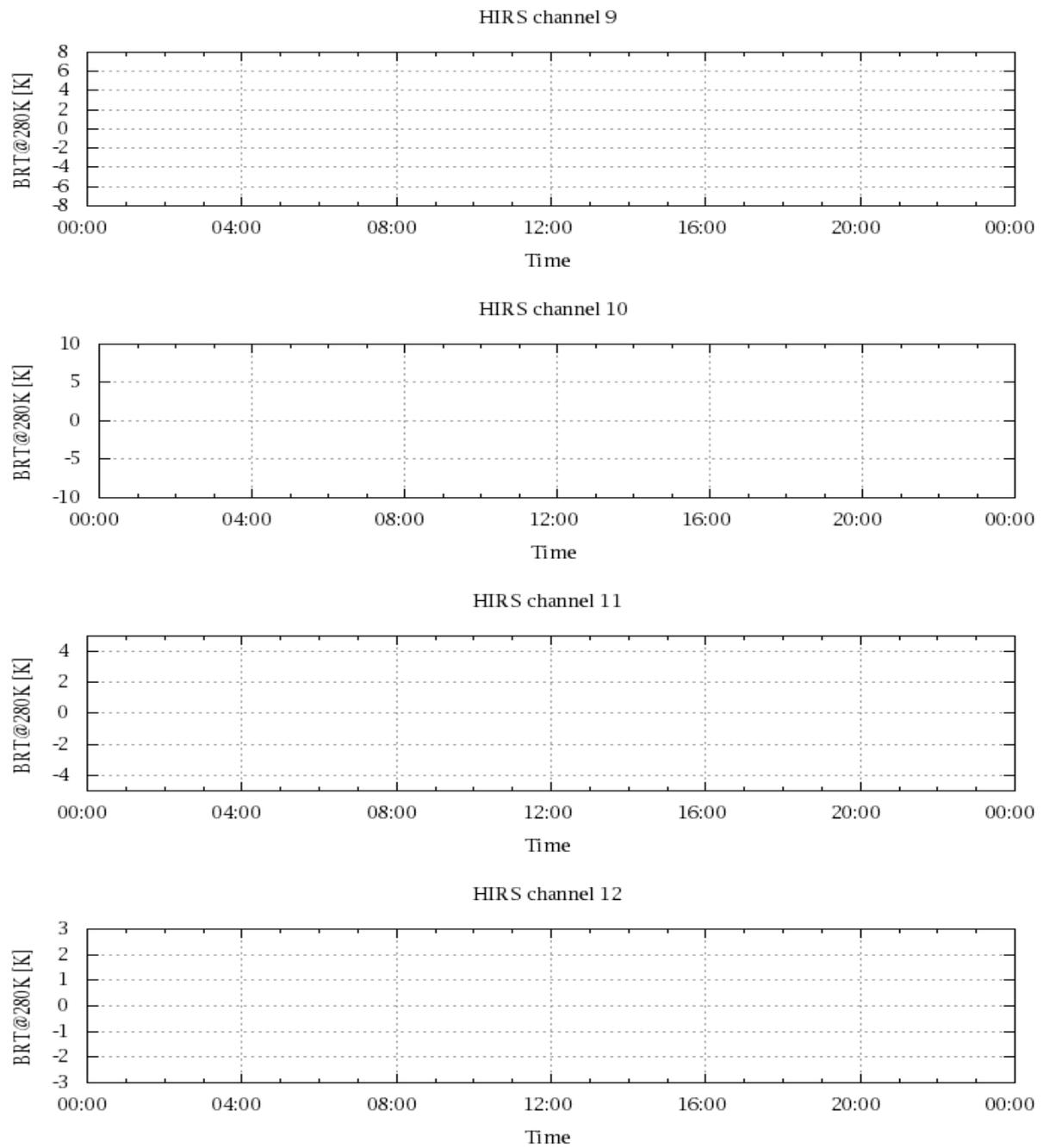


Figure 19: Radiance Differences in BT

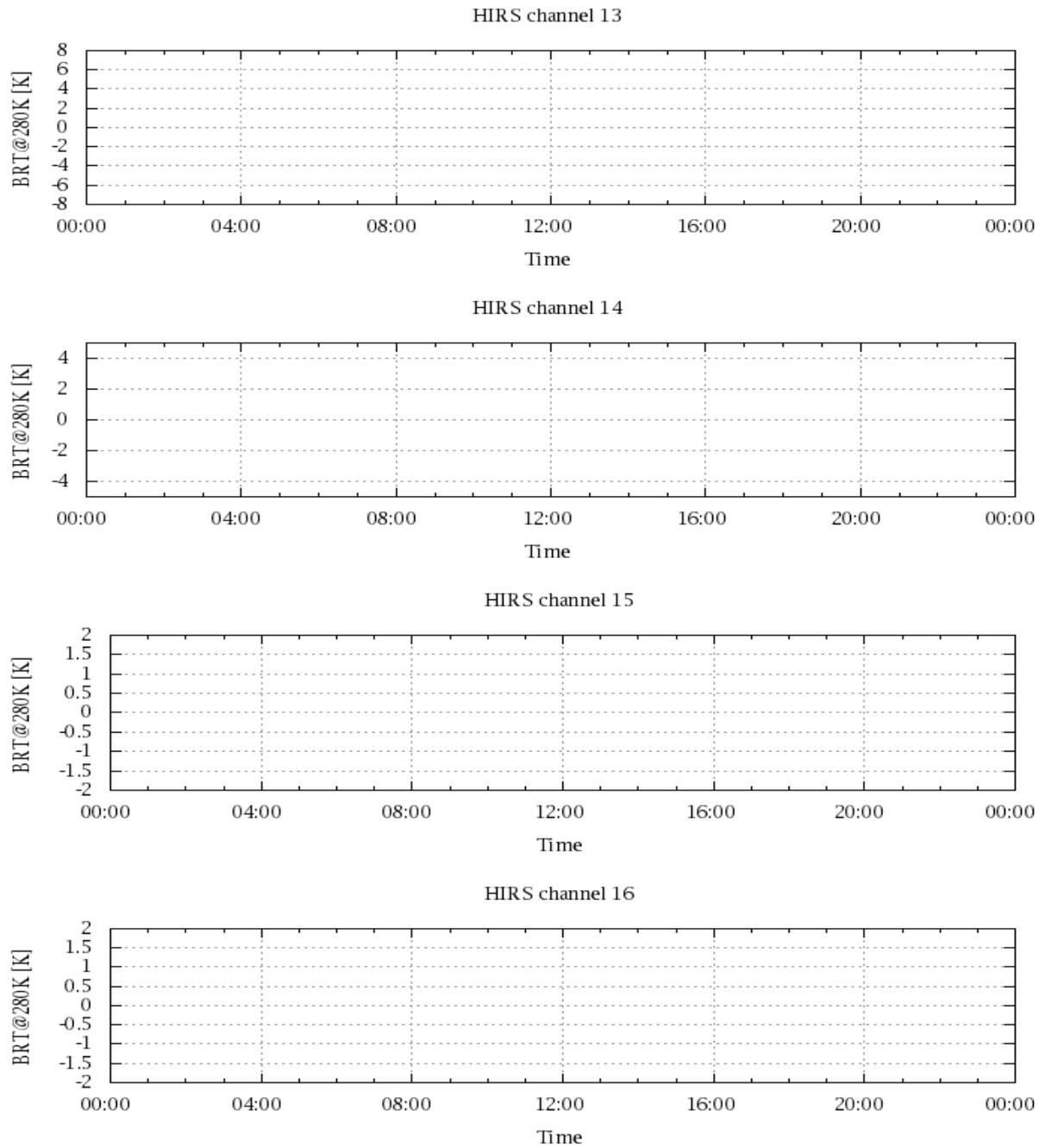


Figure 20: Radiance Differences in BT

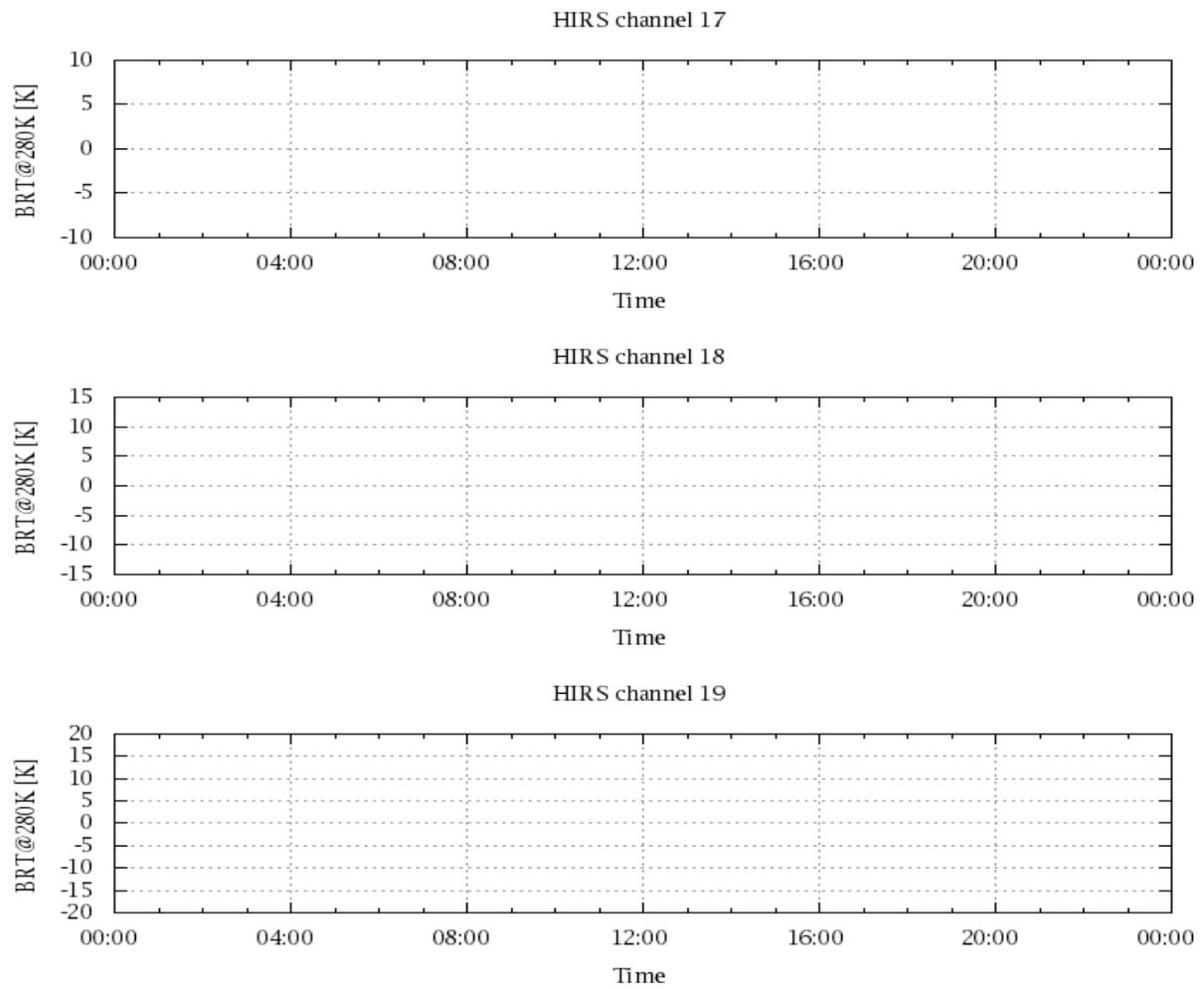


Figure 21: Radinace Differences in BT