

CMS Ops Team Nominal Mission #1 2022-01-27

- CMS ops
- Anomalies (if any)
- CMS data and interpretation
- Highlights/recommendations
- Future operations
- AOB
- Next meeting
- Action Items

Attendance:

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CMS ops

Currently executing on board is STP-187, in the three-month period known as LTP06, the first of the Nominal Mission Phase.

LTP-05, the prior long-term planning period, came to an end on 27 Dec 2021 .

Since the last meeting on 02 Dec 2021 , payload has continued observing the Sun in a more or less "synoptic" way after the Earth GAM, with an interruption between 09 Jan 2022 and 12 Jan 2022 for the re-partitioning of the Solid State Mass Memory, as well as for updating the software that controls it.

Anomalies (if any)

None affecting SPICE/CMS.

CMS data and interpretation

See IAS CMS data tool

Operations times shown for CMS since the last meeting.

LTP05:

1. Around and after **EGAM**
 - a. STP-179: 2021-11-26T15:20:00Z – 2021-11-27T04:00:00Z (DOY 330–331)
 - i. **WOL, TCM and MAINT** (EGAM itself; Thrusters firing 2021-11-27T04:04:00 – 05:18:00) – **⚠ AI: pointing needs investigation to discount optical / thermal effects, also to look at the heater operations across the platform around the MAINT window itself.**
 - b. STP-179: 2021-11-30T02:00:00Z – 13:40:00Z (DOY 334)
 - i. **WOL** (2021-11-30T03:00 – 03:05)
 - ii. **MAG Calibration Rolls** (05:15 – 13:31) around S/C X axis (Sunward direction)
 - c. STP-179: 2021-11-30T22:30:00Z – 2021-12-01T12:10:00Z (DOY 334 – 335)
 - i. **WOL** (2021-12-01T03:00 – 03:05)
 - ii. **MAG Calibration Rolls** (2021-12-01T01:44 – 12:02)
 - d. STP-179: 2021-12-01T22:30:00Z – 2021-12-02T12:10:00Z (DOY 335 – 336)
 - i. **WOL** (2021-12-01T23:29 – 23:31)
 - ii. **MAG Calibration Rolls** (2021-12-02T01:44 – 12:02) - **longer period variation than just from the rolls themselves. Need to pull out the parameters that show roll around X for comparison.**
 - e. STP-180: 2021-12-02T21:05:00Z - 2021-12-03T12:45:00Z (DOY 336–337)
 - i. **WOL** (2021-12-02T22:05 – 22:09)
 - ii. **TCM at EGAM+1 week (2021-12-03T07:18 – 07:50).** Substantial on-time of thrusters, so it's of interest to examine the post-maneuvre levels on CMS-1 & 2.
 1. Seems like CMS-2 held steady, and that the CMS-1 drift was real because of non-held temperature.
2. STP-180: 2021-12-03T20:30:00Z – 2021-12-03T23:30:00Z
 - a. **SA relubrication** (04:23 – 04:29)
3. STP-180: 2021-12-09T21:05:00Z – 2021-12-10T00:05:00Z
 - a. **WOL** (22:04 – 22:09)
4. STP-181: 2021-12-13T19:30:00Z – 2021-12-14T05:30:00Z
 - a. **TCM** (unused)
5. STP-182: 2021-12-20T00:05:00Z – 2021-12-20T03:05:00Z
 - a. **WOL** (01:04 – 01:08)

LTP06:

1. STP-183: 2021-12-27T23:00:00Z – 2021-12-28T02:00:00Z
 - a. **SA relubrication** (00:09 – 00:18)
2. STP-184: 2022-01-02T19:00:00Z – 2022-01-02T22:00:00Z

- a. **No special platform event** – is it of interest to make these observations more often? (moved earlier because SPICE wanted to observe at the originally indicated time).
- 3. STP-185: 2022-01-09T00:00:00Z – 2022-01-09T03:00:00Z
 - a. **No special platform event (SSMM software update so not usual operations)** No need to make them regularly: but these are an interesting data set for showing stability of the measurements in the absence of other effects.
- 4. STP-186: 2022-01-17T00:05:00Z – 2022-01-17T09:15:00Z
 - a. **WOL** (01:04 – 01:09)
 - b. **TCM-Type 2** (unused)
- 5. STP-187: 2022-01-24T12:00:00Z – 2022-01-24T15:00:00Z
 - a. **SA Rotation** 0° 30° (13:20 13:26)

Highlights/recommendations

- CMS operations to be performed weekly, capturing interesting events where possible.
- CMS Operator should switch on CMS 30 minutes earlier than the time at which the observations would start, particularly if the observations to catch (for example) a WOL would need to start at midnight. CMS operations in SOOP Kitchen are timed such that they start 30 minutes after assumed switch-on.
- Note that From LTP04 onwards (i.e., starting from STP-154), SOC has not been indicating CMS operations in the EFECs with an RSW_EXT_SPICE. They will still be indicated with CMS “observations” in the LTP plan however.
- For MAINT-ANY windows, since FCT can do ANYTHING in that window, it's good practice to observe right through (and for any adjoining WOLs + TCMs).

Future operations

Already planned

Upcoming planned CMS Ops:

LTP-06 runs until the beginning of April (beyond the Remote Sensing Windows)

- **WOL:** 2022-01-31T00:05:00Z – 2022-01-31T03:05:00Z
- **No special event:** 2022-02-06T19:00:00Z – 2022-02-06T19:00:00Z
- **SA rotation:** 2022-02-12T23:00:00Z – 2022-02-13T02:00:00Z
- **WOL + TCM:** 2022-02-14T00:05:00Z – 2022-02-14T09:15:00Z
- **SA rotation:** 2022-02-18T00:00:00Z – 2022-02-18T03:00:00Z
- **WOL:** 2022-02-21T00:05:00Z – 2022-02-21T03:05:00Z

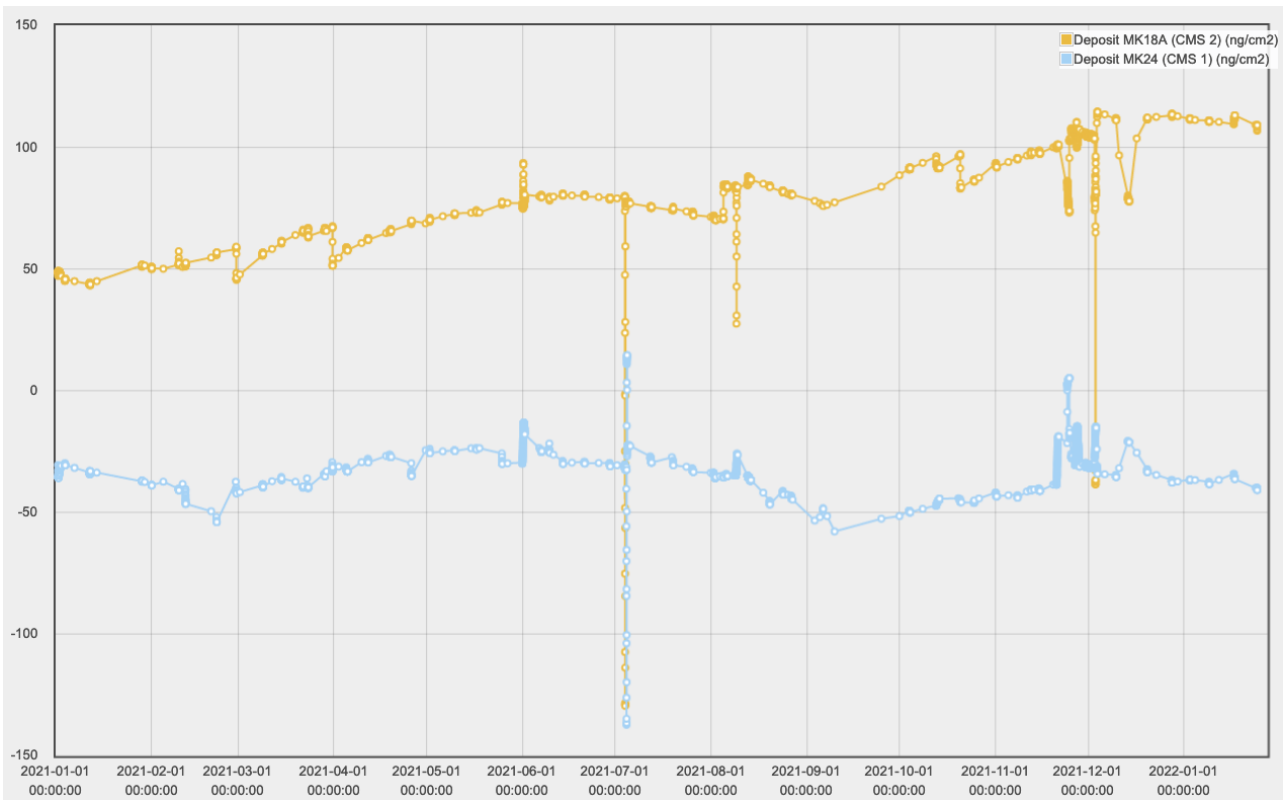
LTP-07 plans can be refined until Monday (31 Jan 2022), so we have the chance today to decide the CMS operations.

RAL has already introduced their proposal in https://solarorbiter.esac.esa.int/soopkitchen/#/planning/plan/LTP07_Apr2022-Jun2022

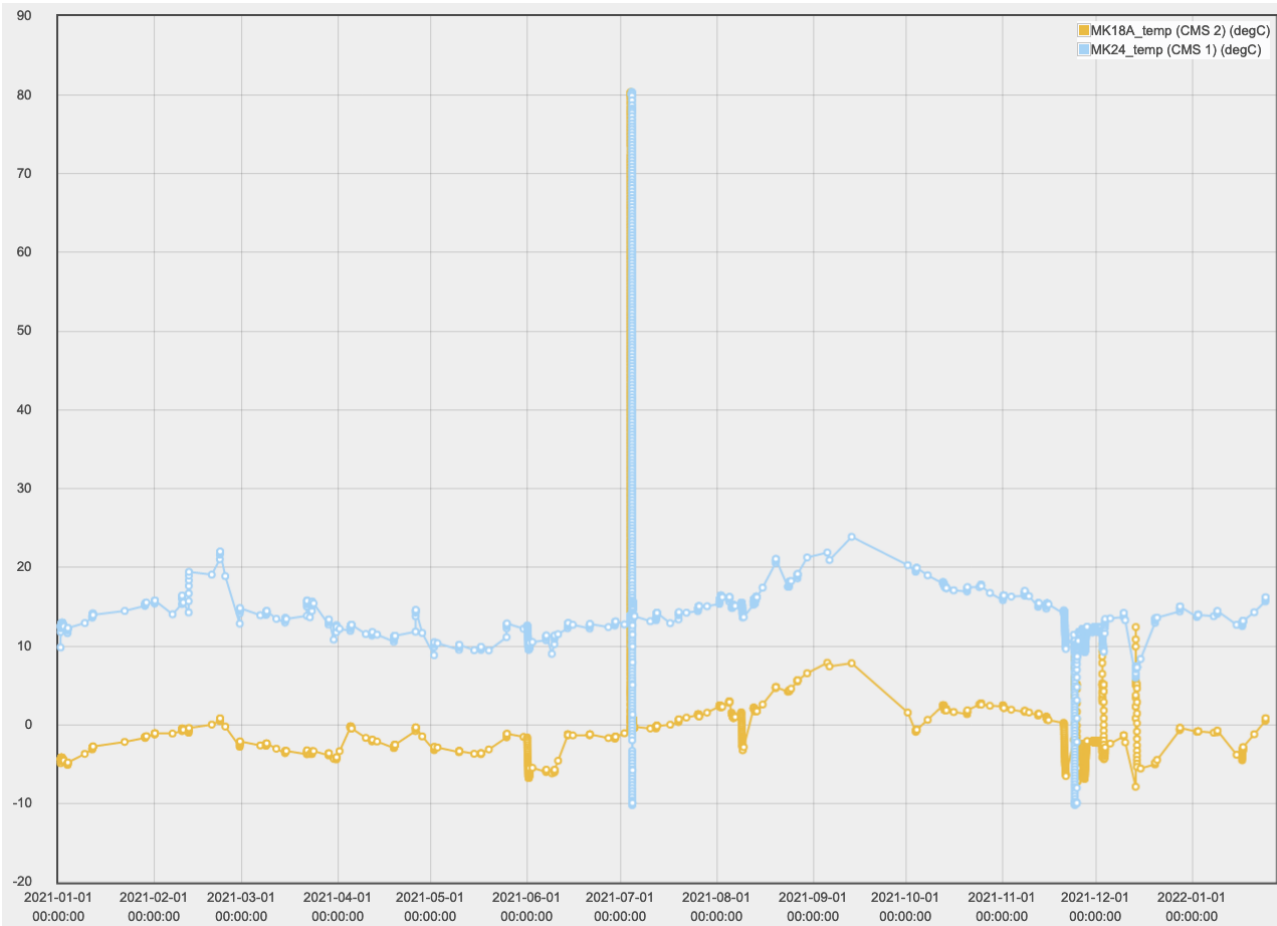
AOB

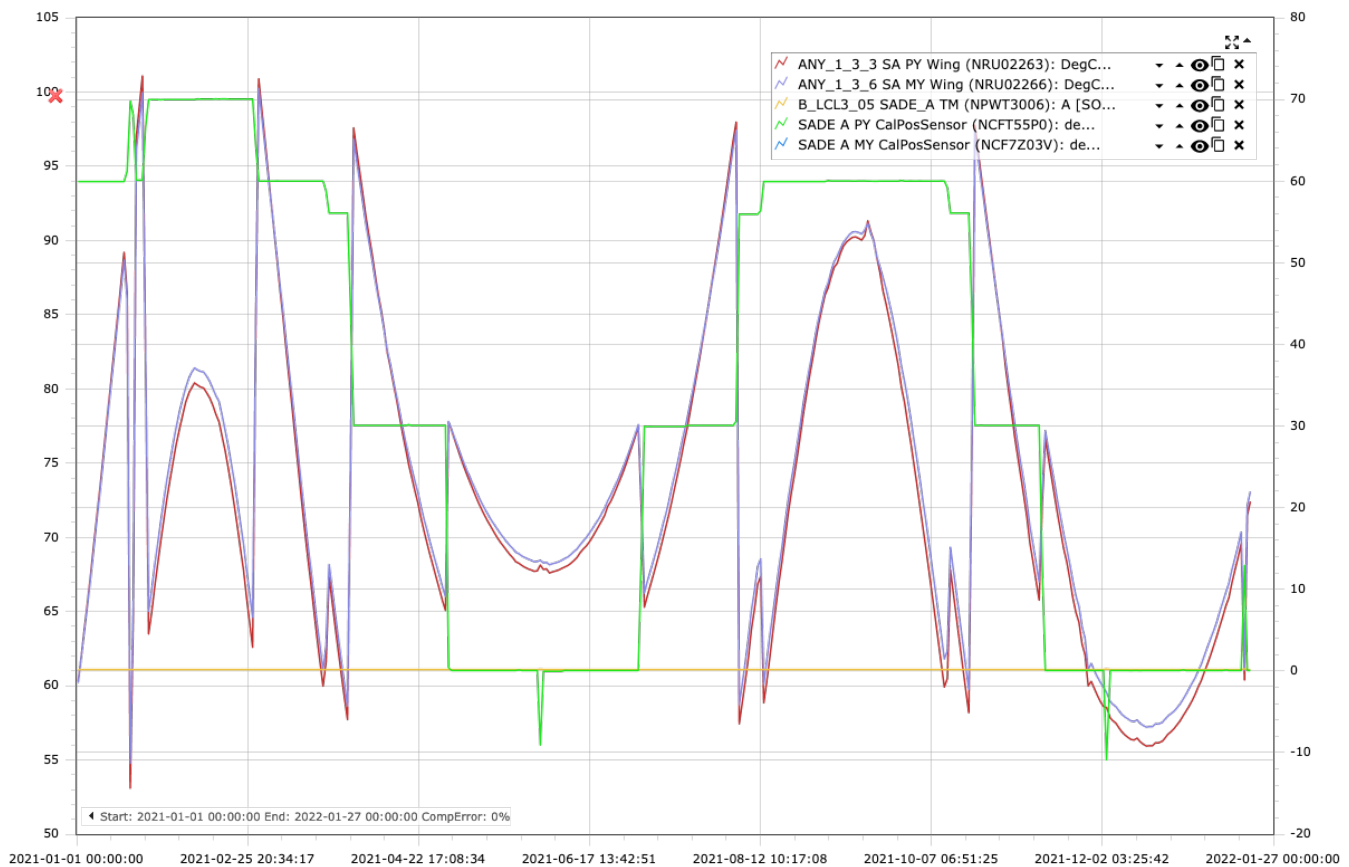
The long-term trend of deposition will be updated here each month.

Deposition / (ng / cm²)



In addition, the CMS sensor temperatures and Solar Array temperatures: (°C)





Next meeting

Unless there is an ad-hoc request to have another meeting in 2021, we could meet next in January

Proposal for 24 Feb 2022 17:00 CET.

Action Items

*New AIs arising from this meeting in **bold**.*

AI-12: MS to provide CMS1 & CMS2 FoV Open (DW will ask MS) important for next VGAM

AI-13: David Williams to investigate SWA temperatures 28th Jan – Open

AI-16: OE will contact Airbus to see what inputs they need from CMS and SOC to compare with their thermal model

Contacted ADS: Awaiting an answer when the responsible person is back from holidays.

AI-25: Rad and Orcun to take a look at the TGA data when possible, and compare with previous TGAs.