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# Delivering the LOFAR2.0 Observing Capabilities

Wim van Cappellen

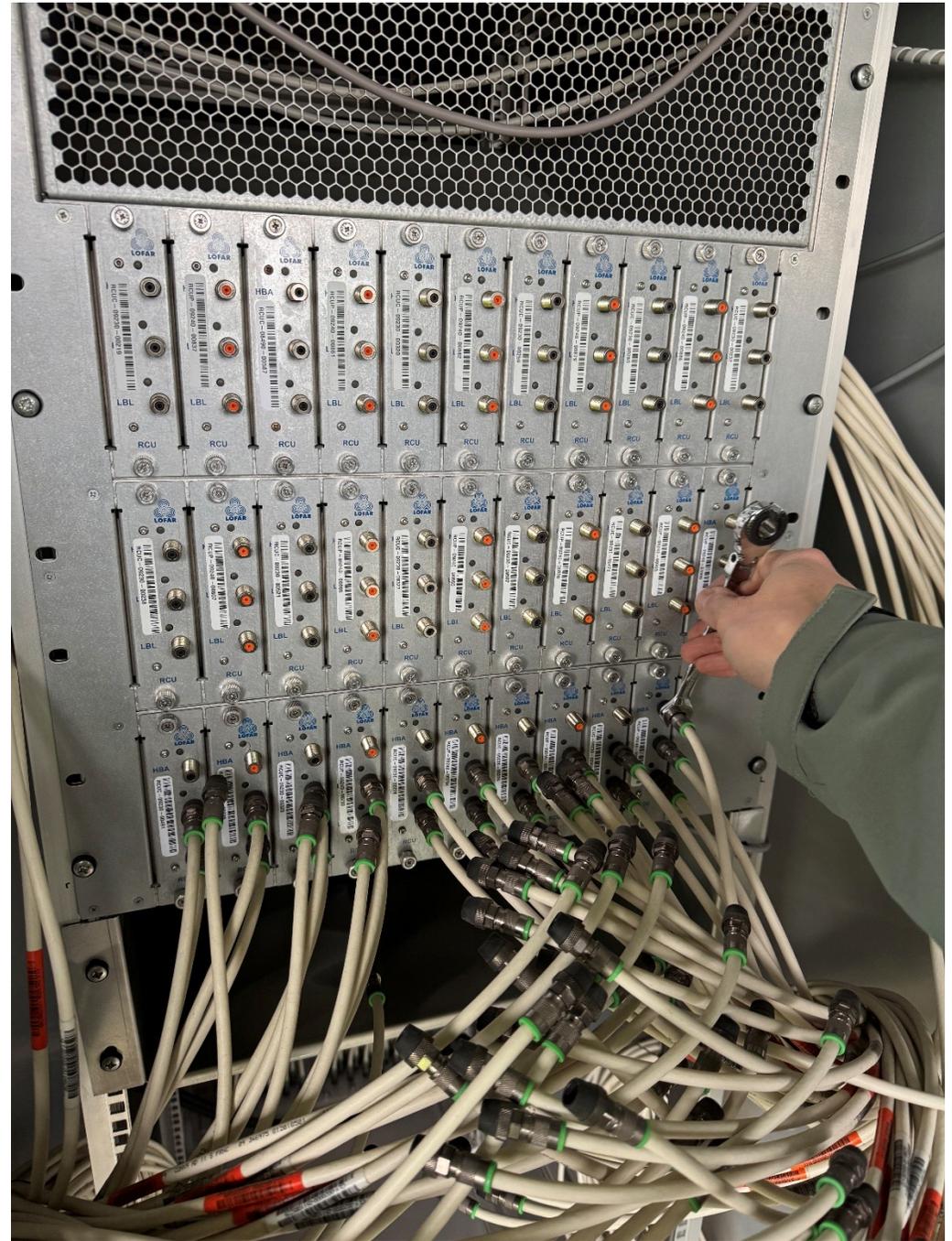
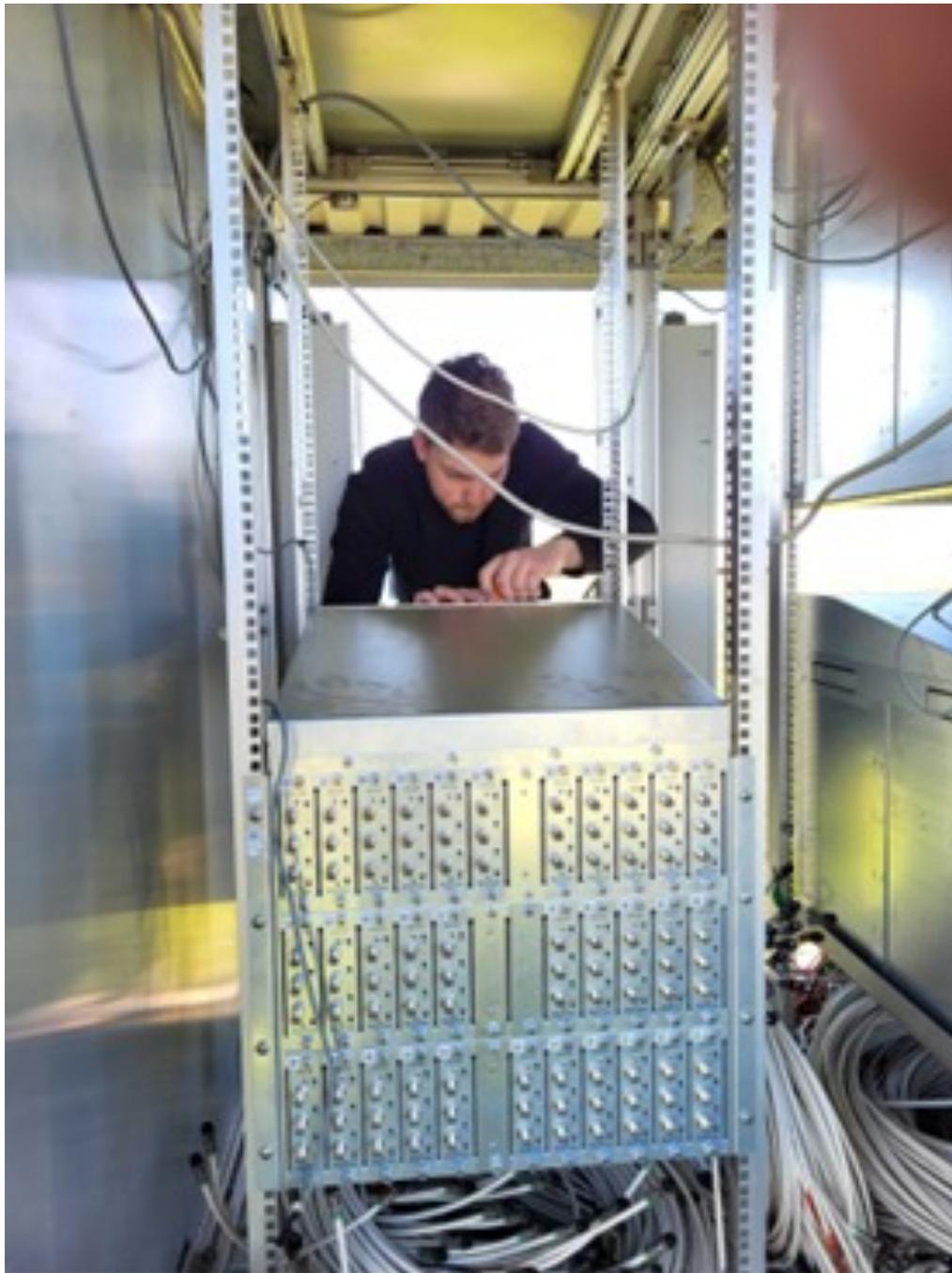
LOFAR Family Meeting

23 September 2025

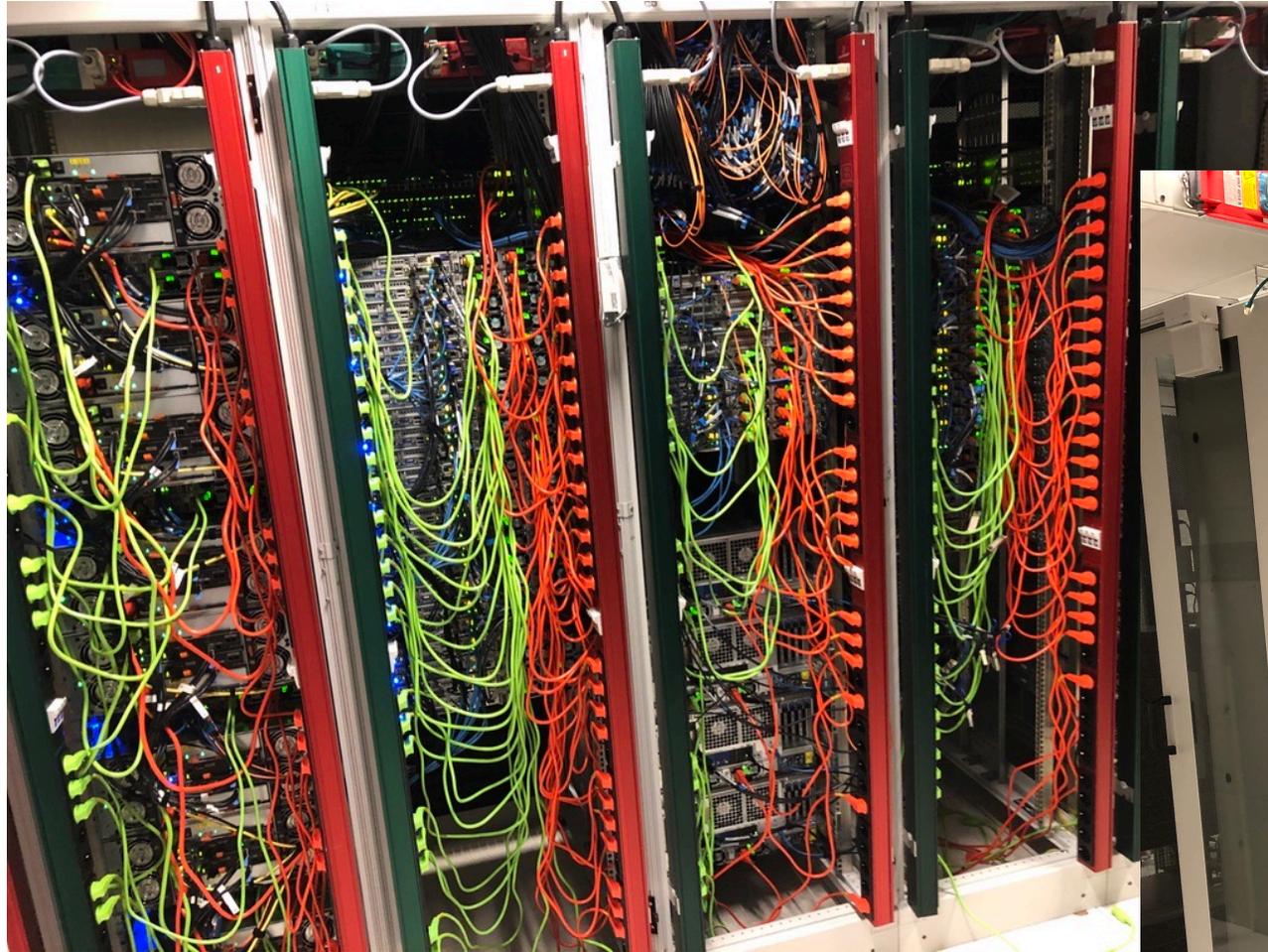


# LOFAR 2.0





# All systems needed to be removed



- We had 24 systems over 100kg.
- Some had not been moved since 2008



- New systems do not fit in the old racks



Automated verification test detects issues (such as swapped cables) and delivers a full report per station.

When all initial checks are done in advance, 3 stations can be verified in a single day.

5 Any other remarks

LBA 46 and LBA47 are swapped in position. This is already corrected in antenna database and also in Iofarantos database (done).  
New station calibration is suggested for optimum use of LBA46 and LBA47.

2 Test Results

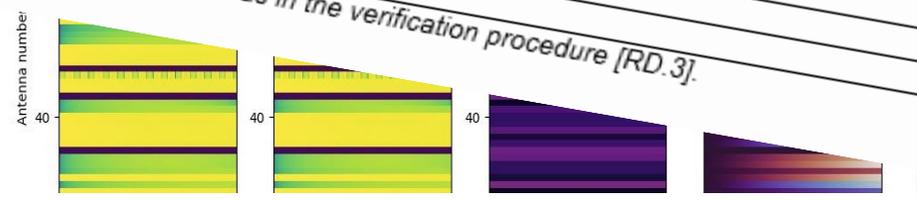
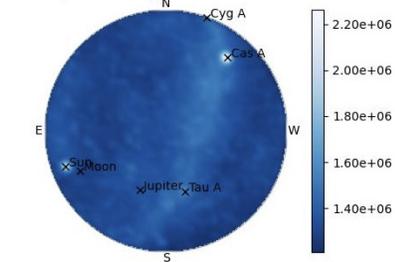
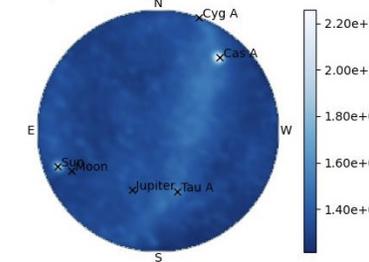
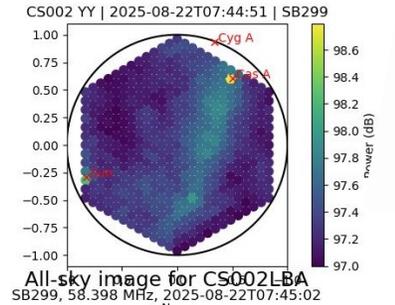
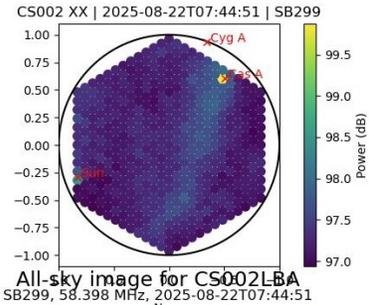
Station: CS002

Table 2: Compliance Summary of Verification Tests

Test Ref.*	Test Title*	Remarks (optional, e.g. conditional pass or fail condition)	Pass	Fail
2	Clock distribution system			
3	Power distribution system			
4	Configuration	APSCT PCB number H0 and L1 failed		
5	RCU Control			
6	Crosslet statistics (XSTs)	LBA46 and LBA47 swapped position (solved)		
7	Beamformer performance	DAB filter only Y pol HBA (fix in software)		
8	All sky imaging			

ALL TESTS PASSED

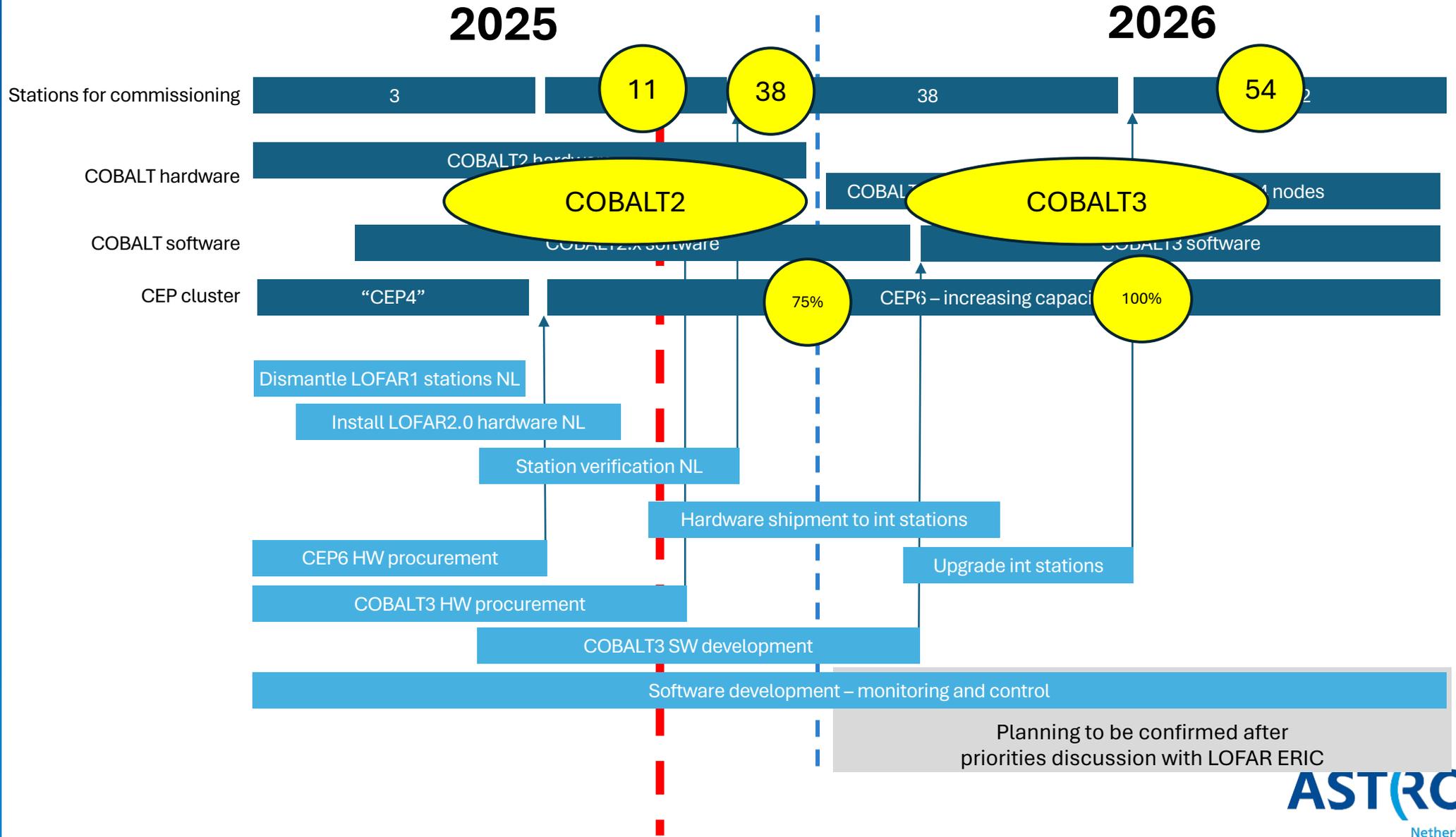
\*Test reference and title as in the verification procedure [RD.3].



Chapter 2: test\_2\_3\_6\_check\_APSCT\_PCB\_NUMBER

stat/apsct/h0: FAILED APSCT_PCB_NUMBER_R no match with APSC-202503-00056	stat/apsct/l0: PASSED	stat/apsct/l1: FAILED APSCT_PCB_NUMBER_R no match with APSC202503-00057
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# LOFAR2.0 rollout overview



# Observatory capabilities

## End of 2025

- End-to-end operations
- Dutch stations only
- LBA **or** HBA observing
- BF mode for PST
- HBA-NL imaging
- Calibration
- HBA-NL pre-processing, LINC, Rapthor, PST
- Delivery of data products

## 2026 and beyond

(to be prioritized H2 2025)

- Dual LBA / dual HBA
- ILT mode
- LBA + HBA observing
- NenuFAR super station
- Simultaneous IM + BF
- Station stand alone
- Transient buffer

# LOFAR2.0 delivery of observing modes

including pipelines!

**LOFAR ERIC prioritization pending**

