SVOM Science Ground Segment

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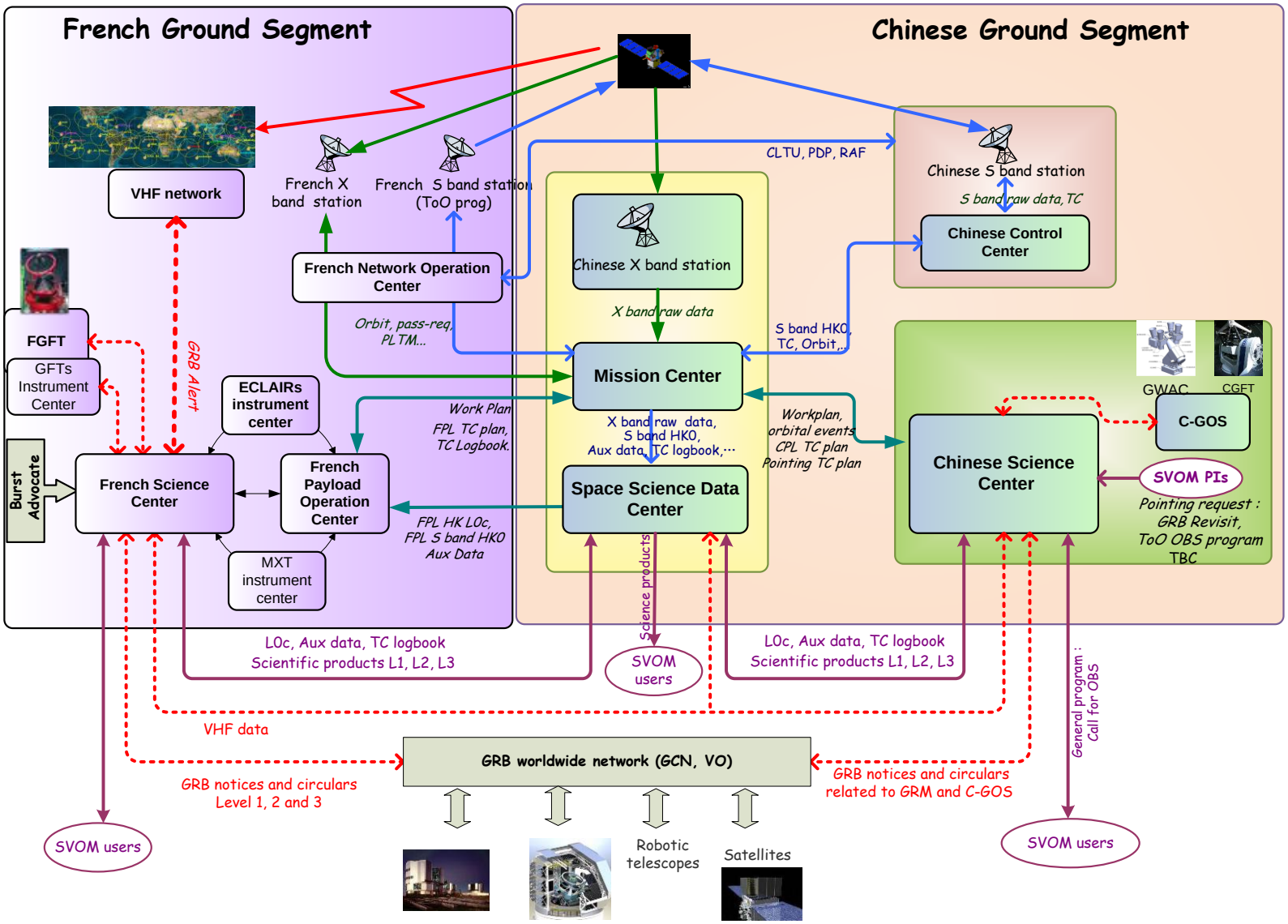
on behalf of SVOM GS team

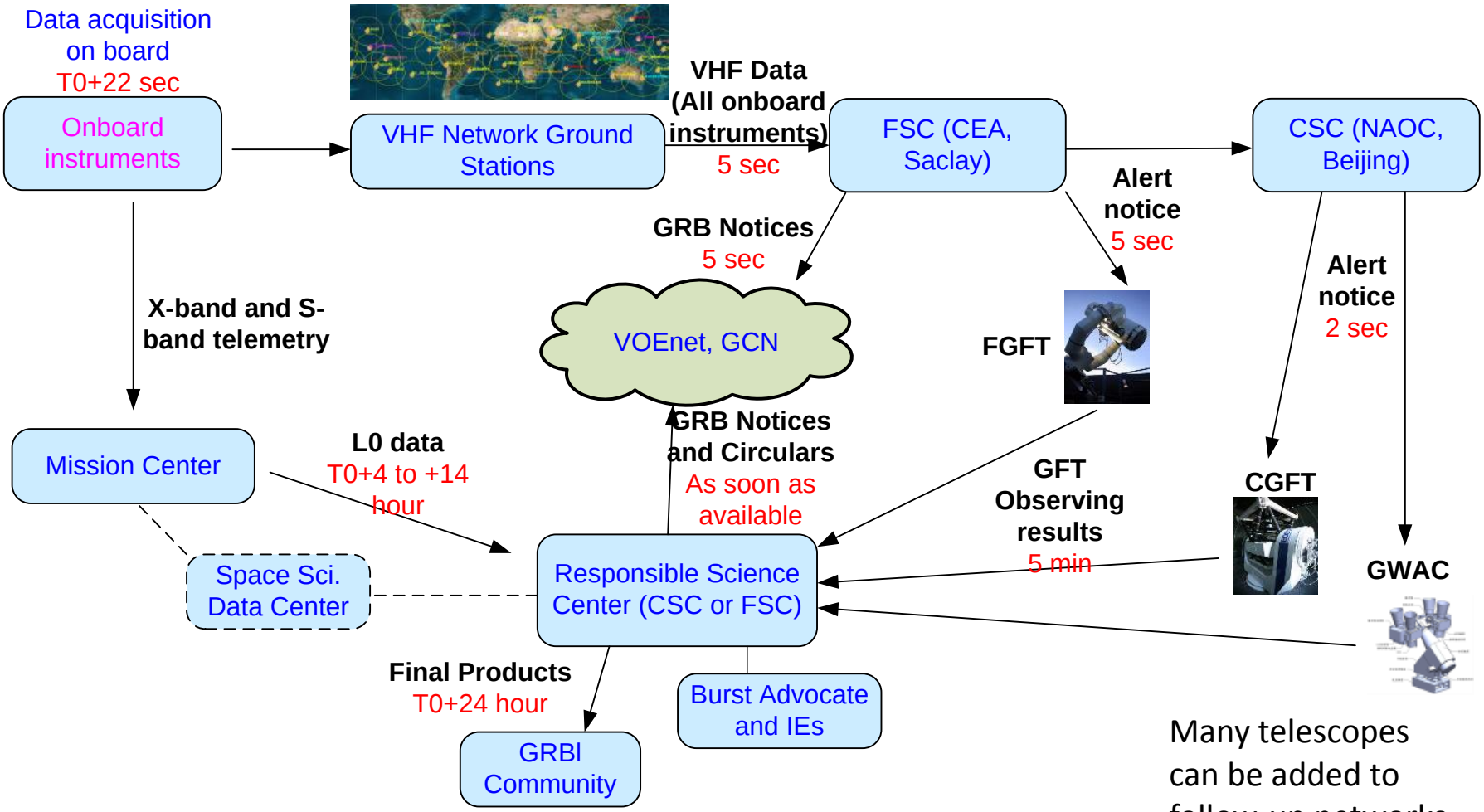
SVOM Observing Programs

- Core Programs (GRB)
- General Programs
- ToO Programs
  - Nominal ToO (including revisit of GRBs)
  - Exceptional ToO
  - More refined classification is being defined.

Overview of SVOM ground segment

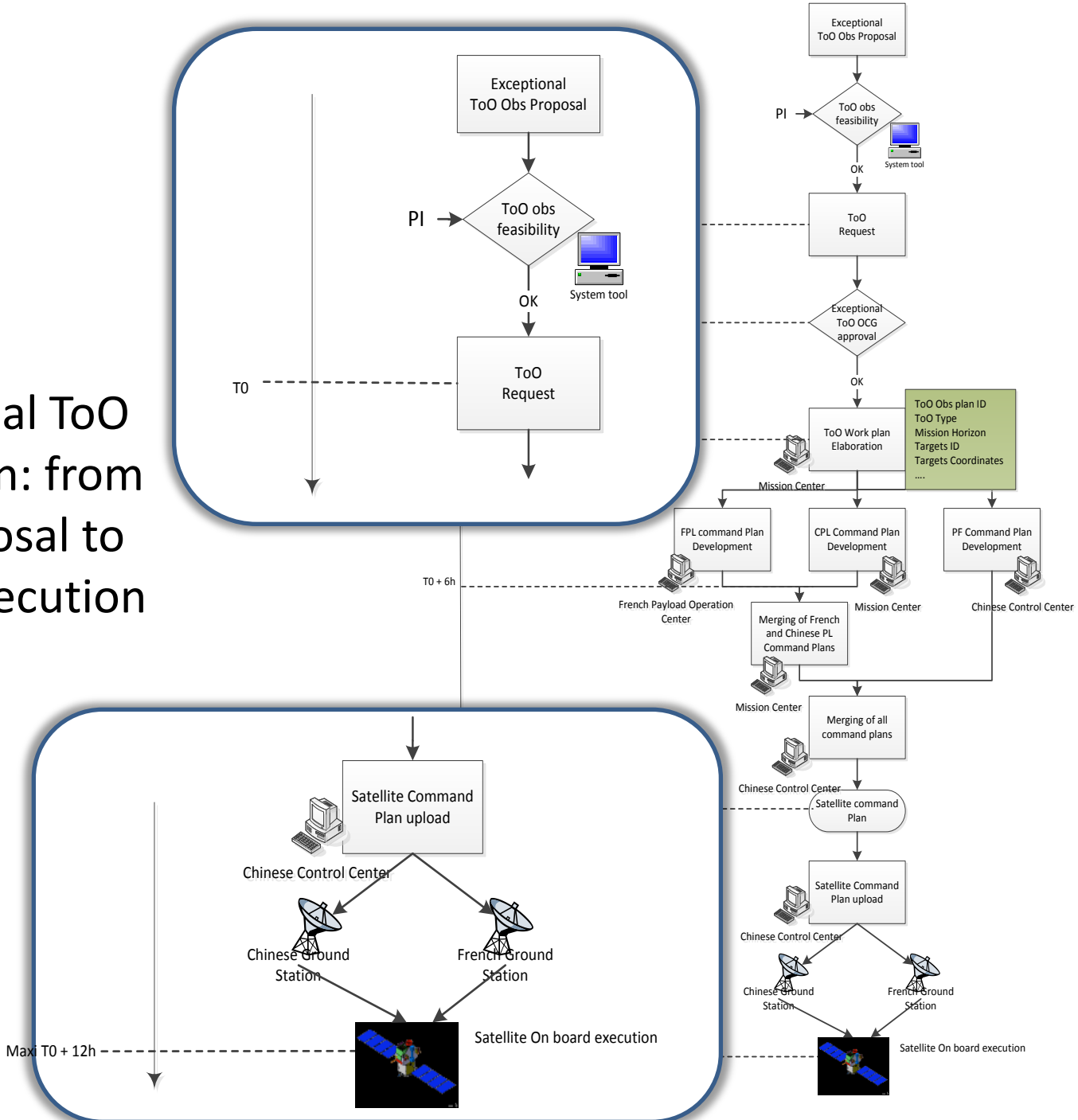


Data flow and time requirements from satellite to VOEvent network and GCN



Many telescopes can be added to follow-up networks with flexibility.

Exceptional ToO observation: from obs. proposal to satellite execution



General Programs

1. PIs issues call for proposal once a year for ÉCLAIRs, VT, MXT, and ground instruments
2. Observers write and submit proposal with tools supported by the Science Centers
3. TAC evaluates, selects and allocates time, and form a one-year Pre-Planned Target
4. PPT executed by the Mission Center, subject to interruption and re-scheduling due to Core and ToO activities
5. Once observed, data are processed in standard pipeline and released to observer.

Note: GP may also have ToOs

summary

- SVOM ground segment is designed to offers guaranteed follow-up capabilities, quick reaction time, and flexible IT infrastructure to meet the requirements of SVOM observation programs as time-domain astronomy enters a rapidly expanding period.

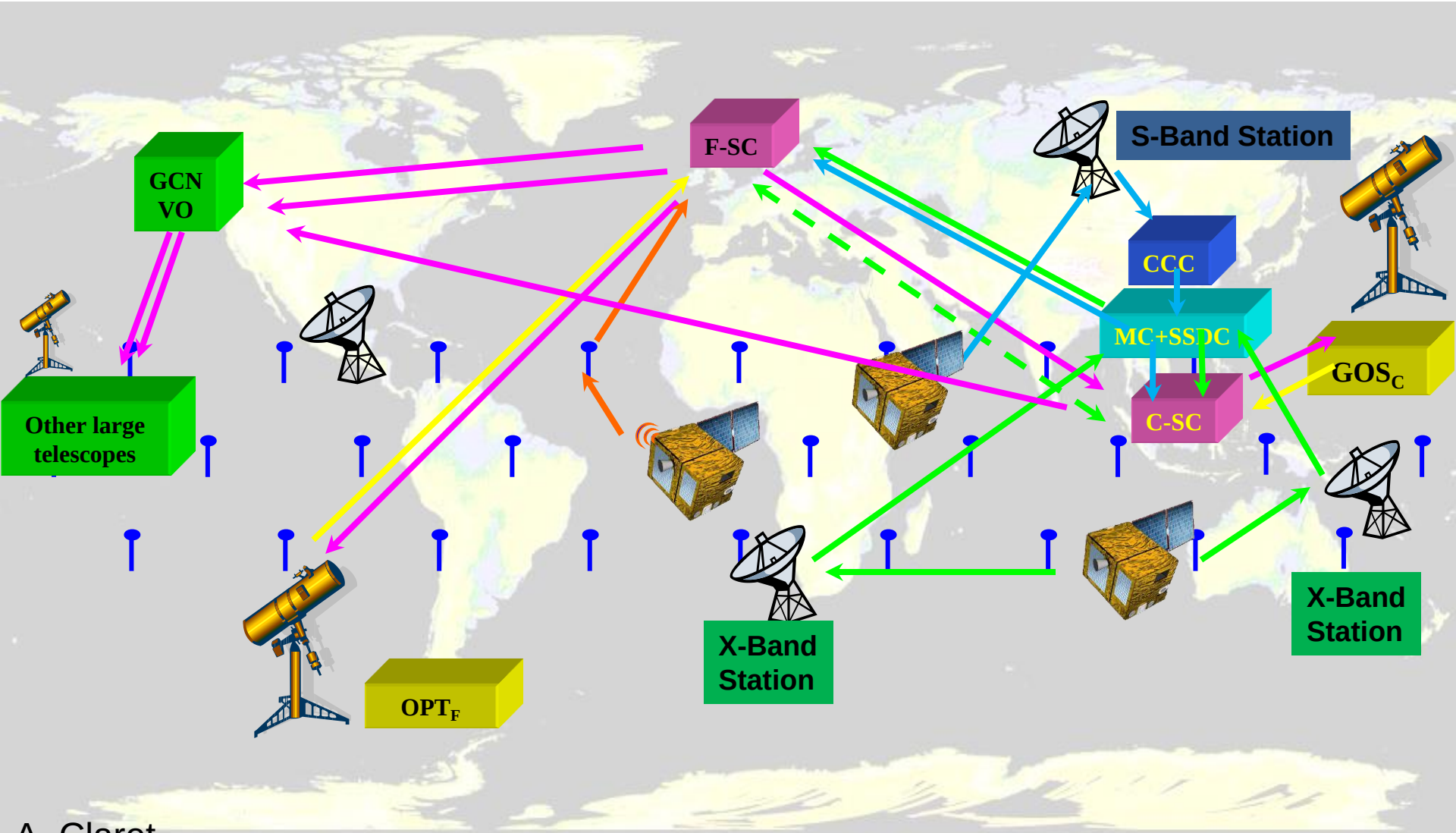
- C. Lachaud & B. Cordier : about ToO

summary Table

ToO	Approval	performed within from acceptance/ trigger	GRB interuption	Frequency	Tiling process	Science product availability	VHF Canal	VHF data
ToO-CP	BA	<48h	yes	MAX 80/year	No	24h	No	-
ToO-GP-PP	GP selection process	<48h	yes	MAX 1/day =>5/day	No	24h	No	-
ToO-GP-NP	PI	< 12h	no	1/month	No	24h	No	-
		< 48h	yes	1/day =>5/day				
ToO-MM-L	PI	<12h ?	yes ?	?	No	24h	Yes	MXT-VT?
ToO-MM-NL	Automatic +PI	<12h	no ?	MAX 1/week	Yes, 4-25 tiles 10minutes/tiles	VHF<1h BX 24h	Yes	MXT photon-list
TbE– GP Triggered by ECLAIRs	Automatic follow-up	0	yes	Will be adjusted with the catalog list and threshold on-board	No, but observation lasts 2 orbits	24h	Yes	Idem GRB

An overview of what happens of a SVOM Core Program (GRB) Observation

22s➔ 5s➔ 4.5min 1st pass S-band➔ 60min ➔ 30min 6hr➔ 1hr➔ 1hr Proc



A. Claret

Data flow and time requirements from ground stations to Science Centers