

INTT Status and Schedules

RIKEN/RBRC

Itaru Nakagawa

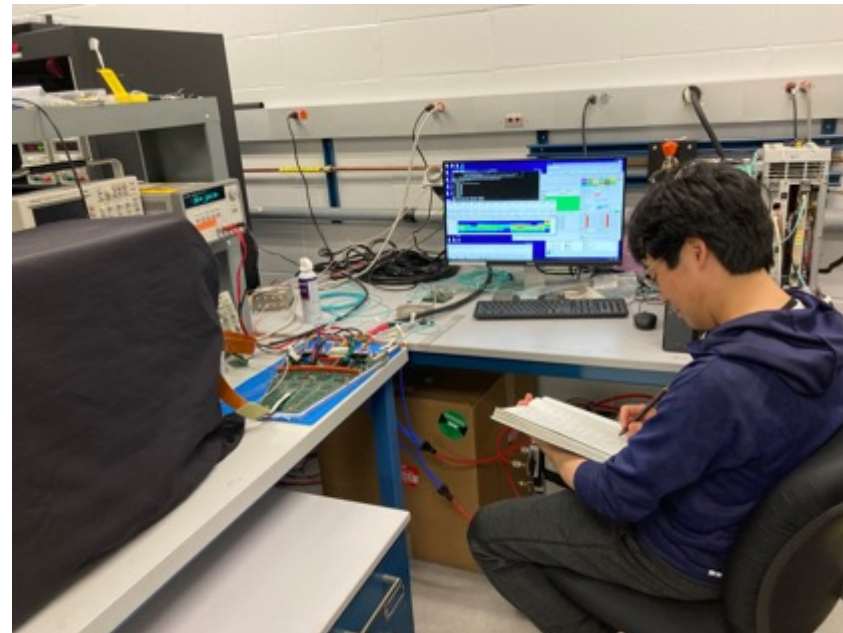
Ladder Status



	Assembly	Calib Test	Source Test
BNL	82	82	30
Taiwan	40	40	22



82 Ladders Assembled Ladders in BNL



- Assembly of ladder has been completed
- Testing ladders are ongoing.
- 56 Class-1 ladders are to be assembled into the barrel

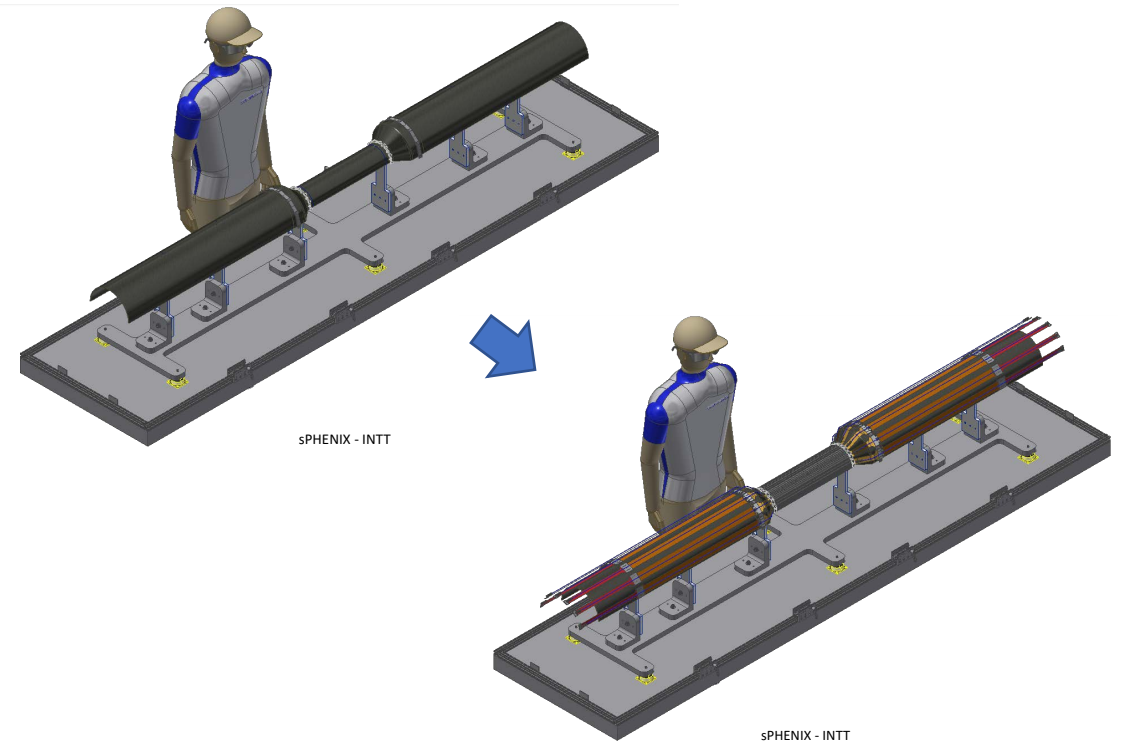
Barrel Assembly



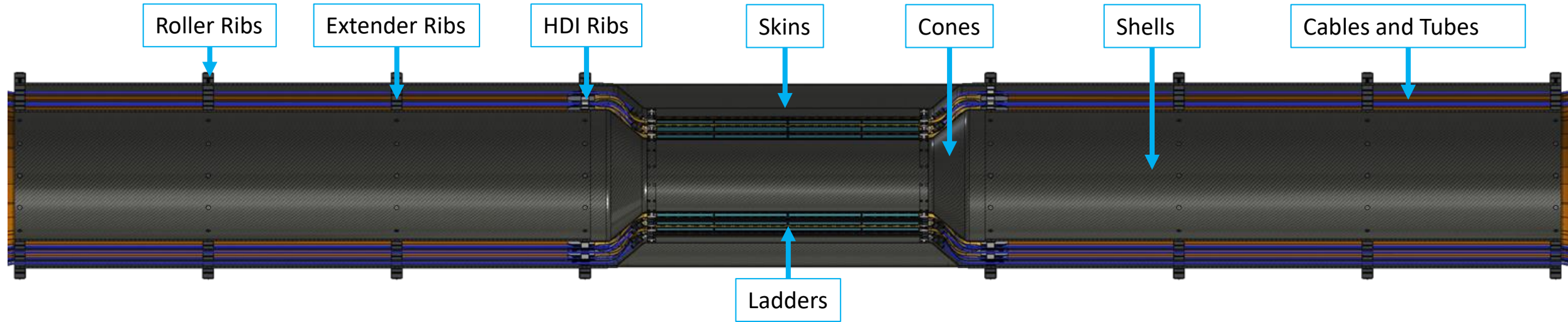
All materials are ready except for CFC support structure pieces. They were shipped from France and on their way to BNL.



INTT Barrel Mock up



Barrel – Components



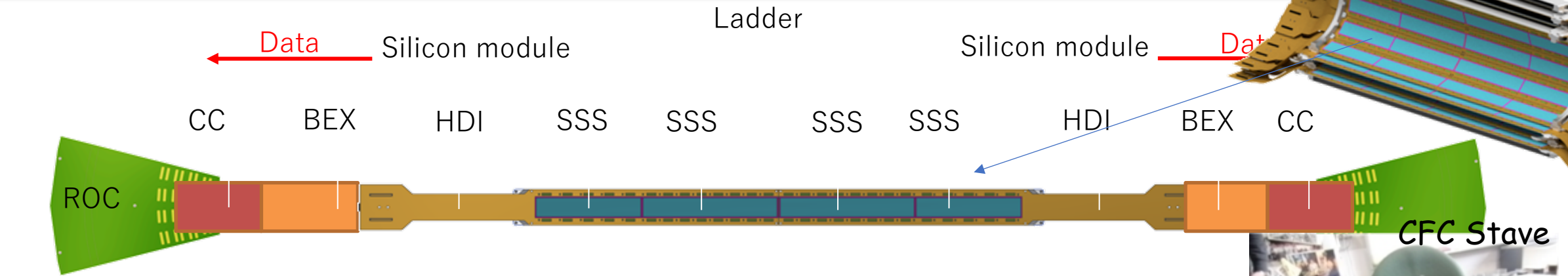
Support Pipe

Description	QTY
Support Pipe	1
Outer Service Barrel	2
Inner Service Barrel	4
Outer End Ring Cone	4
Inner End Ring Cone	4
Outer Skin	2
Inner Skin	2

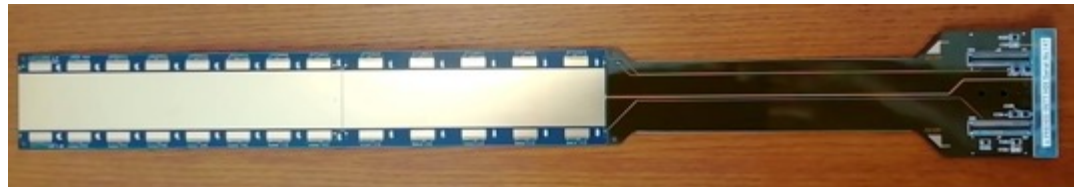
Outer Service Barrel – QTY 2



INTT Ladder Components



HDI Cable



Silicon Sensors



CFC Stave

FPHX Chip



Conversion Cable Prototype-I

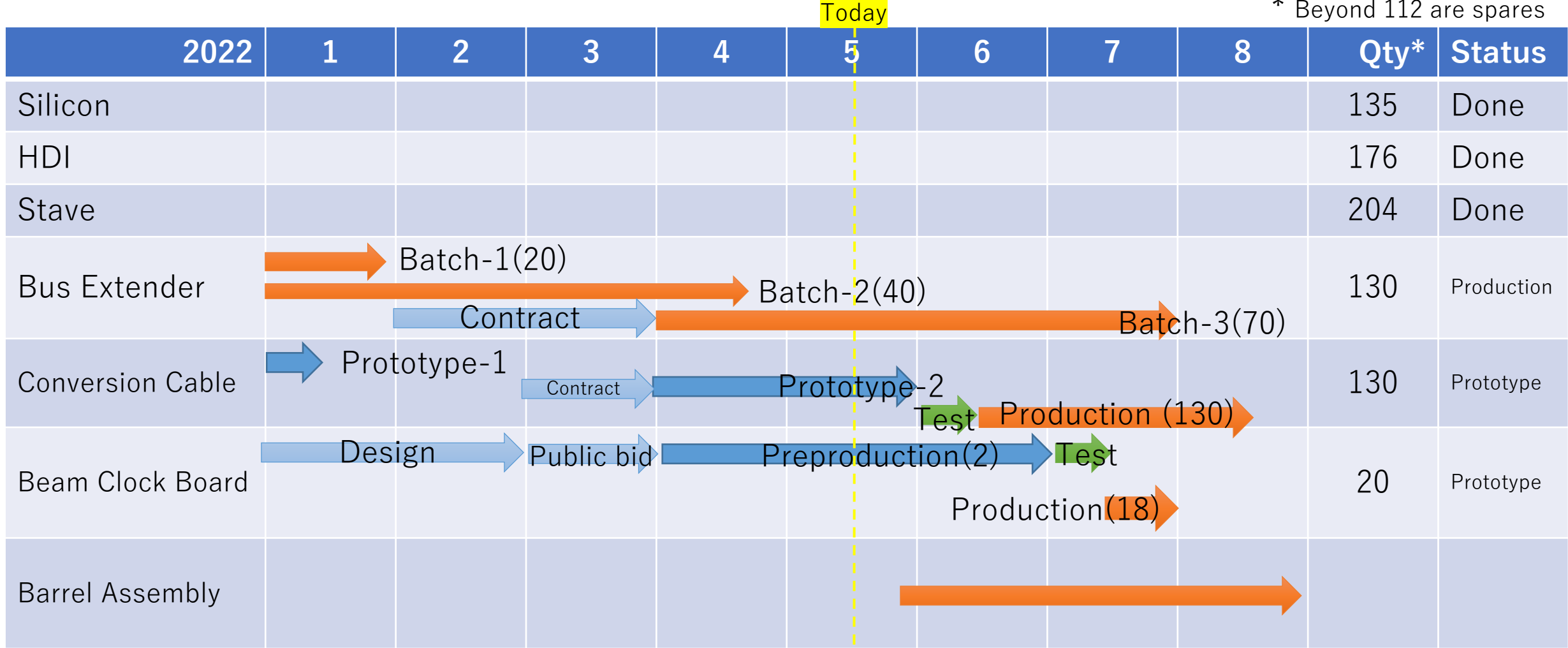


1.11 m Bus Extender



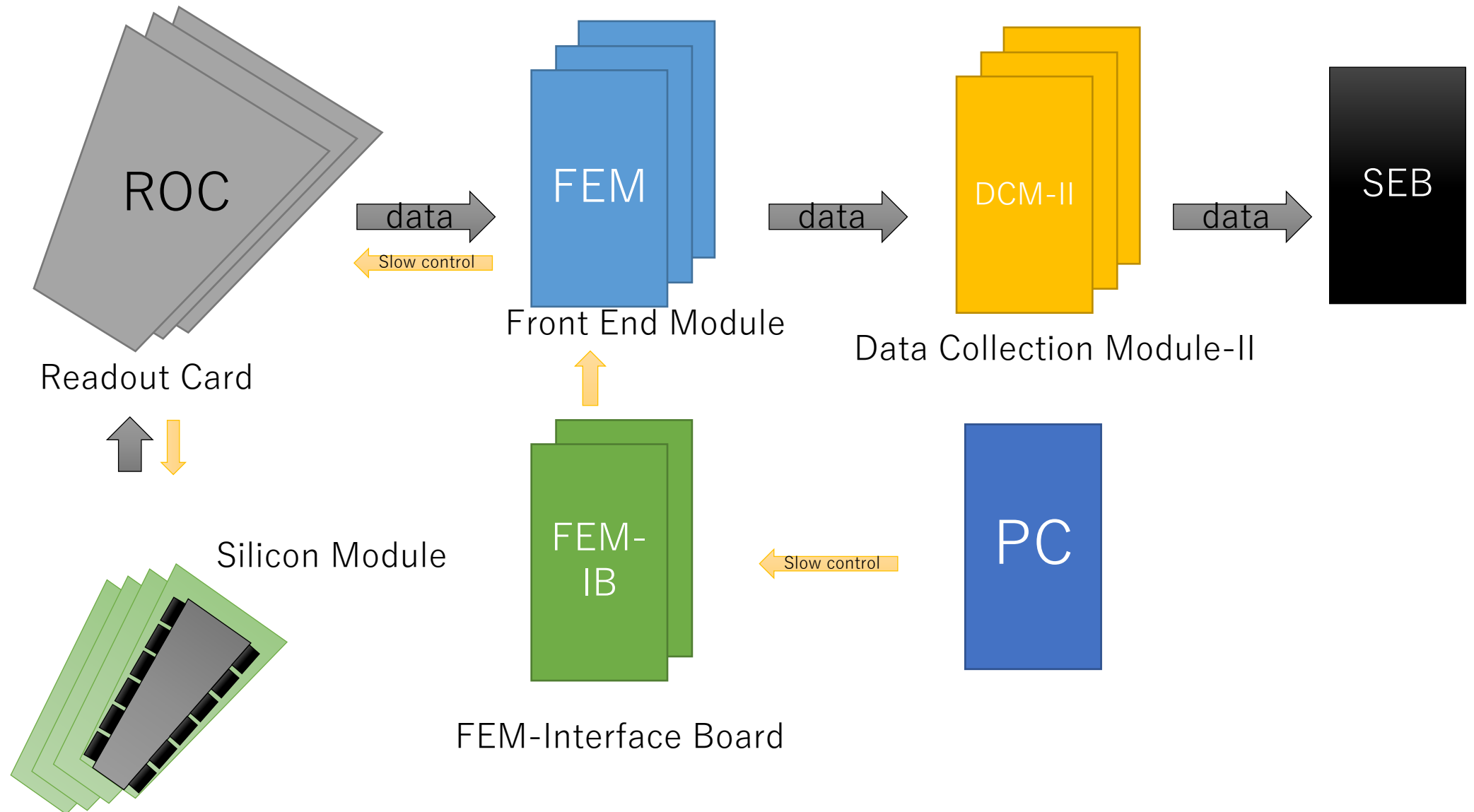
INTT Production Status

* Beyond 112 are spares

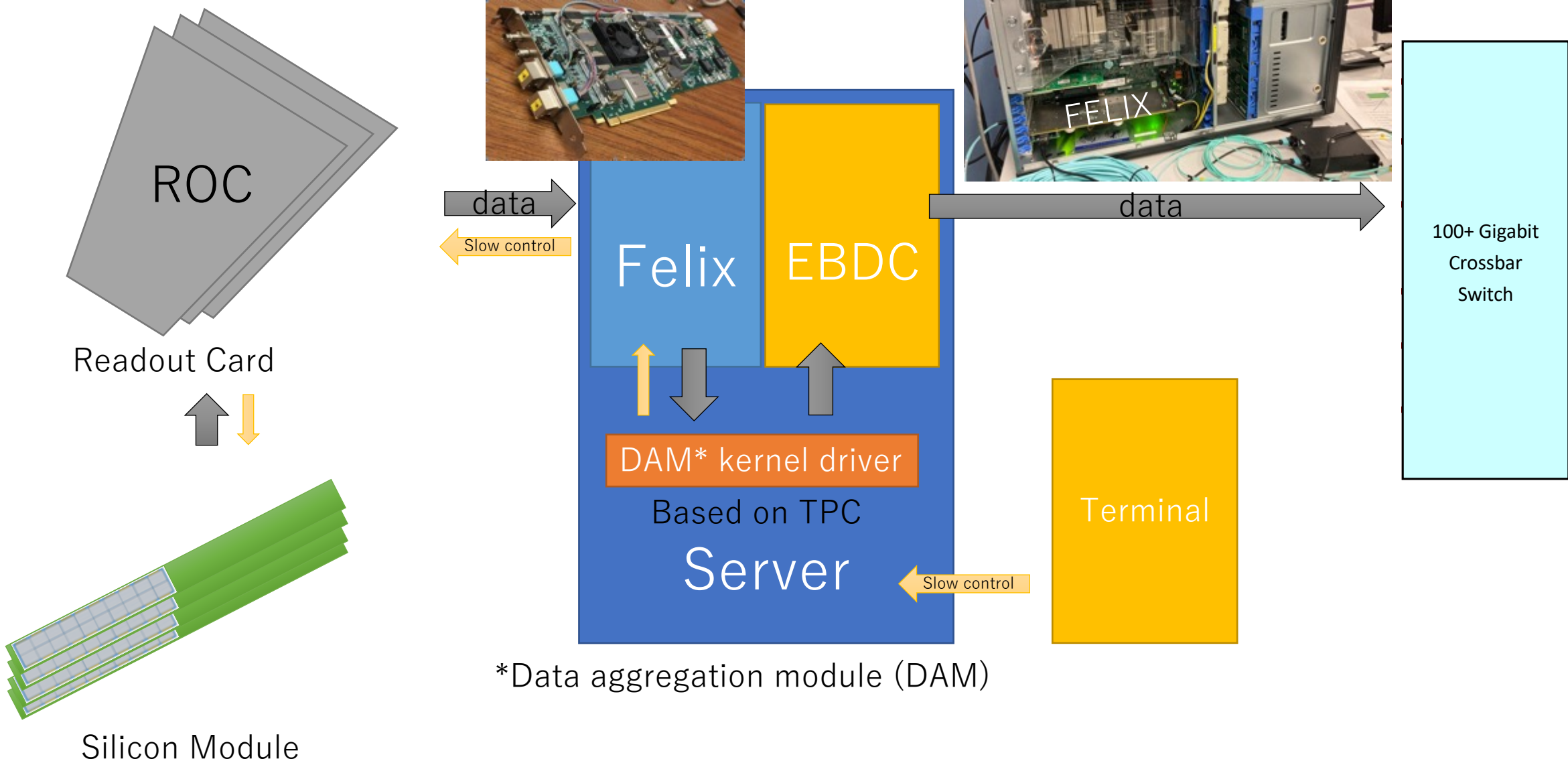


Student's travel to BNL

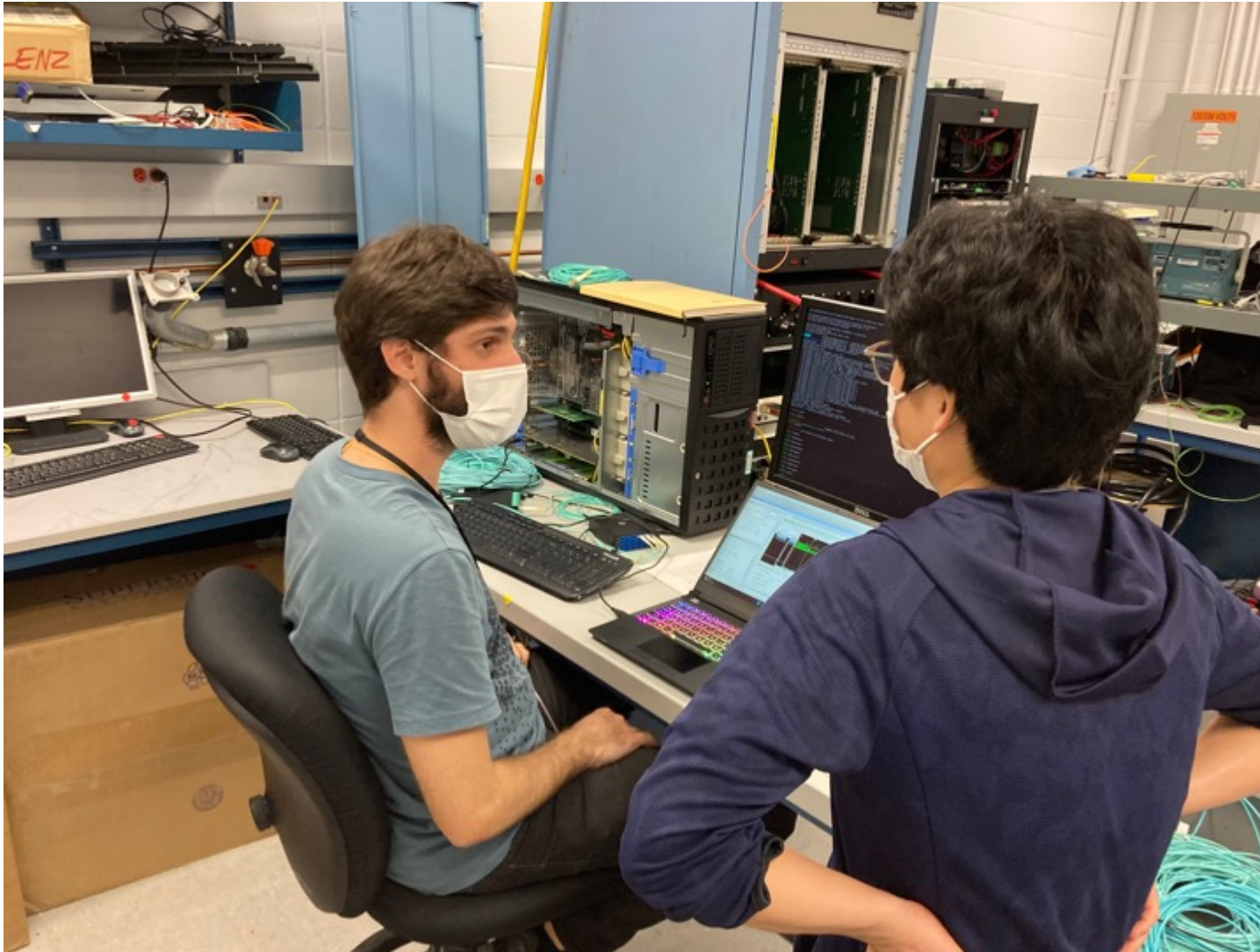
FVTX Readout Chain



INTT-Felix Readout Chain



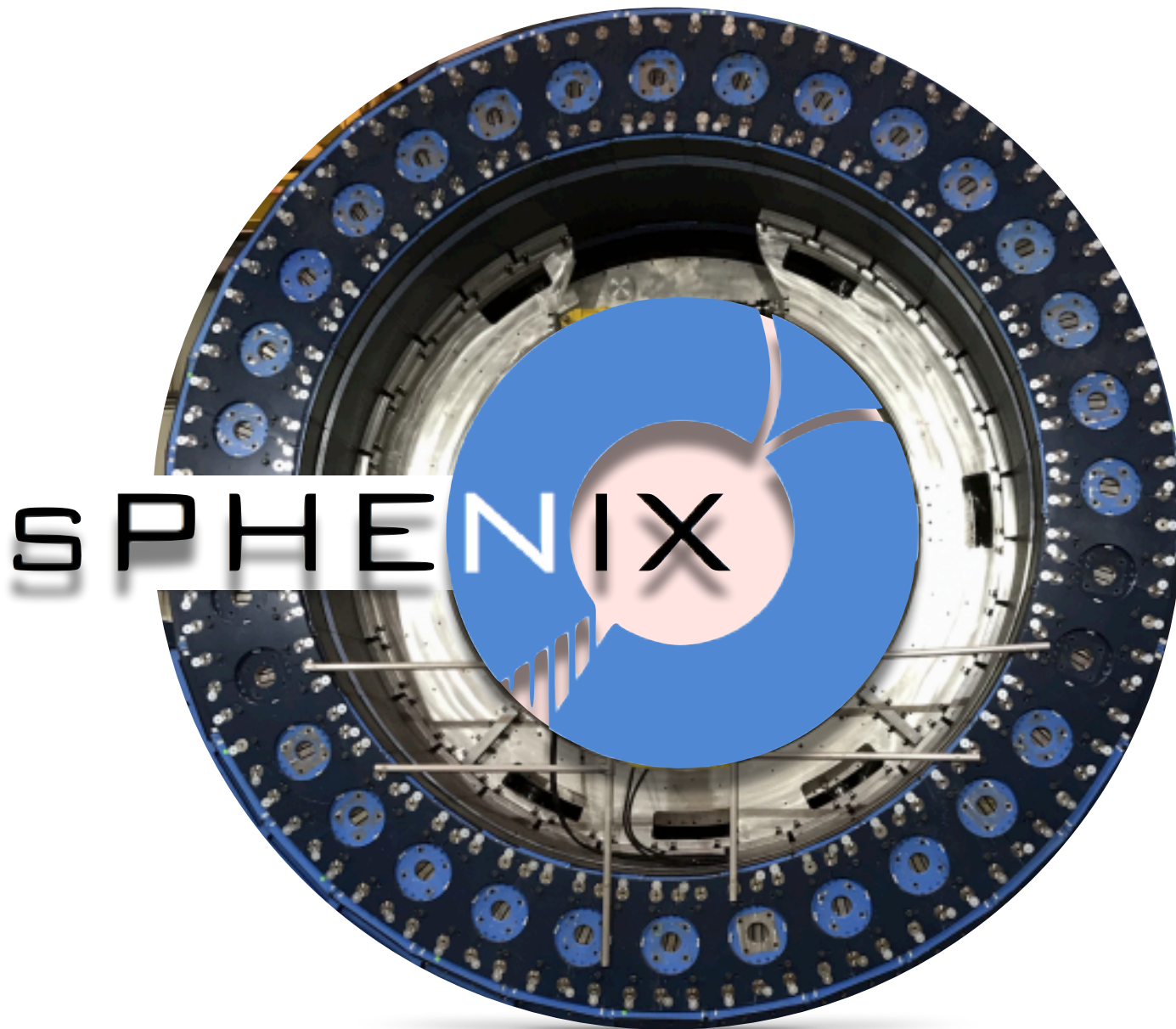
INTT FELIX Readout



- Initial attempt to take data with FELIX readout system has been successful.
- Passed 1st stage FELIX review in April.
- Start to establish environment for control/online software.
- Redirecting more man powers for software development this Summer.

Installation and Commissioning

Discussed in the general meeting on May 13, 2022



Report from the sPHENIX commissioning task force

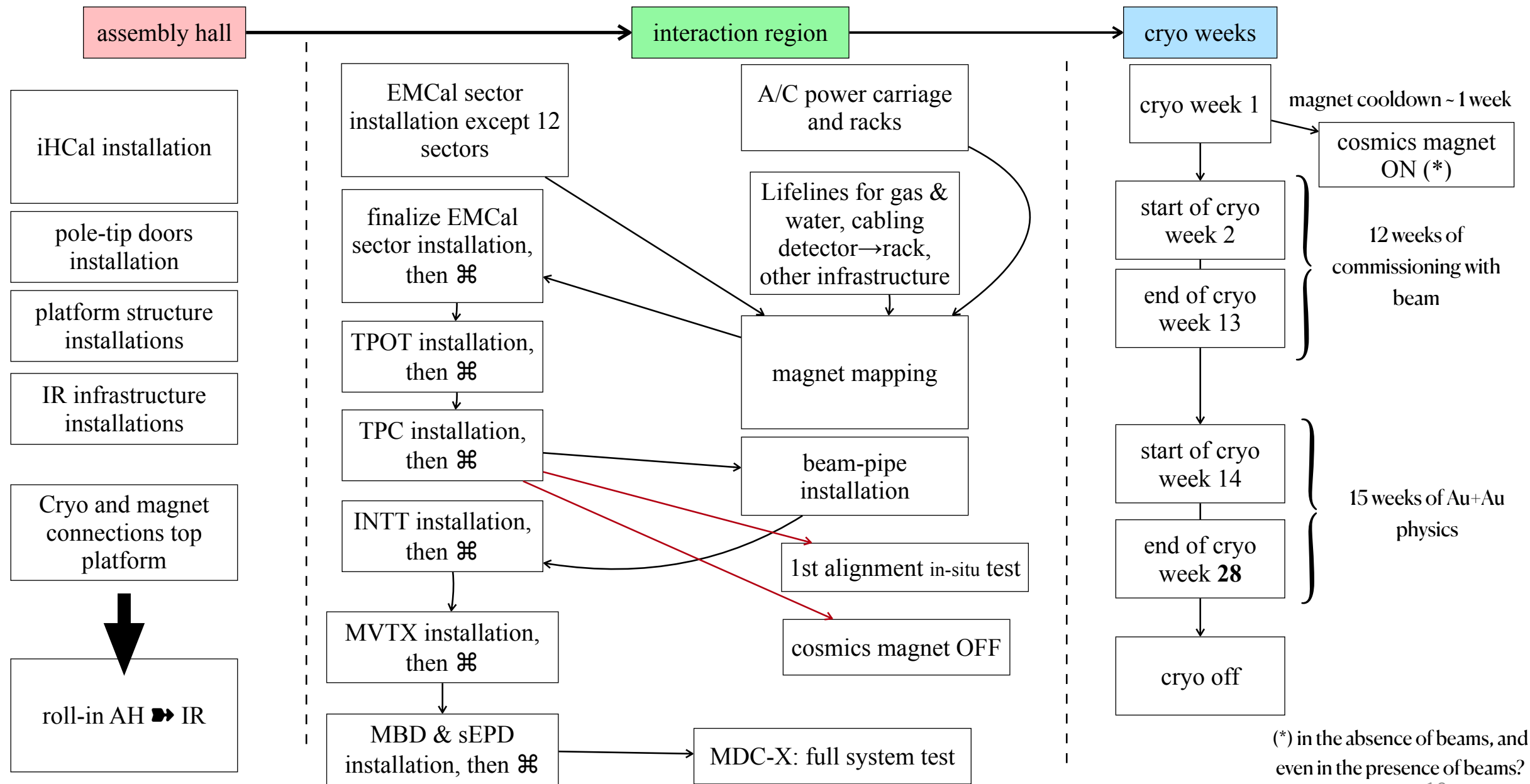
Putting together information from Russ Feder, the
commissioning task force members, and others



first beams
February 2023

sPHENIX General Meeting - May 13, 2022

C. Riedl, J. Haggerty¹¹



(*) in the absence of beams, and even in the presence of beams?

Installation Schedule Highlights and Milestones



Remove the shield wall after RHIC Run-22	4/19 – 5/6
Install the magnet pole tips and cryo on the platform in the Assembly Hall	5/9 - 7/15
Install the IHCaI	6/14 - 7/15
Roll carriage into the IR	7/18 - 7/22
Complete the magnet cryo/power/controls hook up in the IR	7/25 – 9/1
Install the EMCaI in the IR	7/25 – 9/1
Magnet mapping	9/9 - 9/27
Install TPOT	9/28 - 10/24
Install the TPC	10/25-11/28
Beam pipe installation and bake out	12/6 - 12/27
IRR complete	12/16
ARR complete	1/13/23
Install silicon and trigger detectors	12/29/23 – 2/13/23
Begin RHIC Run-23	2/22/23

Depending on the task we are a little ahead, or a little behind schedule. We revise the schedule as needed

zoom: putting it together

Beam pipe installation right before Christmas & baking thru holidays



Cyan	calorimeters
Pink	tracking detectors
Purple	SC magnet
Light Green	cryo
Orange	beam pipe
Grey	infrastructure
Red	alignment
Dark Green	cosmics
Light Yellow	software
Blue	data

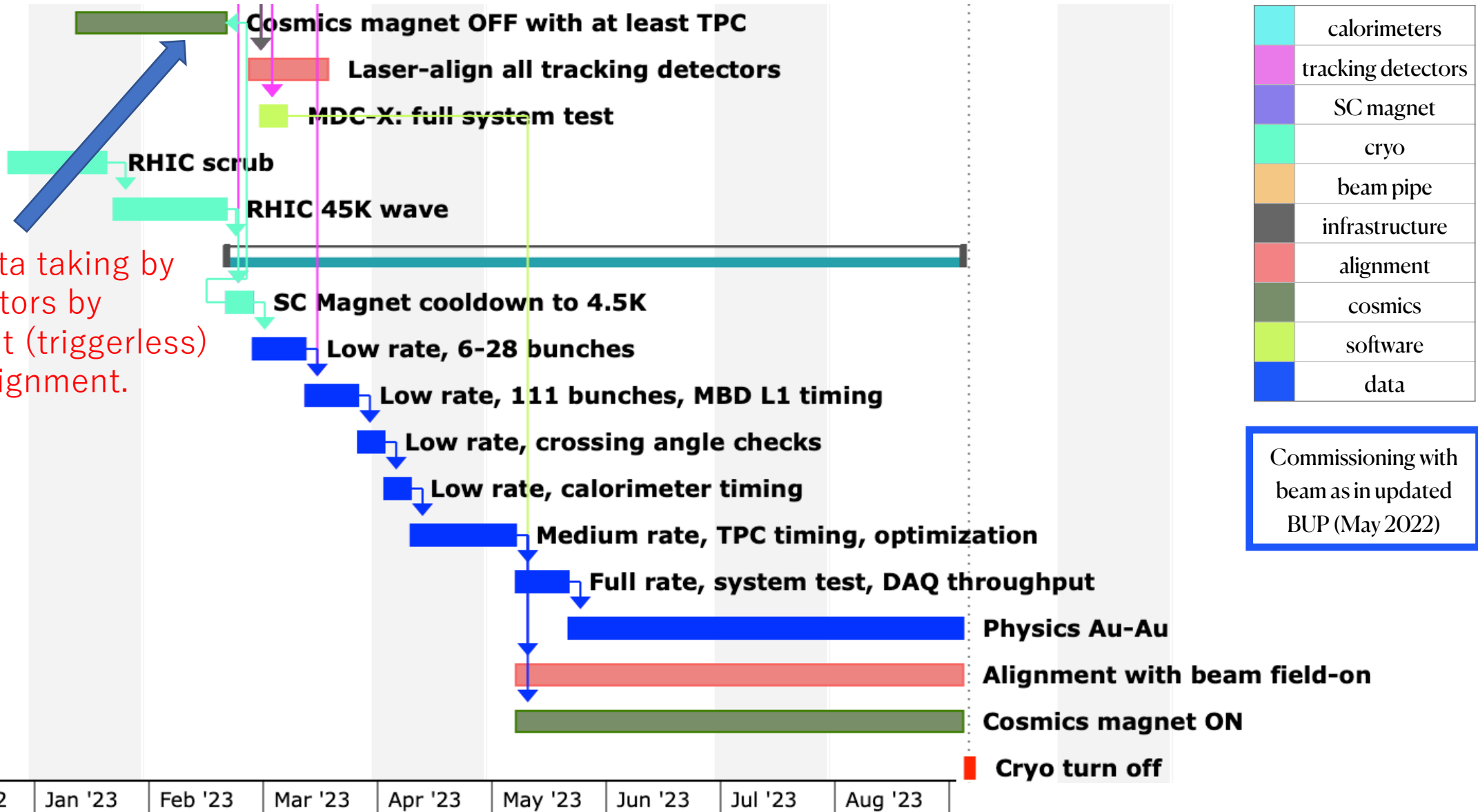
For every detector - software milestones:

Before installation of each individual detector:

- **geometry** implemented incl. possibility to use survey data
- **alignment** strategy defined and software available
- **calibration** strategy defined and software available
- **DAQ** - able to use packet API
- **DQM** - have strategy, software and hardware ready

After installation: dress rehearsal for everything above

Cosmic ray data taking by tracking detectors by stream readout (triggerless) for possible alignment.



22	Nov '22	Dec '22	Jan '23	Feb '23	Mar '23	Apr '23	May '23	Jun '23	Jul '23	Aug '23
----	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------