List of ongoing work and plan for 2022/2023

→ XBand-preprocessing

→ XBand Manager

→ XBand UI

→ Aux-HK and Crest preprocessing

→ FSC-CSC interface

X-band pre-processing

- **Daily test Simulation**
  → OBS_ID, PASS_ID, BURST_ID, packet time, trigger time are changed dynamically everyday
  → **2 simulations**
  - ***DC3-GRB : test only orbito and mxt pre-processing:***
    - Associated to the complete VHF GRB scenario made for DC3
    - 2 Xband pass (one CP and one GP+CP based on DC3 pass 000496_HK00P and 000498_KR00M)
    - As for DC3, L1 ECL file are uploaded automatically and changed dynamically everyday: this mimic the step of the eclairs pre-processing

  - ***XVHF-ECL: test orbito + eclairs pre-preprocessing :***
    - 3 GRBs and the associated complete VHF sequence (simulation made by Benjamin and Marie Claire)
    - One binary XBand pass with only eclairs and orbito data
    - Test burst id cut (4 L1 products are produced 1 GP and 3 CP)

You should look every day at this site and suscbire to the “daily test” slack channel https://fsc.svom.org/inspector/

X-band pre-processing

- **Time Manipulation**:
  → use class SvomTime in svom/utils for time manipulation
- **Attitude service** :
  → for each PVT bulletin, add LON/LAT in SVO-ORB-CNV
  → for each AAV bulletin, add GRDX_1, GRDX_2 and GRDX_3 in SVO-ATT-CNV
- **Eclairs pre-processing memory consumption**

Planning for the end of 2022:

→ add a scenario with a slew in the xband binary data daily scenario
→ process workplan auxiliary data for source id and object id in the fits header
→ memory aspect for eclairs pre-processing

Planning for 2023:

→ *May*: once implemented in the xband manager, make the telemetry gap table in the form of GTI at L1 level

X-band manager

- New end point storing meta data for each file
- Clean some end point request parameters

- **Planning for the end of 2022:**

  → Finish cleaning, implement tests for the new API

  → Test upload of daily large data file

  → Make a continuous removal of the frames (no frames older than two weeks will be available directly in the xband DB)

- **Planning for 2023:**

  → *April*: make the ccsds counter gap table to make the telemetry gap L1 table at the xband-preprocessing level

Xband-UI

- https://fsc.svom.org/xband-ui
- Update the UI from new meta data endpoint of the xband manager

  → Visualize each pass id and the apid and obs id by pass

  → Visualize for each apid and obs id, the pass id and the number of packets by pass id.

- **End of 2022 + 2023**:

  → continue developing, reformat and optimize

Aux HK and Crest preprocessing

- **Aux file OEF, OEM and WORPLAN inserted in the Crest DB**

  → Process to the Aux HK by the crest-preprocessing service

  → SAA events table produced at L1 level for the scientific analysis by the aux-hk-preprocessing

- **Planning for the end of 2022:**

  → Add workplan

  → Make more regular tests

- **Planning for 2023:**

  → *May*: See if other aux-hk information should be processed at L1 level

FSC-CSC interface

- **FSC to CSC: listen to NATS stream and send to MQTT topic**
  - → New product in SDB transmitted to the CSC
  - → Every TOO tiling alert transmitted to the CSC
- **CSC to FSC: listent to MQTT topic and sent to NATS stream**
  - → Each new CSC DB product update to the SDB (if the product card is defined)
  - → Beidu VHF messages uploaded to the VHF DB
- **Planning for the end of 2022:**
  - → Continue to test the interface
  - → Update the CSC products to be registered in the SDB : **everyone should think to which product he/she will need**
- **Planning for 2023:**
  - → June: to have all the interfaces defined
  - → September: having all the CSC products list we need to upload to the SDB