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## Montly Report on EUI Operations 202405

Review of performed activities, MOC/SOC interactions and acquired datasets.

Prepared by EUI team, approved by David Berghmans (EUI PI)



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**1 Introduction**

This document presents a brief report of the operations of the EUI instrument onboard Solar Orbiter during the calendar month 202405.

Written by the EUI team. Approved by the EUI PI.

**2 Current Status**

At the time of writing (2024-06-12), EUI is nominal and executing R\_FULL\_LRES\_LCAD\_RS-Synoptic-Low.

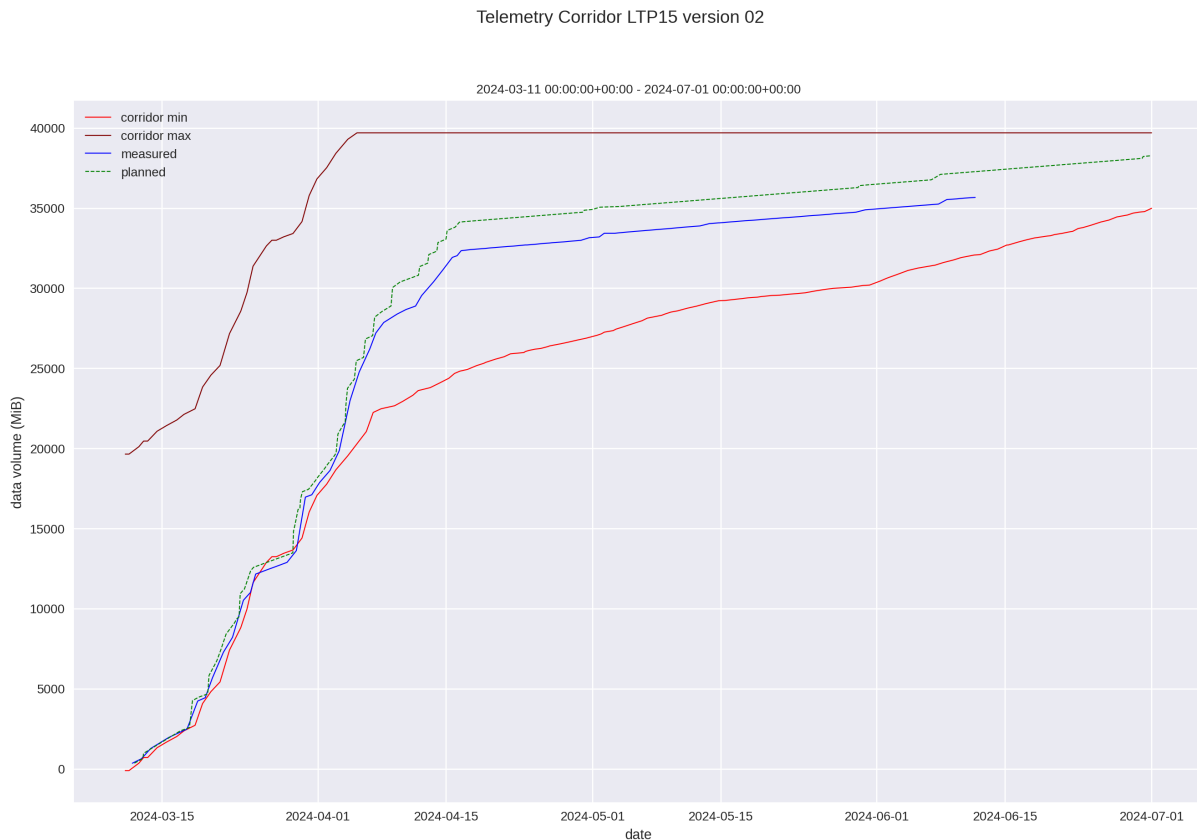
**3 Health monitoring & non-nominal events**

- 2024-05-13: Conversation between Koen Stegen and Sebastian Thomas Andersen (MOC) about a PDOR to reboot EUI and return to science mode because since 2024-05-09 11:53:54 the unrecoverable errors (NIU05149 EUI EDAC SOB Uncorrectable Count) of EUI had been steadily increasing. The PDOR was executed at 2024-05-13 20:59:50 UTC (see also SOL\_SC-84 below).
- 2024-05-20: an increased number of particle hits on the FSI sensor were recorded (see May 20 in the movie of [All Low Latency Synoptics during 2024 May](#). A significant rise in particles was confirmed by the EPD Low Latency data.
- 2024-05-21: From 02:09 onwards, the SOB started reporting a continuous stream of non-recoverable EDAC errors (NIU05149 EUI EDAC SOB Uncorrectable Count). This is possibly related to the previous item, but the same behavior was observed before without obvious particle fluxes (see also SOL\_SC-84 below). Koen Stegen (EUI) sent a request to reboot EUI to MOC. Following that NIU05149 was constant again from 2024-05-21 21:46.

**4 Observation progress**

- R\_FULL\_LRES\_LCAD\_RS-Synoptic-Low were executed by FSI throughout the month. This was interleaved by:

- The Alpha Virgo Star Observation campaign involving HRILYA, on May 1 and May 2.
- A monthly LED campaign on May 30.
- due to too careful planning and a few compression setting errors (below), we are underproducing data (about 1600 MiB below the SPK trajectory). To be discussed with SOC, we can consider
  - later in the LTP to switch temporarily back from low to moderate synoptics to compensate.
  - carry over the spare TM to LTP16



**Figure 1:** Telemetry corridor

## 5 Data remaining onboard

- The latest SOB filesystem list report dates from May 13. Nevertheless, SOB filesystem list reports have been commanded after every flush. The absence of SOB filesystem list reports in the second half of May indicates that the SOB was entirely emptied during every flush.
- Data in SSMM: the EUI Packet Store 12 in the SSMM was non-empty throughout the period and decreased from >6200 MiB in the beginning of the period to <4000 MiB at the time of writing (June 12).

### 5.1 EDDS performance

No update available.

## 6 Data received on the ground

- Besides Low Latency FSI images, HRIEUV data were received on the ground during the month May with observation times between April 9 and April 15
- After April 16, only low latency images have been received so far.
- Selected observation movies
  - [Daily synoptic Movies](#) (not available yet for 2024 May)
  - [All Low Latency Synoptics during 2024 May](#)

## 7 Past and upcoming noteworthy instrument/team events

- An update of the flight software is planned for July 18. This software update will correct all known & fixed bugs in particular for event triggering, sequence and timing performance.
- The target date for Data Release 7 is late 2024. Meanwhile Data Release 6 has been appended up till 2024 March 7 and the additional data has been pushed to the SOAR and to jHeliviewer.

## 8 Past Month MOC/SOC interactions

- 2024-05-07: on HRILYA, David Williams informed that the current fill state of the SSMM has enough margin that they think they can absorb the extra 360 MiB now. David Berghmans answered that for May 1 HRILYA campaign not all of the 360 MiB were used and he suggested that the remaining 237 MiB can be spent in LTP16.
- 2024-05-21: Emil Kraaikamp (EUI) informed SCIOPS that we tried to load the new EFECs file in our system, but failed. They replied it will be fixed.

## 9 Pending Anomaly Reports

- SOL\_SC-84 (TM flush from OHQ to SOB blocked. EUI filled linear&circular CEL. Reboot needed., created 2021-08-31): There is no definite resolution to this problem in sight yet but we operate with the work-around that when the number of SOB uncorrectable errors rises quickly, we reboot. This works perfectly but could potentially lead to data loss if it happens in a RSW. This anomaly report remains open while the EUI team further studies possible, exceptional issues with the filesystem.