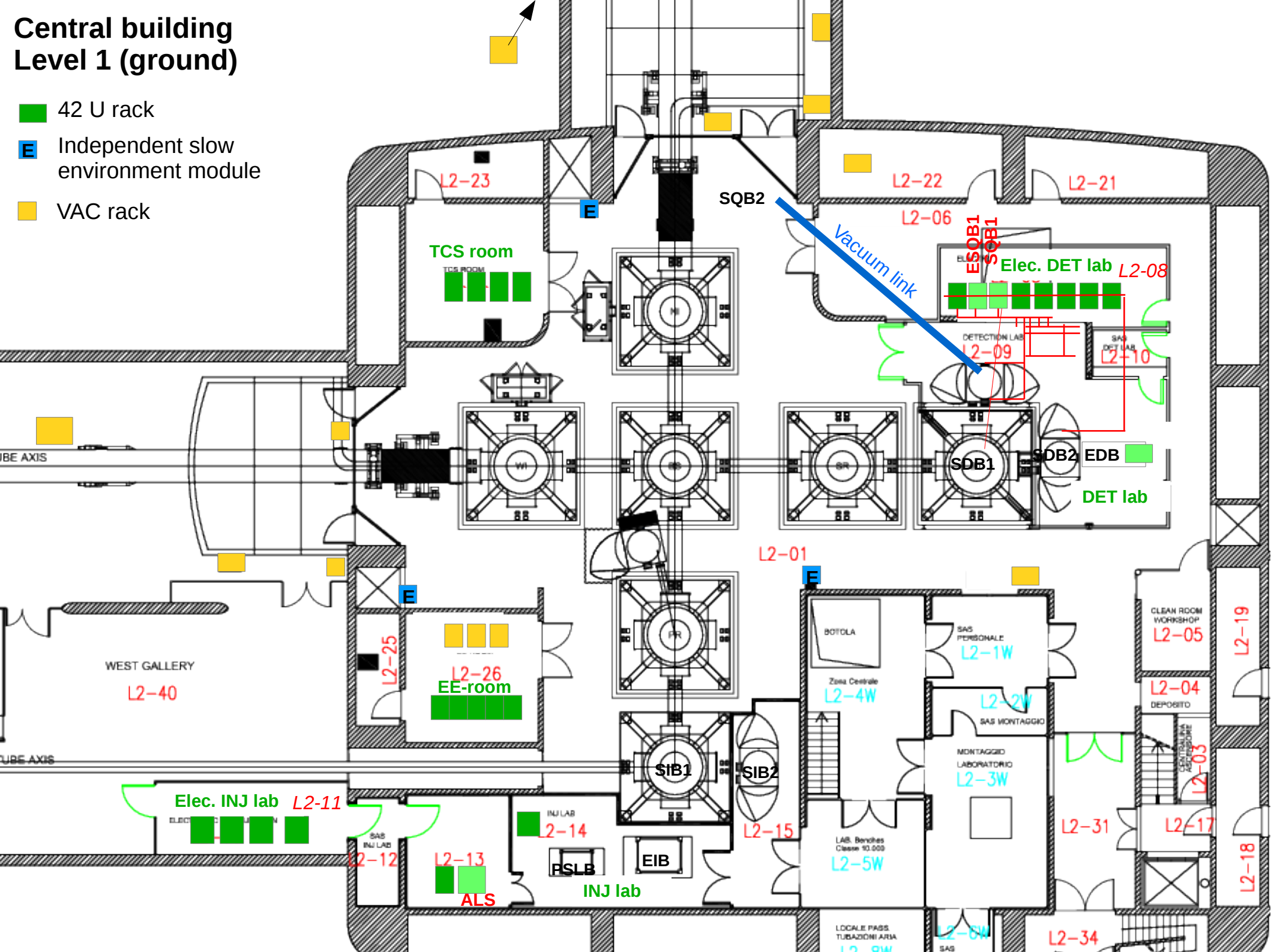
Central building
Level 2 (platform + terrace + DAQroom)

- 42 U rack
- VAC rack

Racks in most of the labs:
42U, 600(w)x800(d)
Racks in Atrium, and for ALS :
43U, 800(x)x800(d)
Racks on the plaform:
42U, 600(w)x871(d)
Racks in MCB :
36U, 600(w)x800(d)

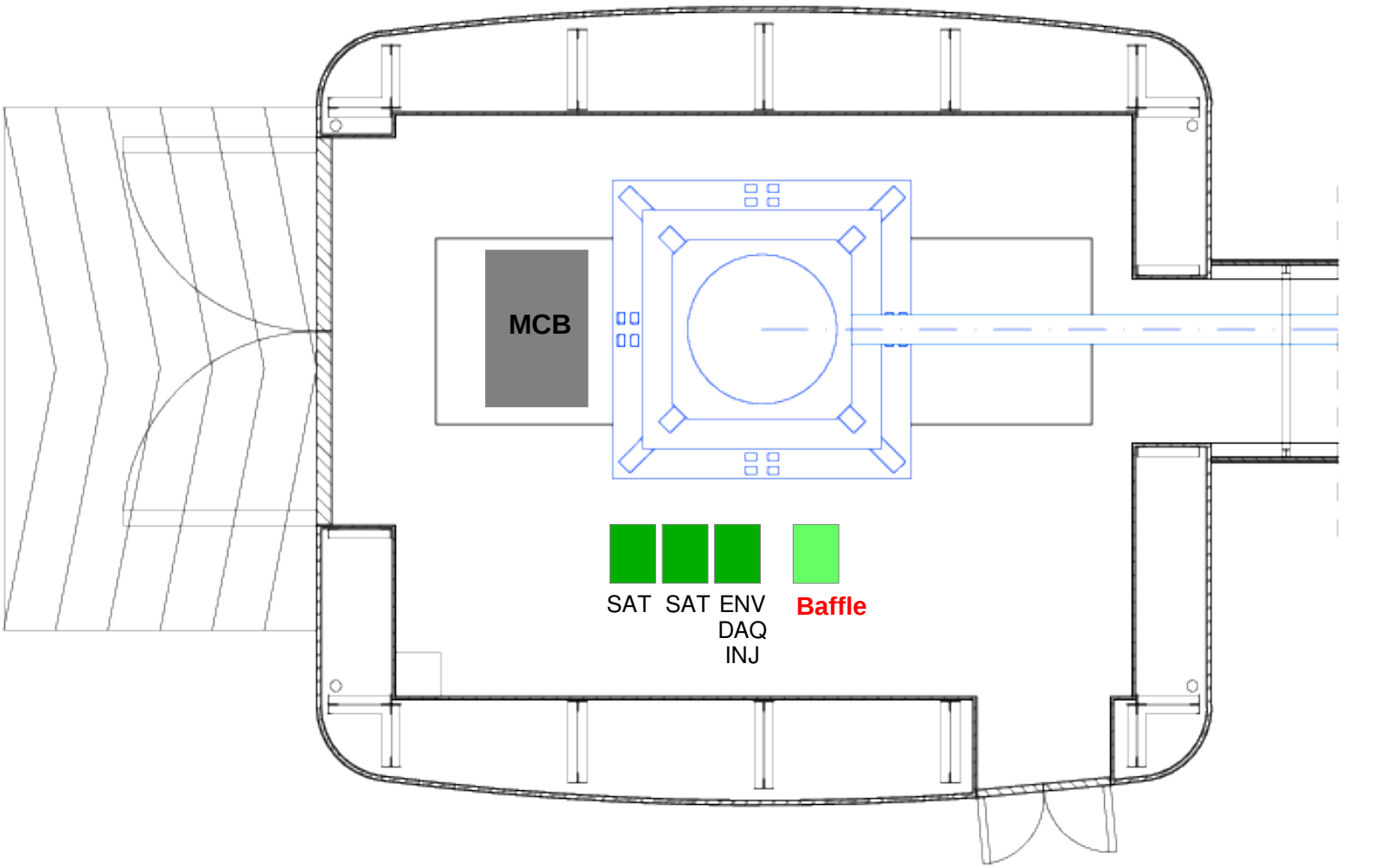
Central building
Level 1 (ground)

- 42 U rack
- E Independent slow environment module
- VAC rack



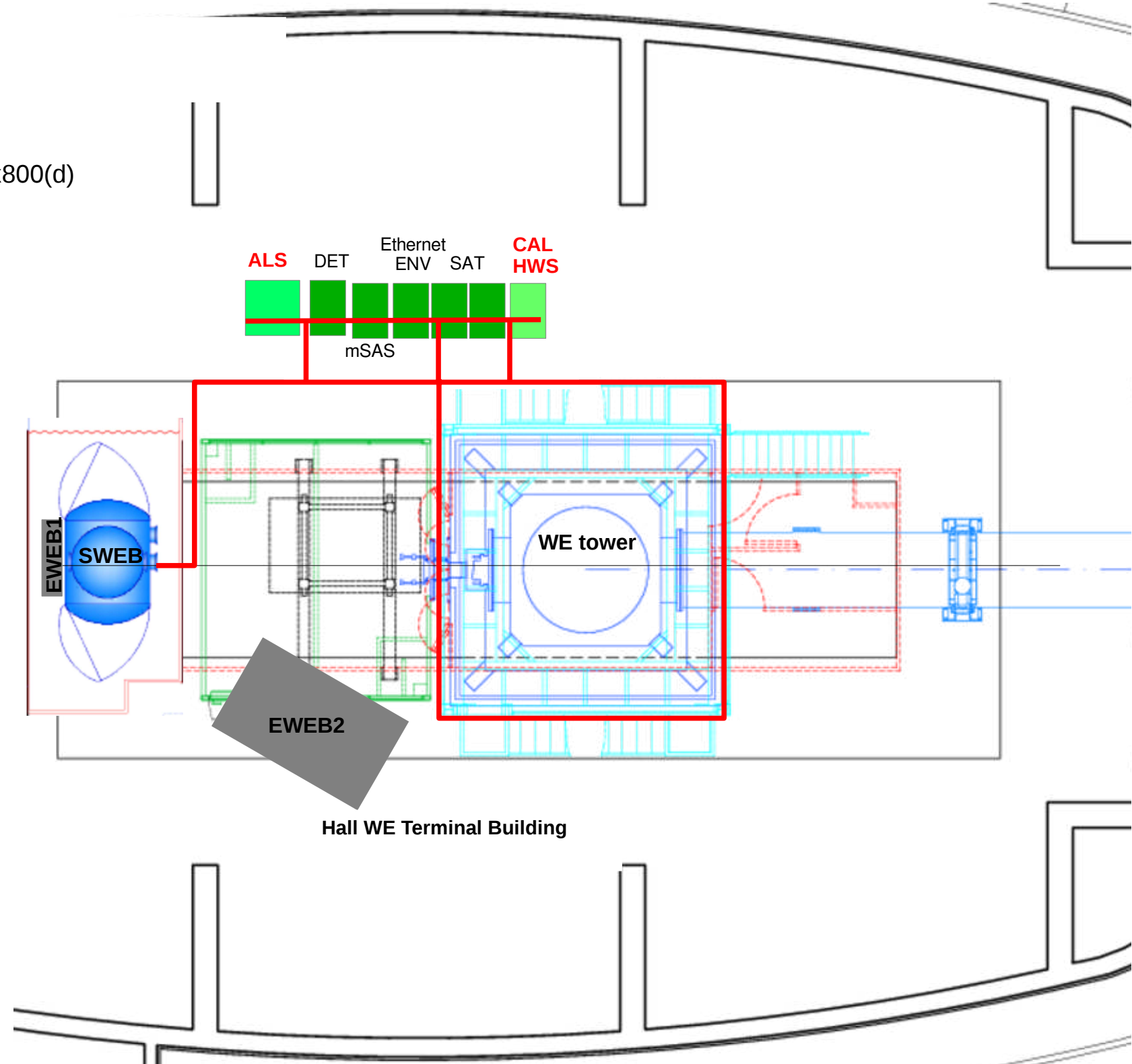
MC building
Level 1

36 U rack, 600(w)x800(d)



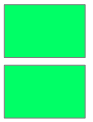
End building (x2)
Level 1

42 U rack, 600(w)x800(d)

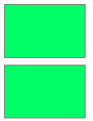


North arm (FDS filter cavity)

42 U rack, 600x800 (w x d)



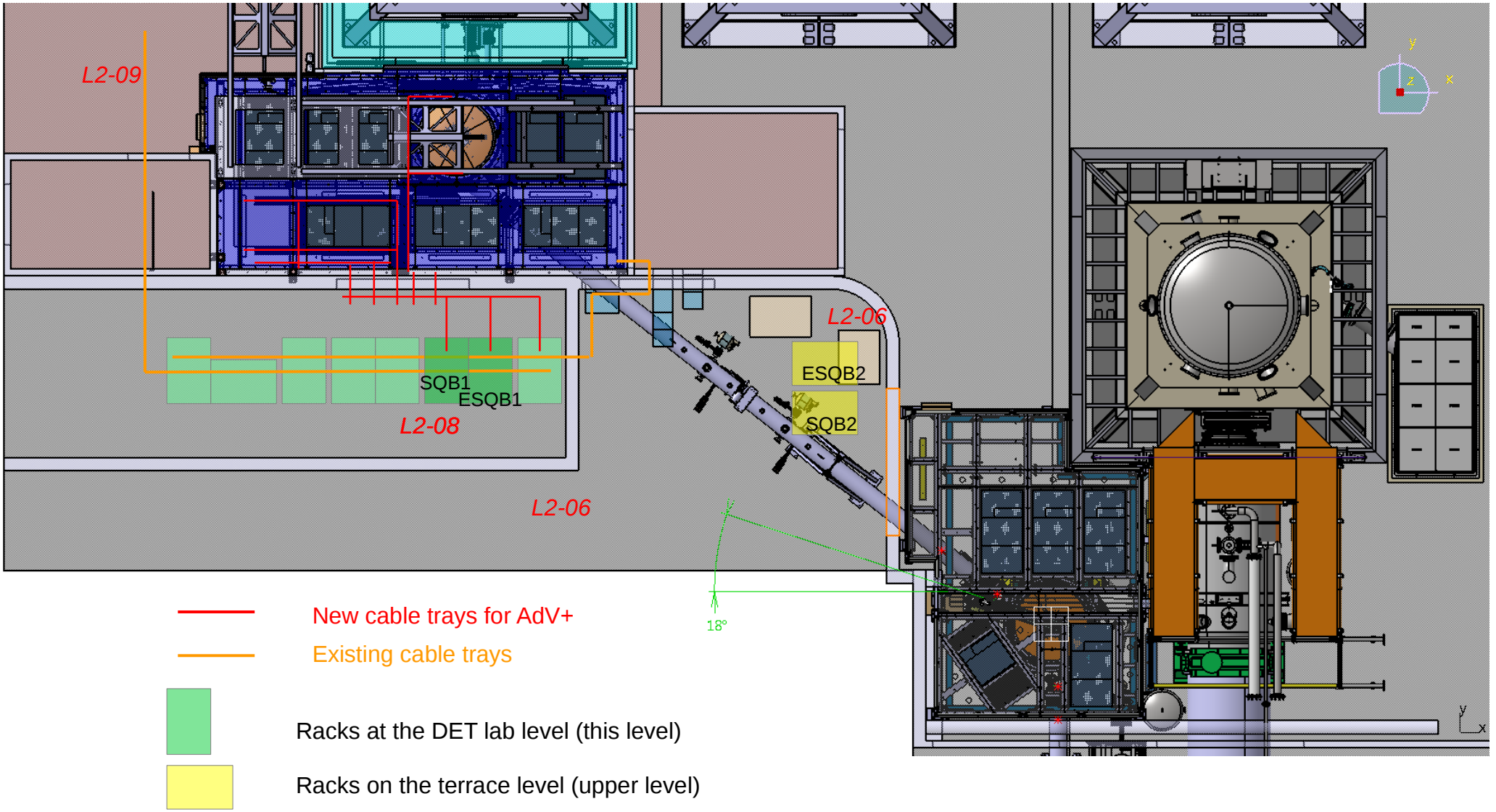
FLTout_1
FLTout_2



FLTin_1
FLTin_2

Some more slides about SQB1/ESQB1 and SQB2/ESQB2 racks positions, ESQB1 electrical power

Racks SQB1/ESQB1 in DET EEroom
Racks SQB2/ESQB2 on the terrace
Cable trays in this area



Adding SQB2/ESQB2 racks on the terrace

VAC
→ ok for working with virolas

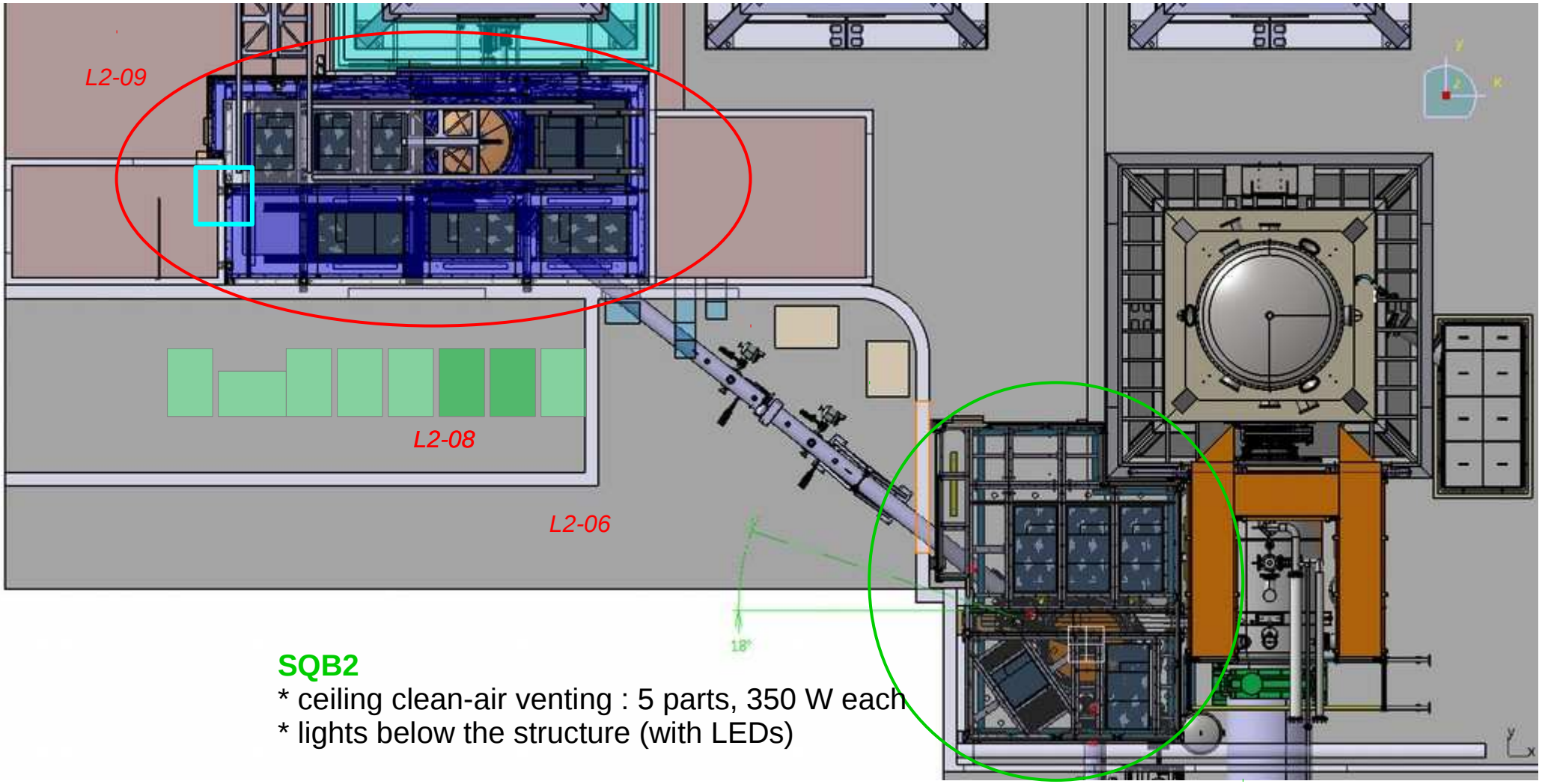
INF
→ put racks in the middle of the guard to keep access to the reference points on the floor at both sides of the guard (one is shown inside blue circle).

EGO IT
→ will add optical fiber patch panels for SQB2/EQB2 rack

Electrical power supply for the SQB1 clean structure in DET lab

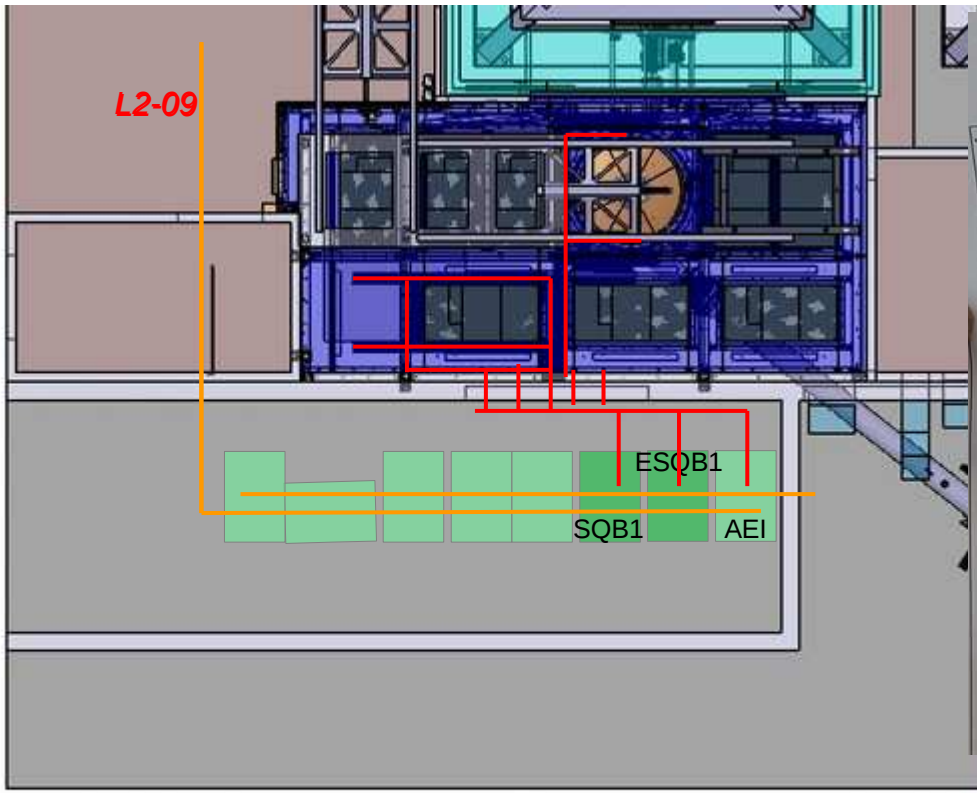
SQB1
* 1 connection for ceiling clean-air venting : 8 parts, 350 W each
* 1 connection for lights below the structure (with LEDs)

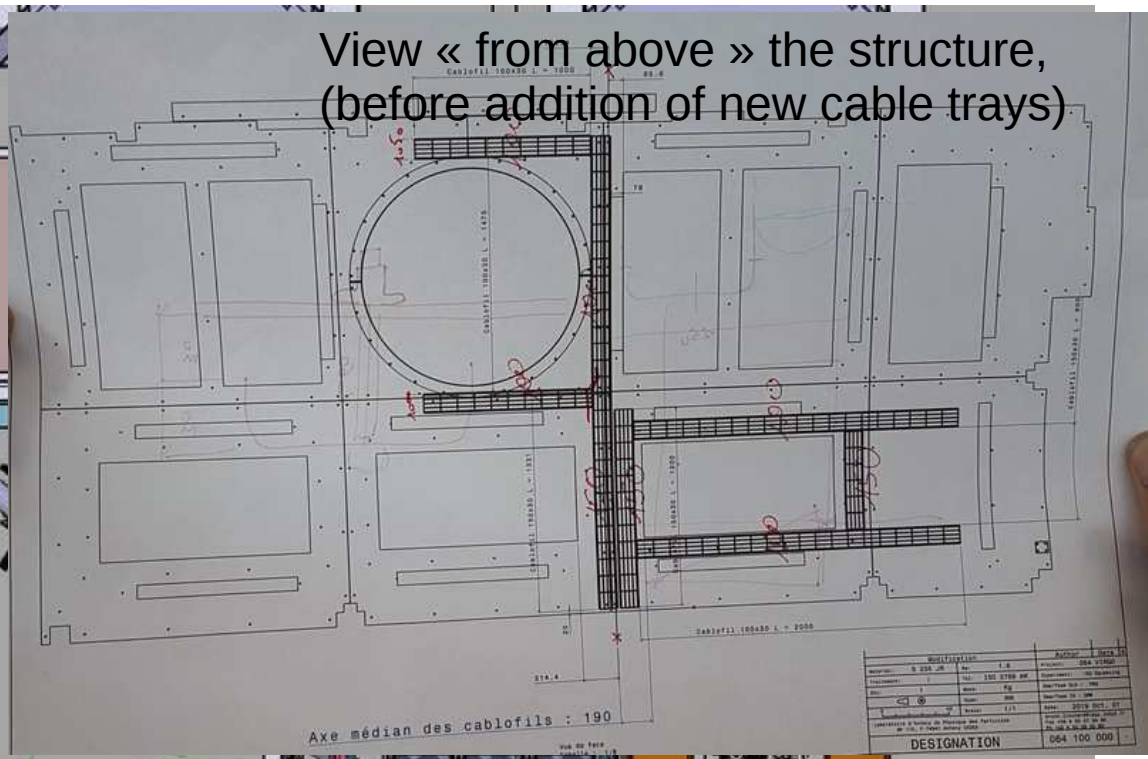
Position of the connection from infrastructure power lines and SQB1 structure (derivation boxes).



SQB2
* ceiling clean-air venting : 5 parts, 350 W each
* lights below the structure (with LEDs)

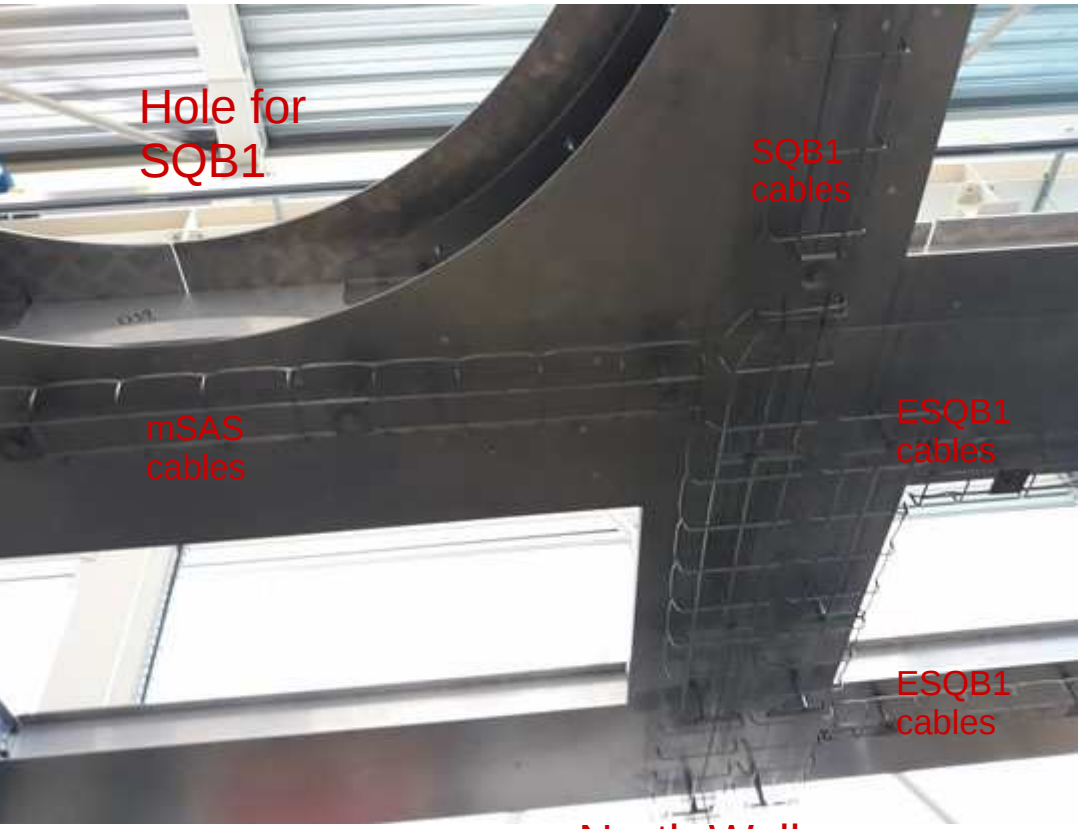
Some more slides about DET clean room to DET Eeroom cable trays

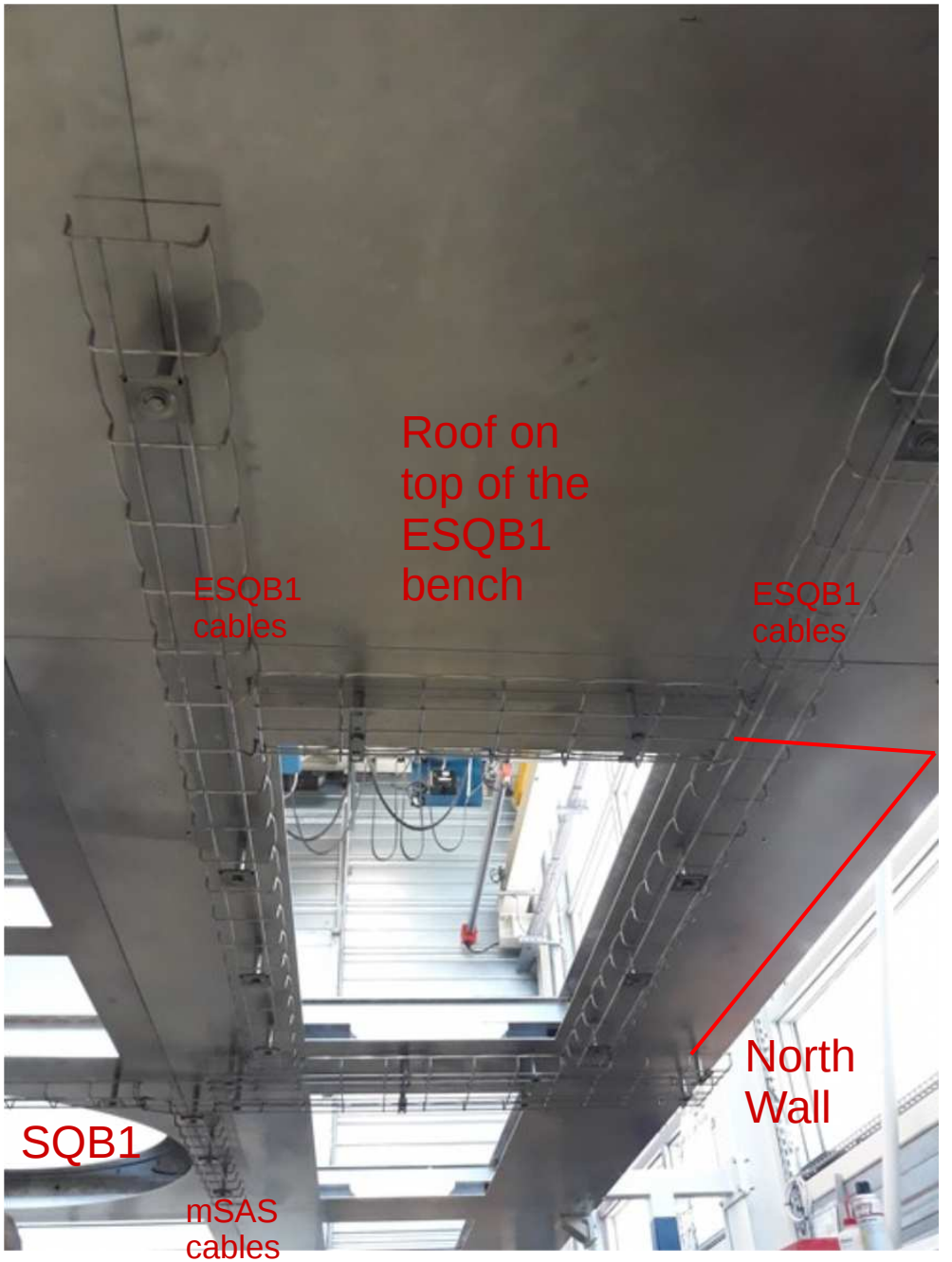




ESQB1 structure mounted at LAPP (20/07/2020)

Pictures of cables trays below the structure (mounted at LAPP, 20 July 2020)





Ground to bottom of cable trays: 199 cm
Blue feedthroughs 241 x 135 mm
3 cm between them

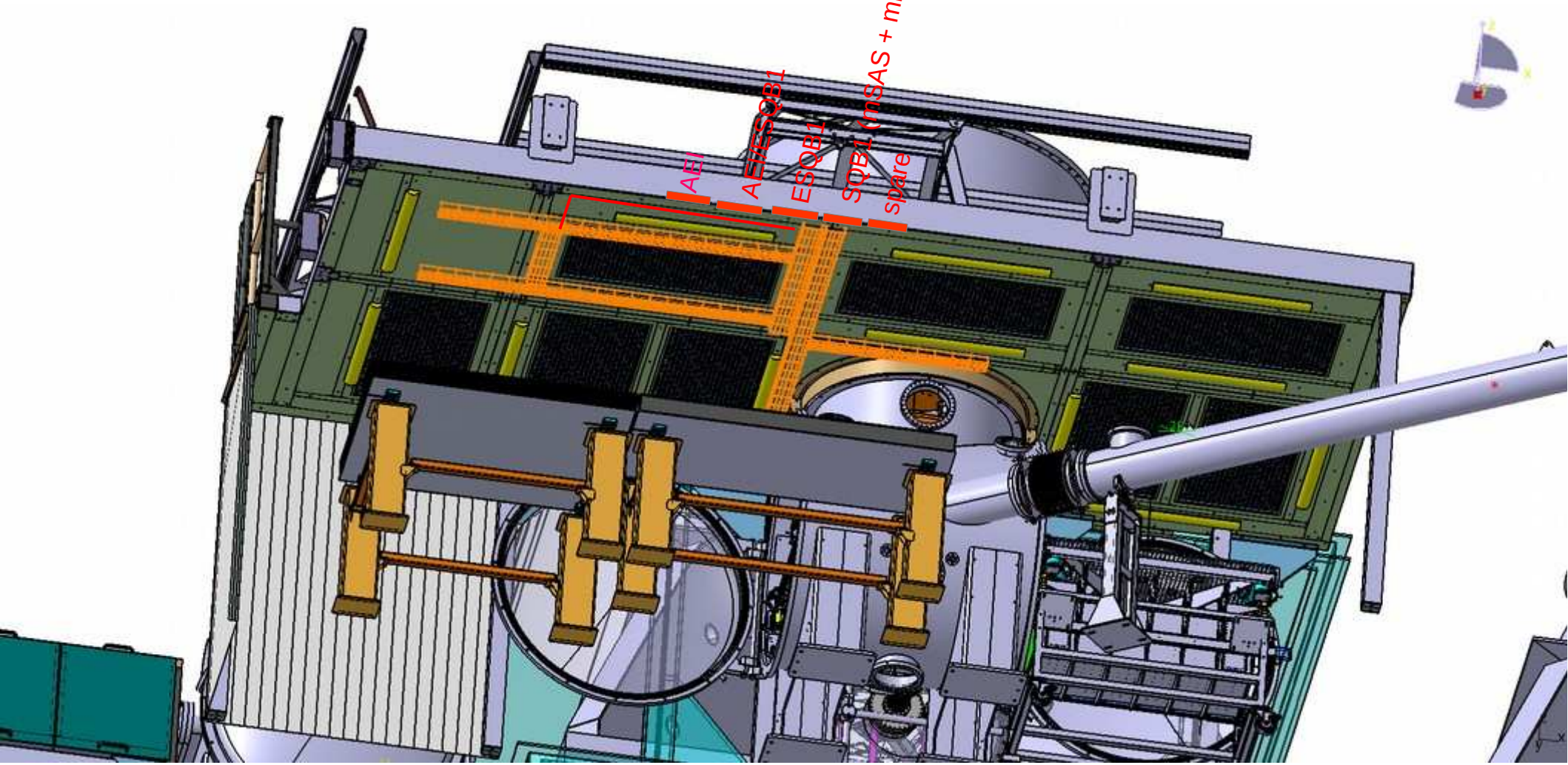
SQB1 cables
6 power supplies ~10 mm diameter
4 optical fibers (1 timing + 3 TOLM)
1 Ethernet timing
few Ethernet IP cameras
8 LEMO for local control LVDTs (external)

mSAS cables
17 cables of 7 mm diameter

ESQB1 cables
92 cables
+ ~70 AEI cables

Adding a cable tray for ESQB1, along the North wall
Drilling 5 holes for feedthroughs between DET lab and DET Eeroom

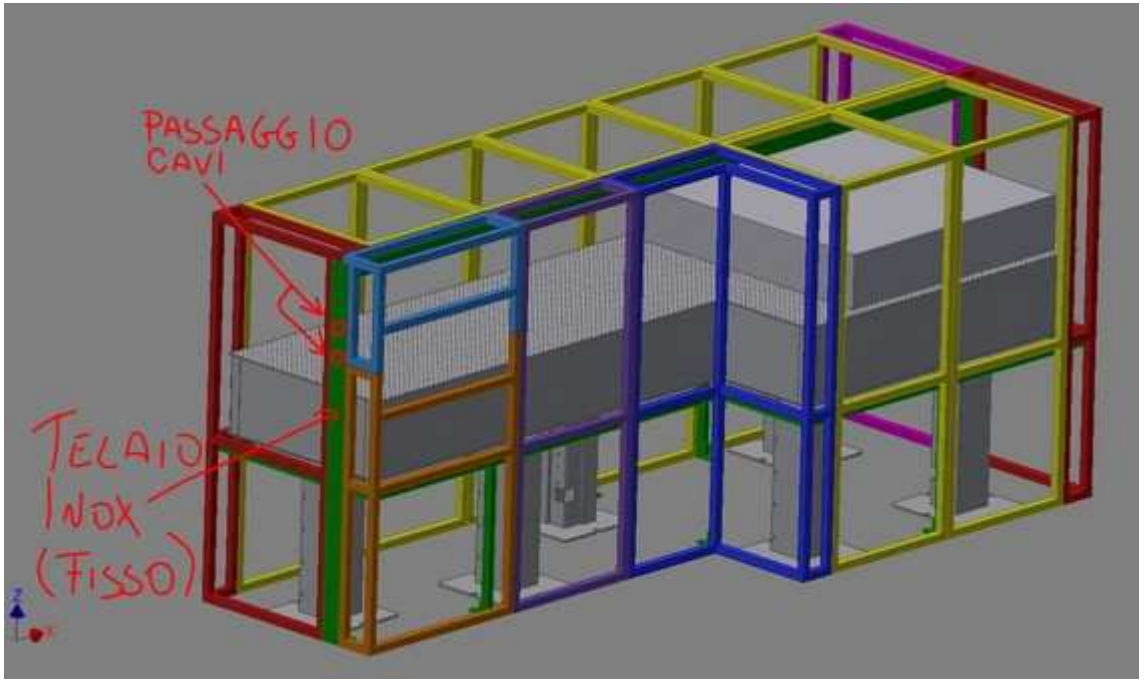
(conclusions of discussion with Matteo T., Marco V., Jean-Pierre Z., Carlo F., Bruno L., Loïc R., 23/07/2020)



Cable trays to be added below the SQB1 structure

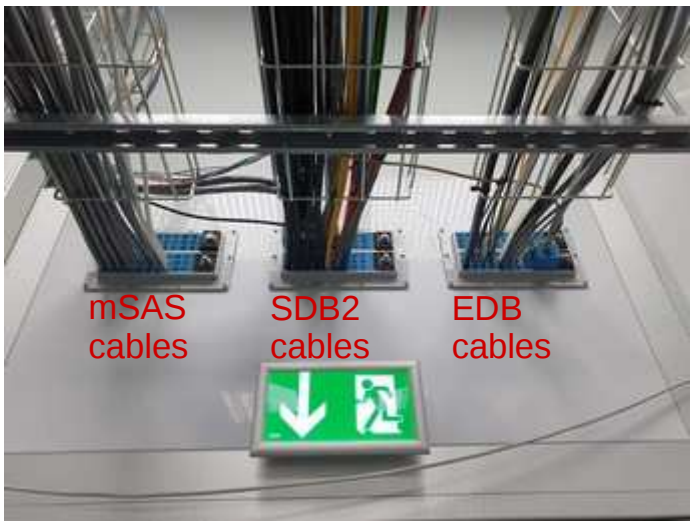
Approximate positions of the feedthroughs through the wall (below the structure)

Other collected information



Preliminary design of accoustic enclosure around ESQB1
- Height of the structure around ESQB1?
- Position wrt SQB1?
- Possible to have cable feedthroughs elsewhere?

→ need to modify cable feedthroughs :
- more feedthroughs
- better to have more on the other side of the bench



Existing feedthroughs for SDB2 and EDB
(viewed from clean room)

Plan for filling the racks for AdV+, phase 1

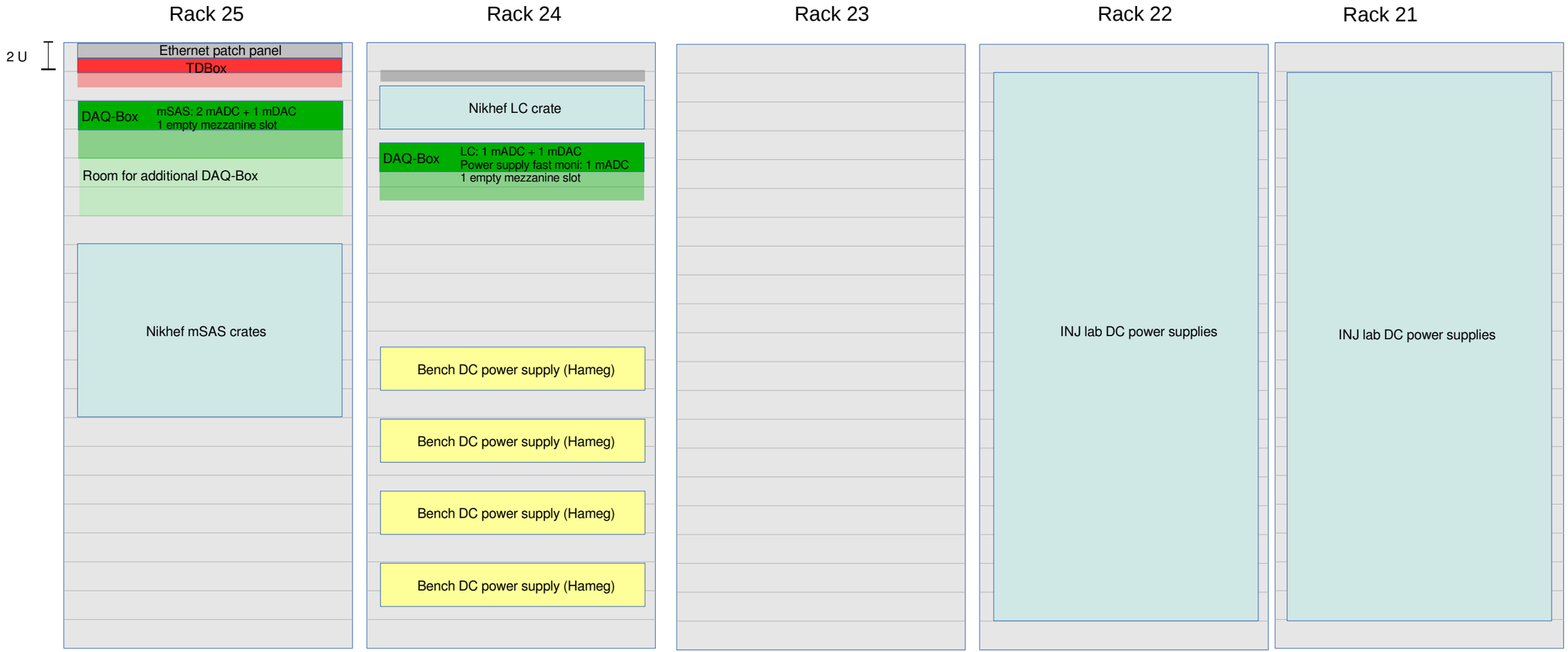
- The racks in every buildings/rooms are shown with the space needed for each sub-system.
- **New racks** to be installed for AdV+ are shown with their names being written in bold red
- Few comments/open questions that still remain are written in red

- **Summary of additional rack needs for AdV+**
  - ALS: 3 new racks, already bought and installed
  - RTPC in computing room: 1 rack
  - Other sub-systems: 11 racks, ordered on 22 July 2020 (Atos)
    - Positions for SQB1, SQB2 and ESQB2 racks are now fixed
    - A 36U rack will be installed in the MC building, other racks are 42U

- Decisions made last weeks:
  - Position of the SQB1 rack: in DET Eeroom (it was checked that there is enough space, and the air conditioning is fine)
  - For the 4 new quadrants + galvo on EDB for squeezing alignment/mode matching, add electronics (16U) in DET Eeroom (CEB-L2-08), at the bottom of rack DET2 (it was checked that it is compatible with EGO IT needs and with rack size).
  - Number/positions of cable feedthroughs for SQB1/ESQB1 between DET clean room and DET Eeroom

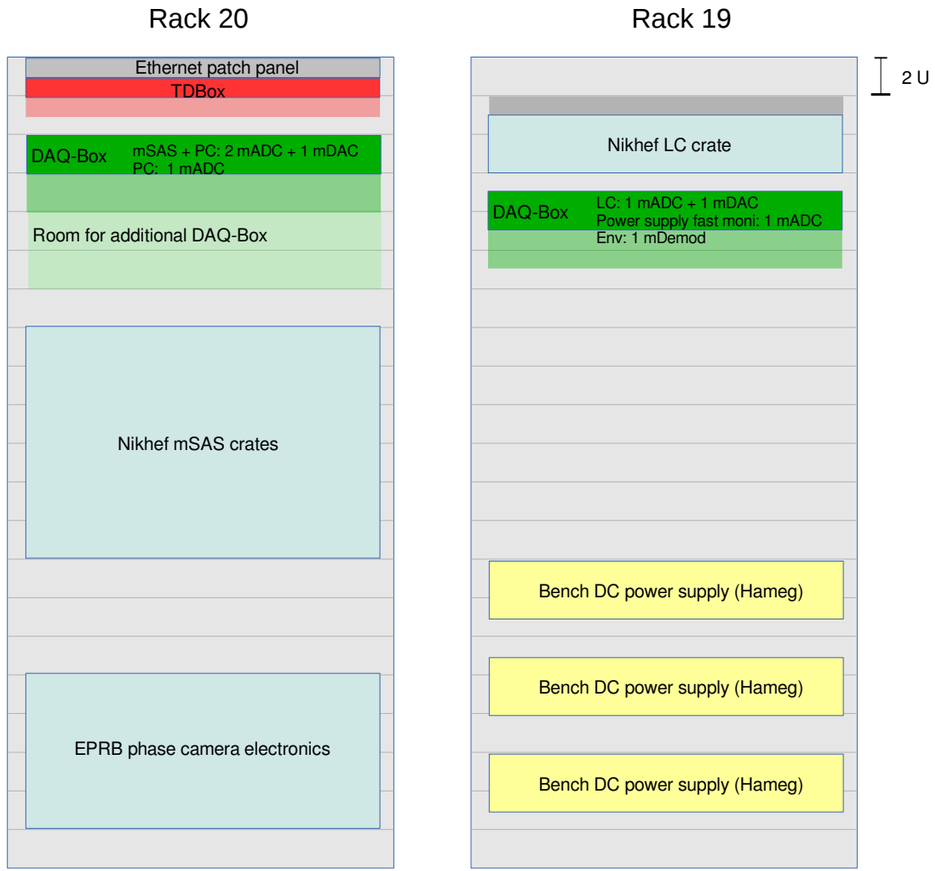
Last update: 7/28/20

DAQ-room (CEB-L3-09), West side



Last update: 7/28/20

SPRB racks in DAQ-room (CEB-L3-09), North side



Last update: 7/28/20

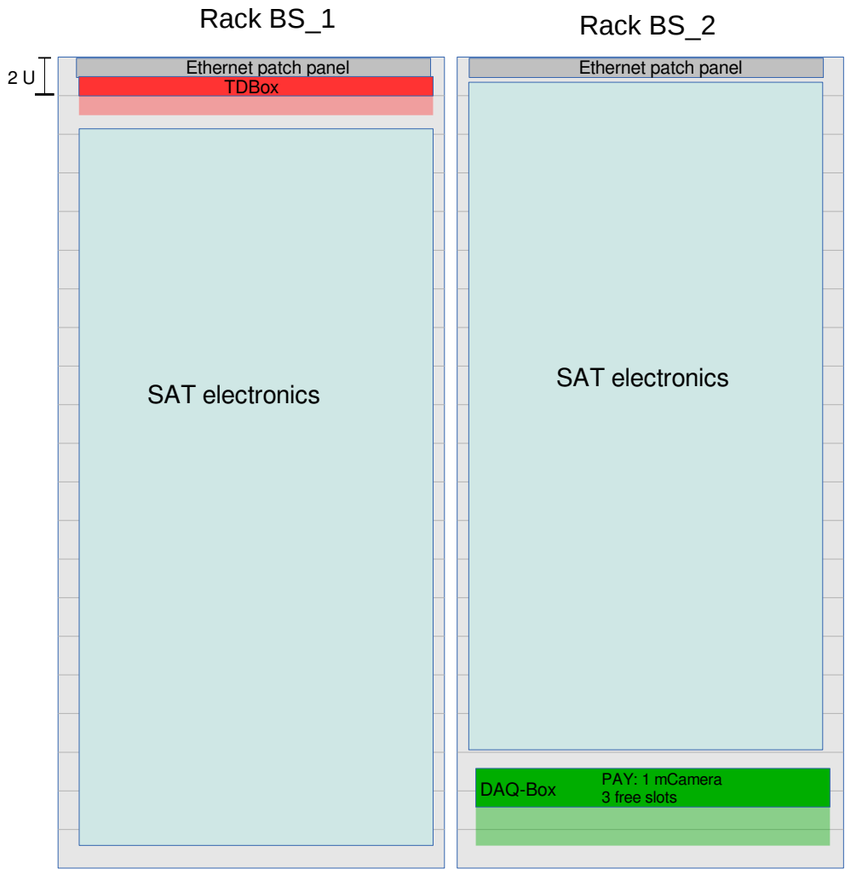
ENV + DAQ racks in DAQ-room (CEB-L3-09), North side

Since modification of HVAC in the DAQ room (June 2020),
Rack 17 is warming up and the door must be kept open
→ Move some parts from rack 17 to rack 18?

Last update: 7/28/20

+ Rack 11
With other RJ45 patch panels
for CEB Ethernet

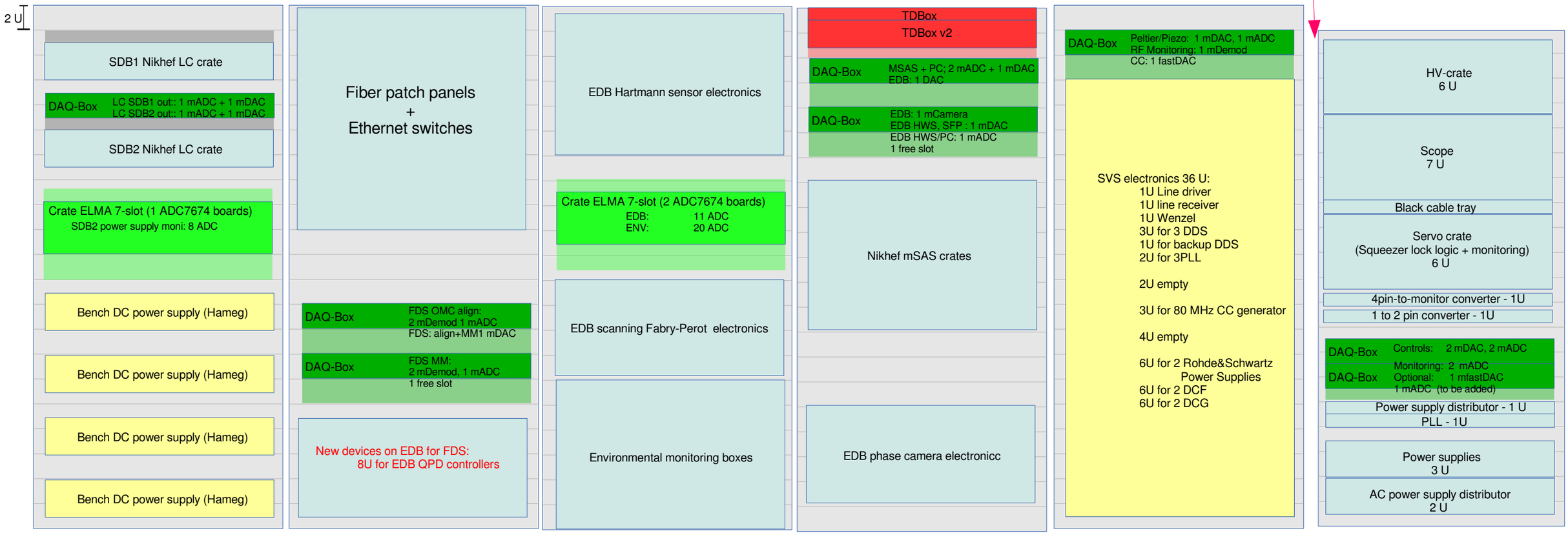
CEB Platform (L3-10), around BS



Last update: 7/28/20

Existing racks in DET EE-room (CEB-L2-08) (new racks on next page)

Add here 2 racks, SQB1 and ESQB1
(see next page for rack content)

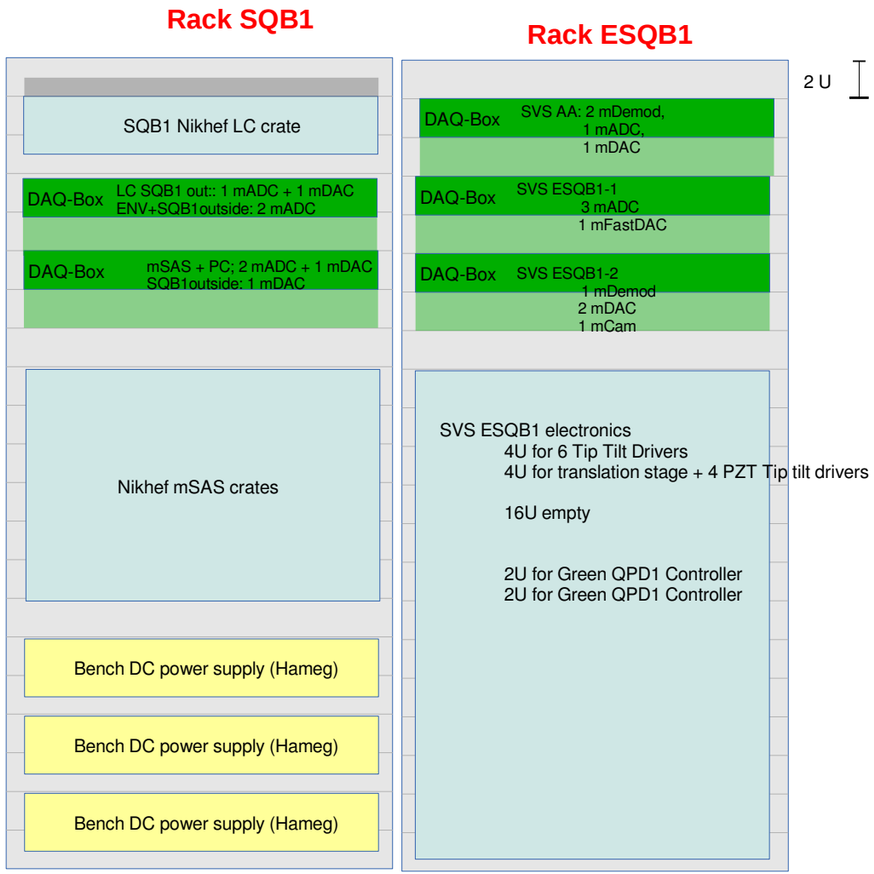


Align this rack with the others

Last update: 7/28/20

New rack in DET EE-room (CEB-L2-08)

(existing racks on previous page)

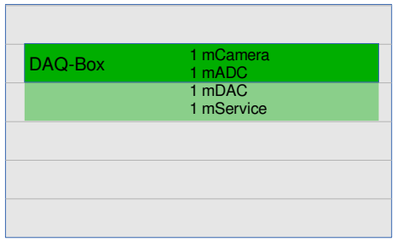


Add this two racks in DET Eeroom, between rack DET5 and rack AEI
(see previous page)

Last update: 7/28/20

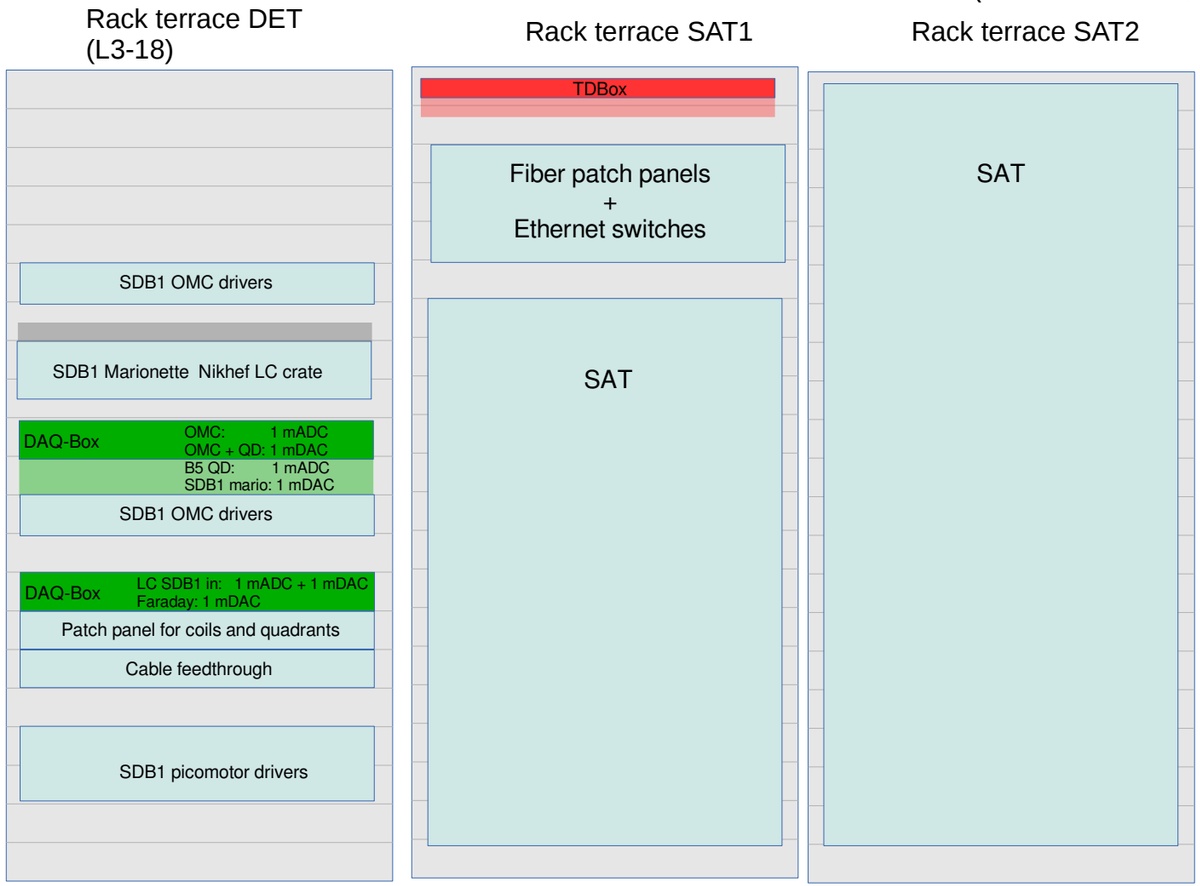
DET clean room (CEB-L2-09)

Small rack in DET clean room (below EDB) (L2-09)



(Currently only 1 DaqBox installed on a “box”
No rack installed)

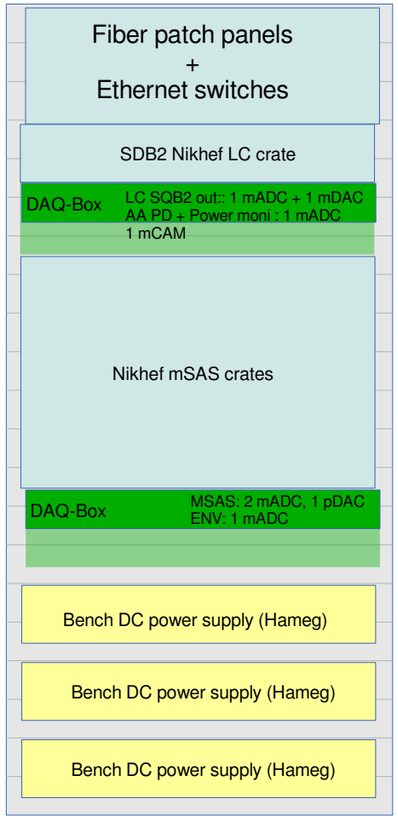
Other DET racks: CEB terrace (CEB-L3-18, South side)



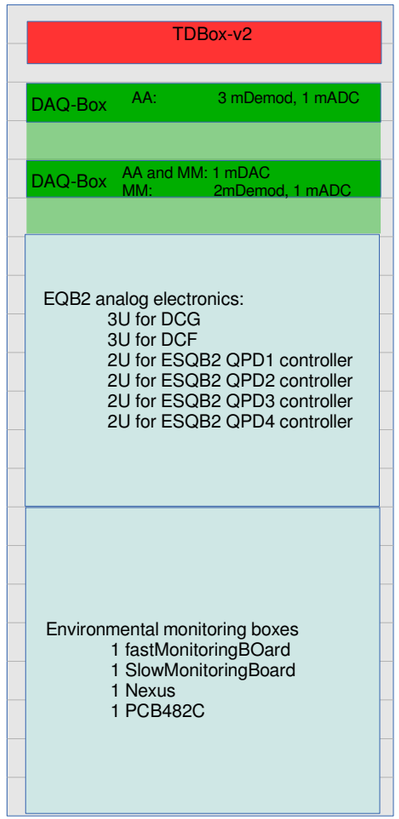
Last update: 7/28/20

Racks for SQB2/EQB2: on the CEB terrace (CEB-L3-18, West side, center of the lifeguard)

Rack SQB2

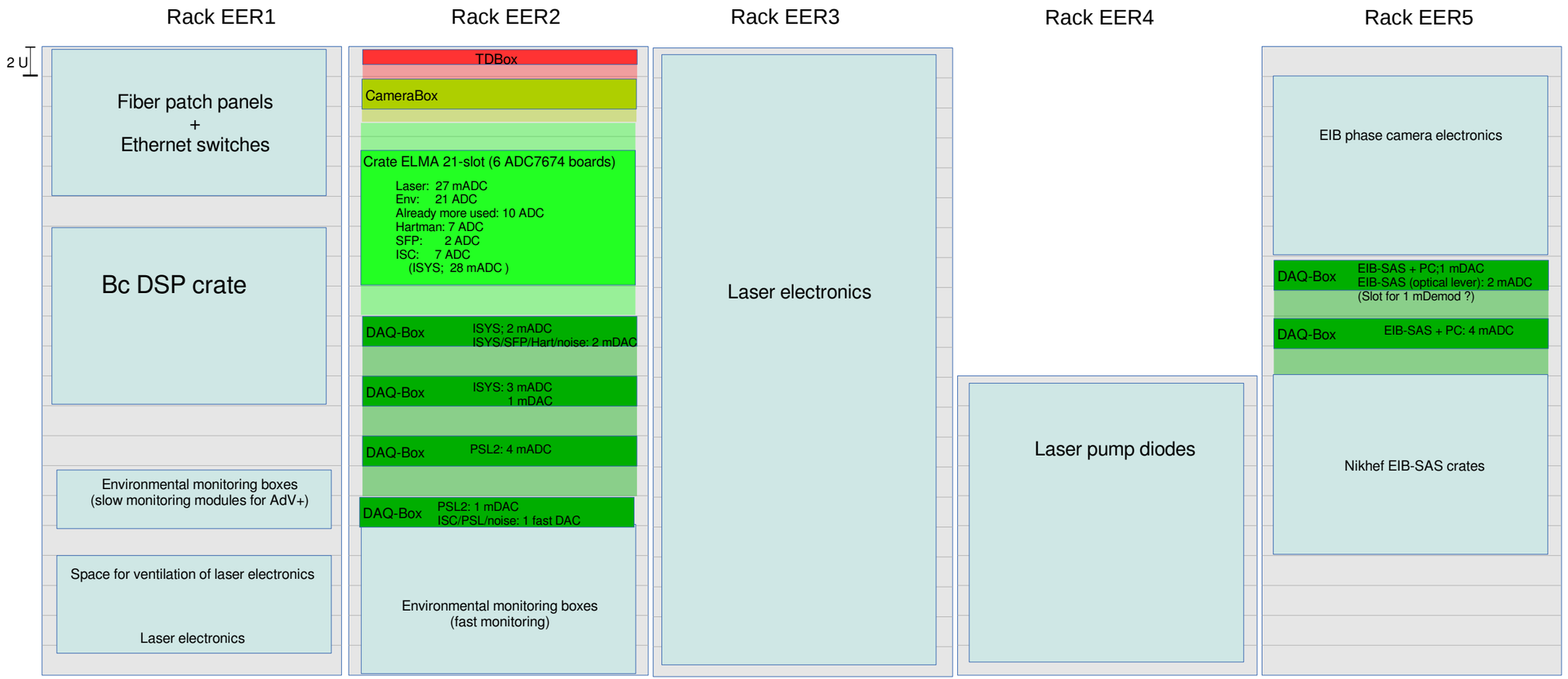


Rack ESQB2



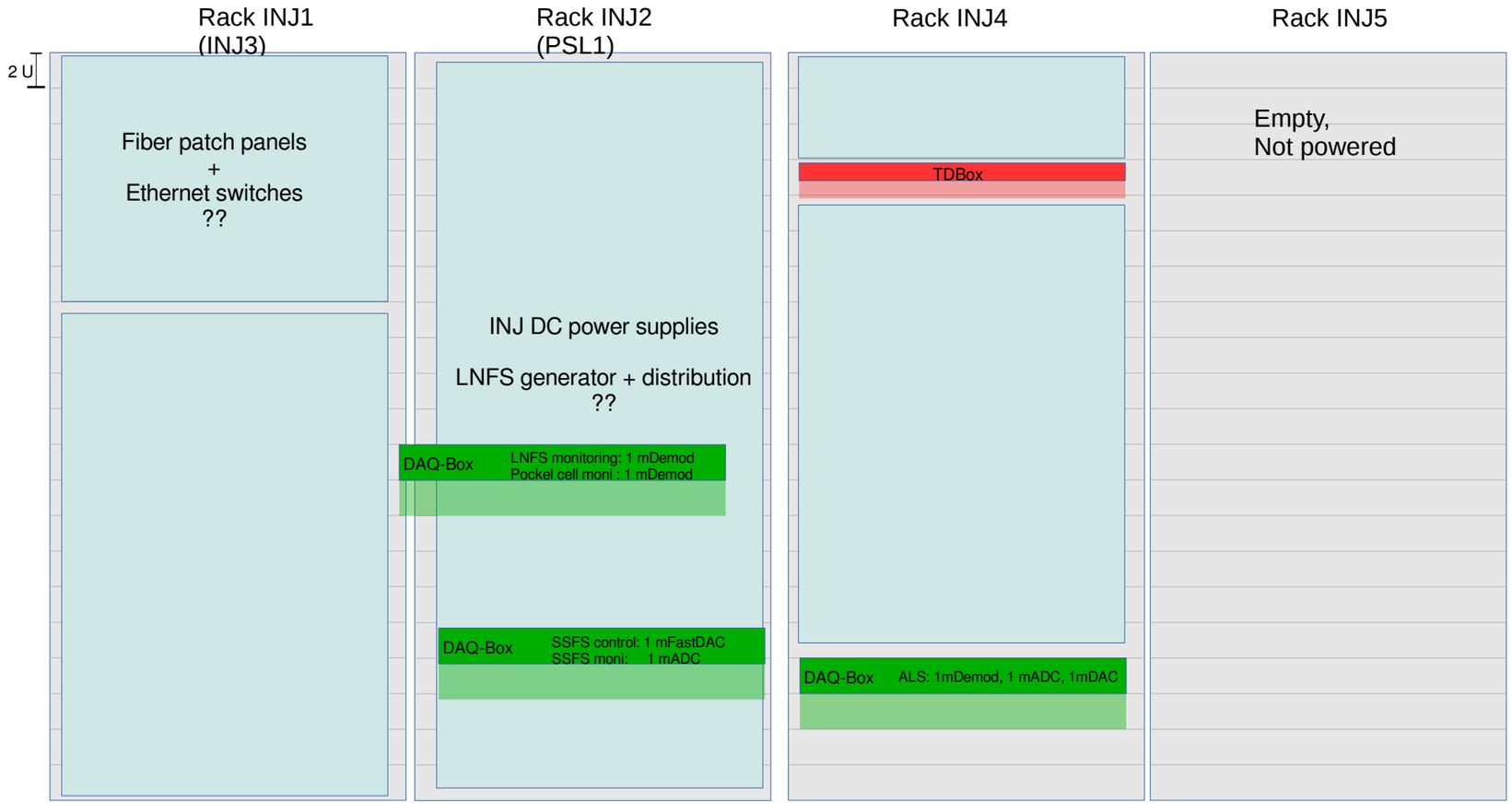
Last update: 7/28/20

Racks in EE-room



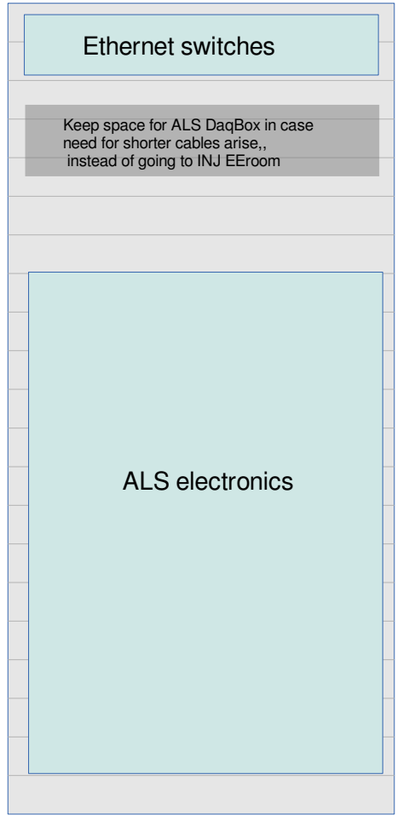
Last update: 7/28/20

Racks in INJ EE-room (= “piscina”)



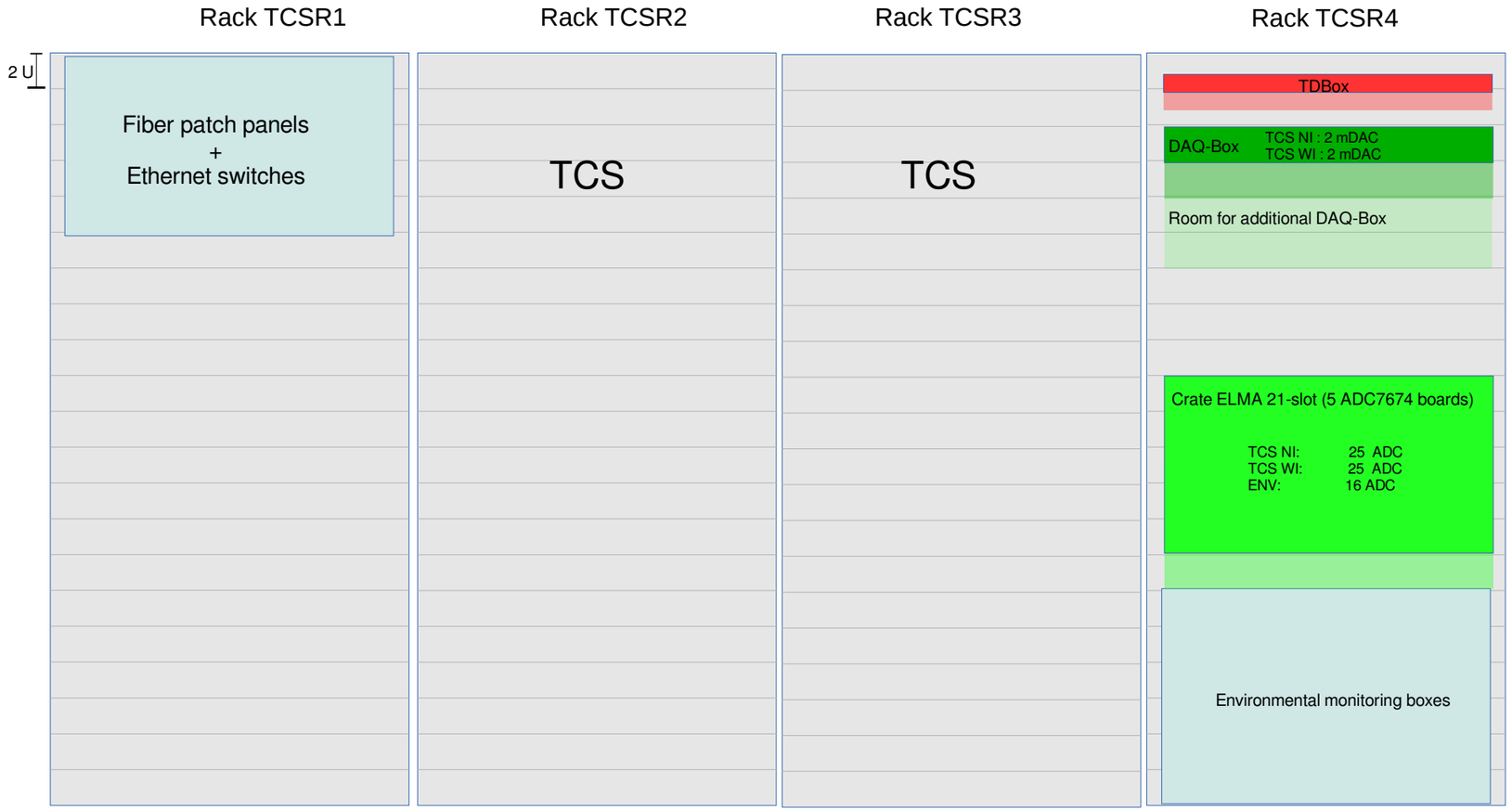
Racks in Atrium

Rack ALS



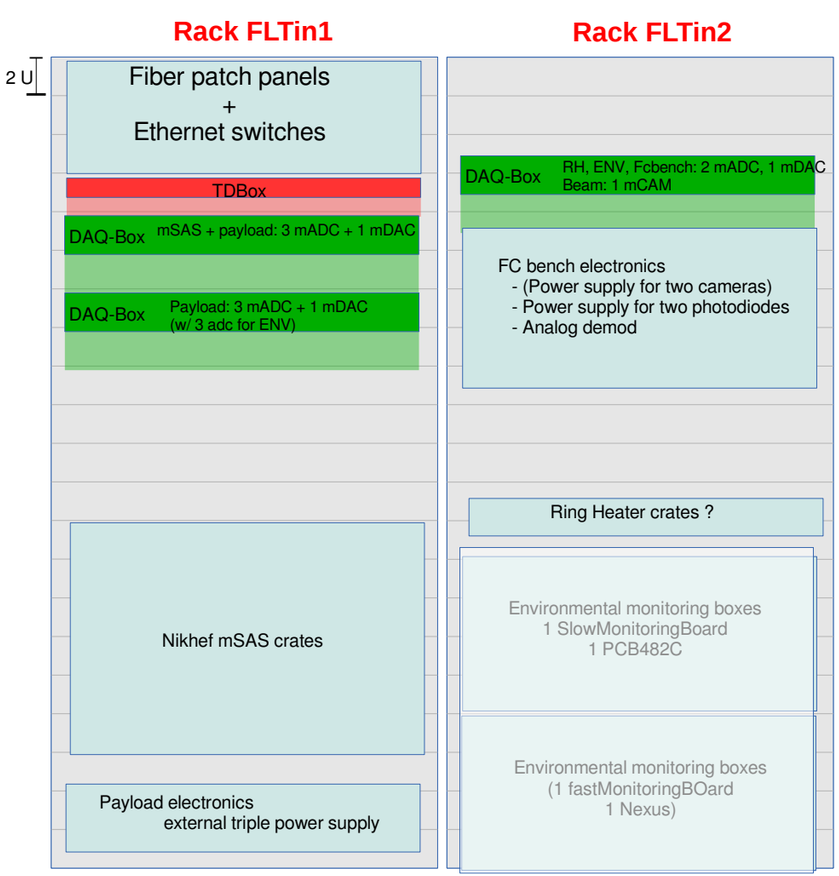
Last update: 7/28/20

Racks in TCS-room



Last update: 7/28/20

Racks for filter cavity input and output (close to the two new clean rooms along North arm)



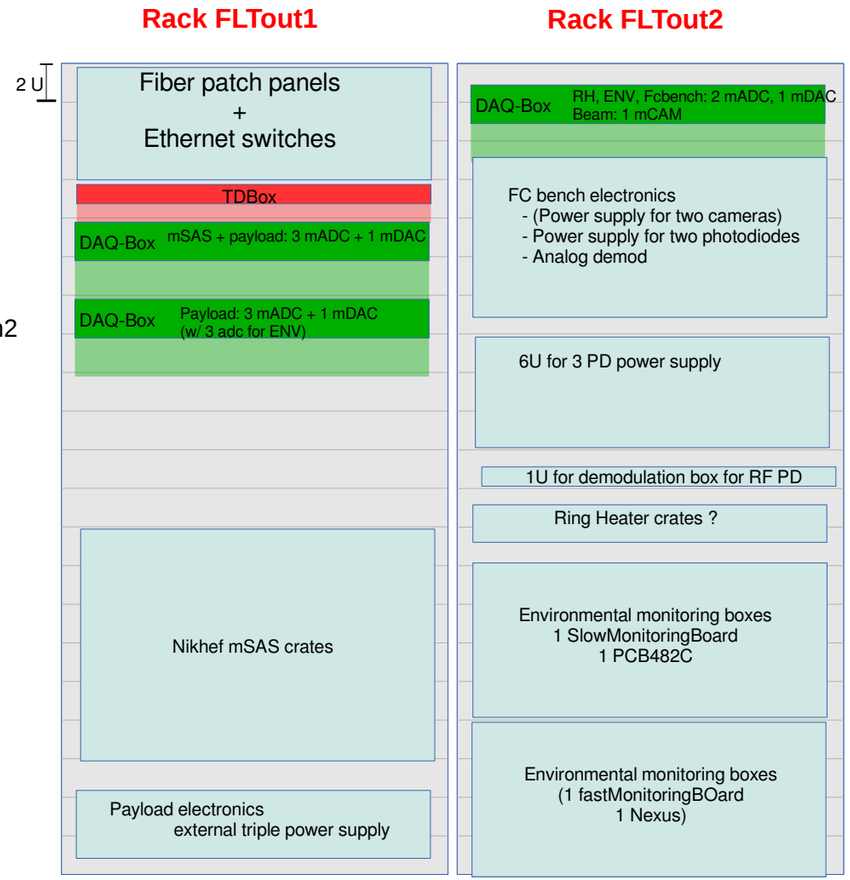
FLTout is the same as FLTin, except for:

* 2 more cameras
* 3 more ADC channels

→ should be ok without more DaqBox ?

ENV electronics not to be installed in FLTin2

Other payload electronics (3 PSD amplifiers and 3 SLED sources) will be hosted in the clean room and optical lever breadboards.



Last update: 7/28/20

Racks in MC building (36 U racks max)

Box on the South wall, corner SW

Fiber patch panels
+
Ethernet switches

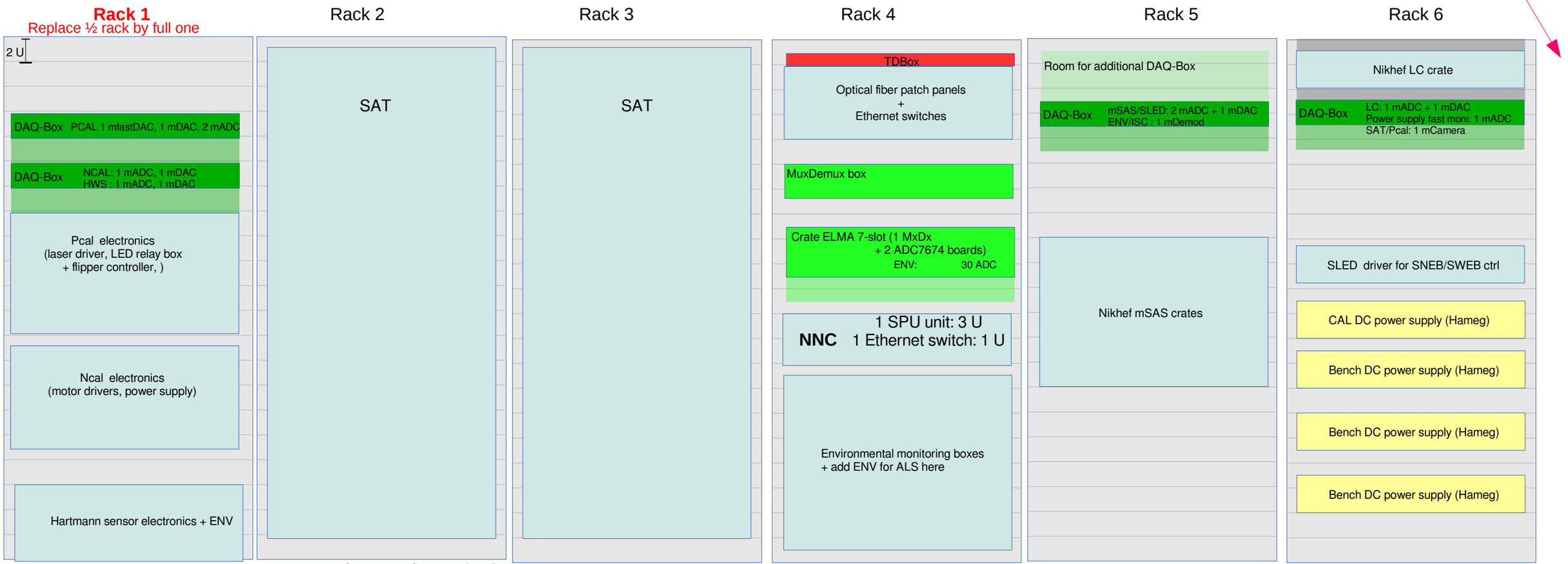
No space for extra rack here: below the stairs of the platform

Last update: 7/28/20

Racks in end buildings (NEB, East side and WEB, North side)

Not supplied, would need additional DaqBox:
- baffle control and monitoring: 6 ADC channels and 6 DAC channels

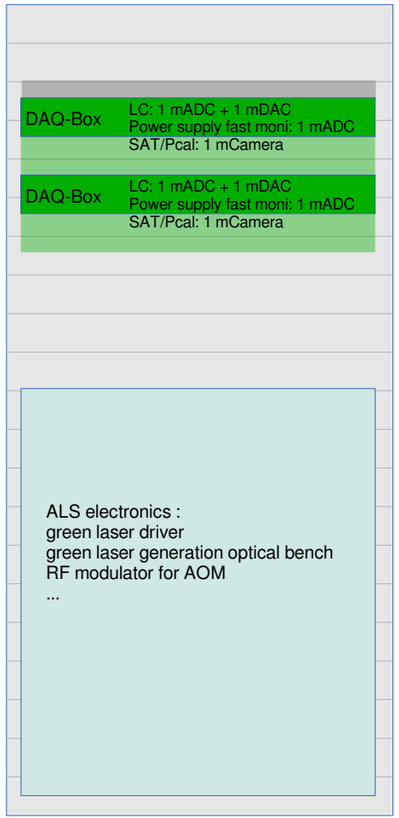
ADD rack 7 for ALS here
(see next page for rack content)



Last update: 7/28/20

Racks in end buildings: to be added to the right of rack6

Rack 7 (ALS)

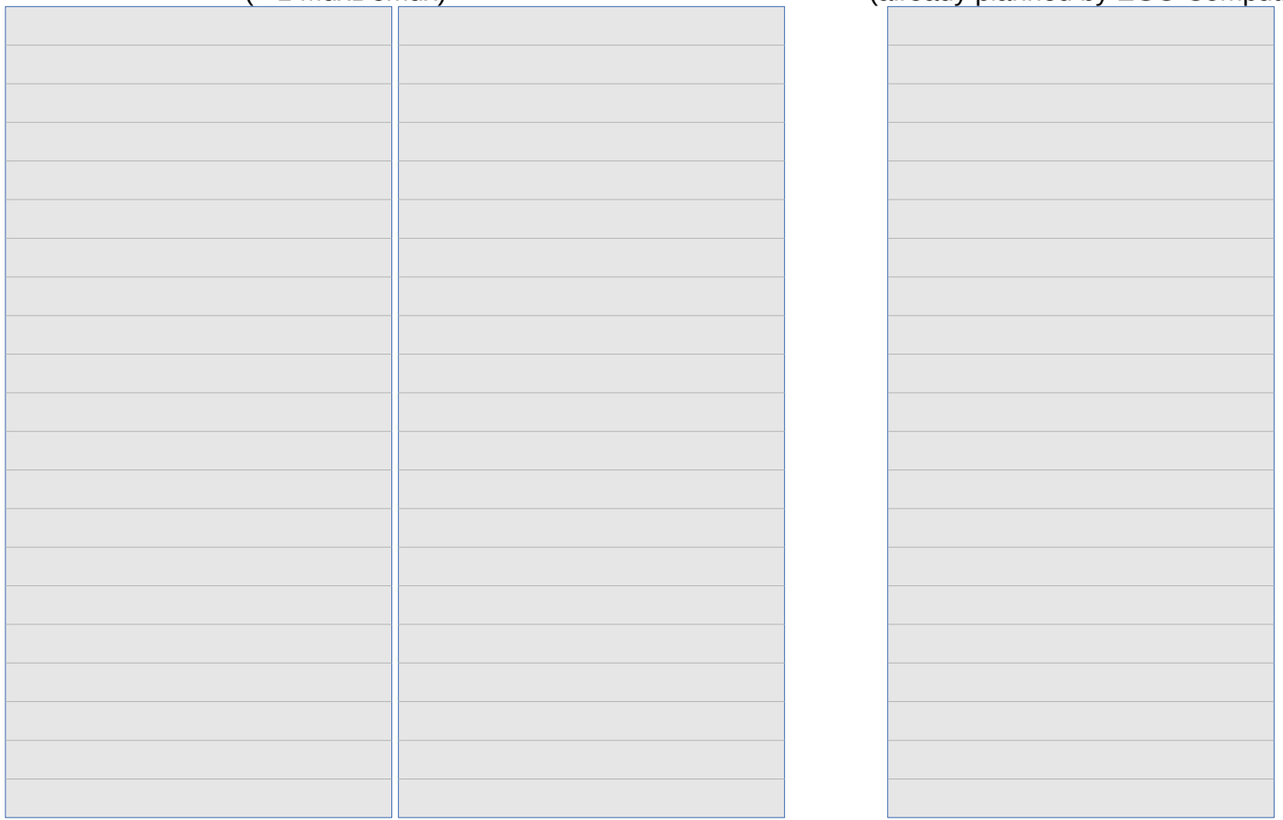


Last update: 7/28/20

Computing Room

2 racks already existing for RTPC
(+ 1 MuxDemux)

1 new rack to be added for more RTPC (DAQ and NNC)
(already planned by EGO Computing)



Last update: 7/28/20