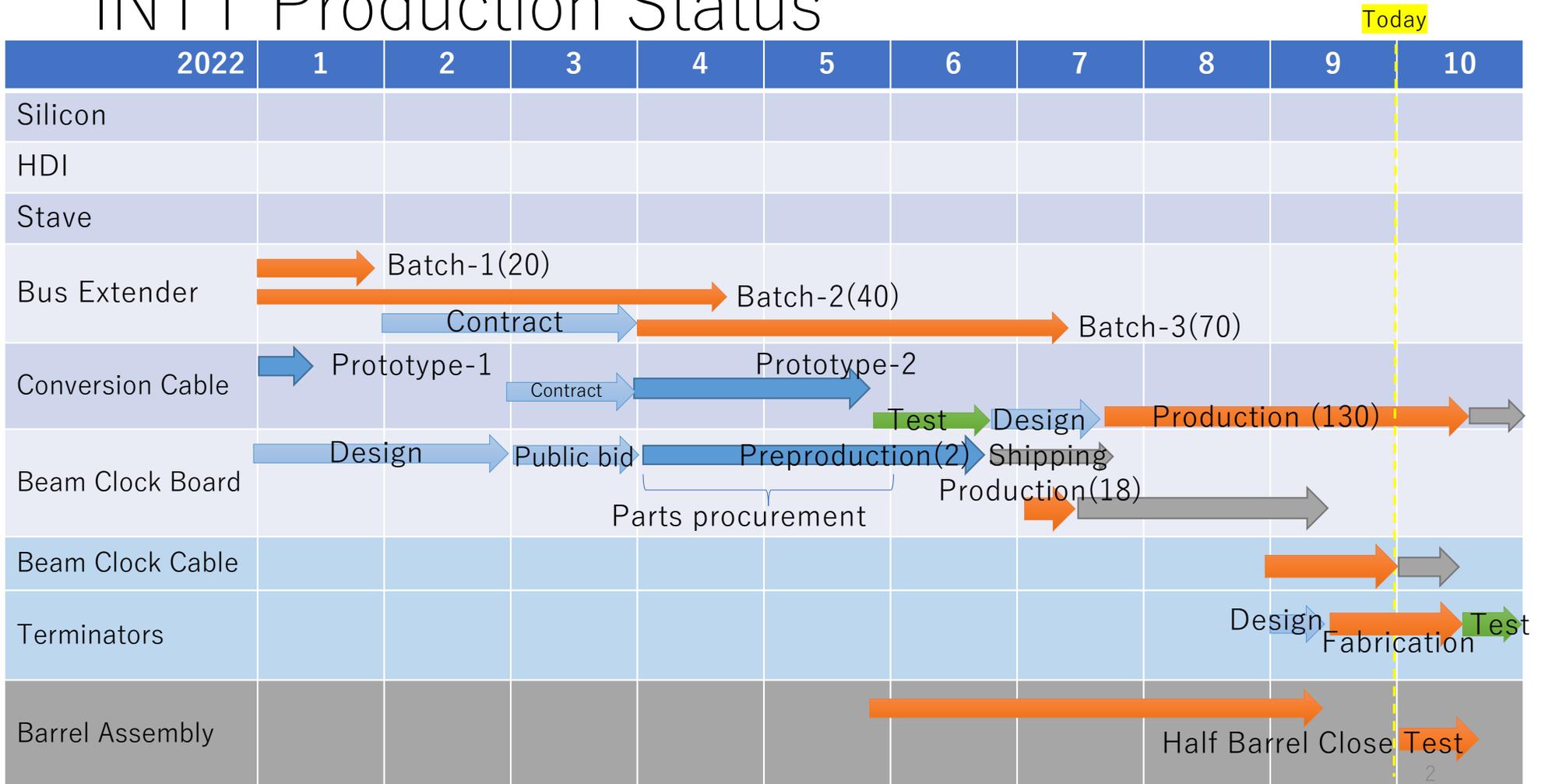


# Production Status and October Plan

RIKEN/RBRC  
Itaru Nakagawa

# INTT Production Status

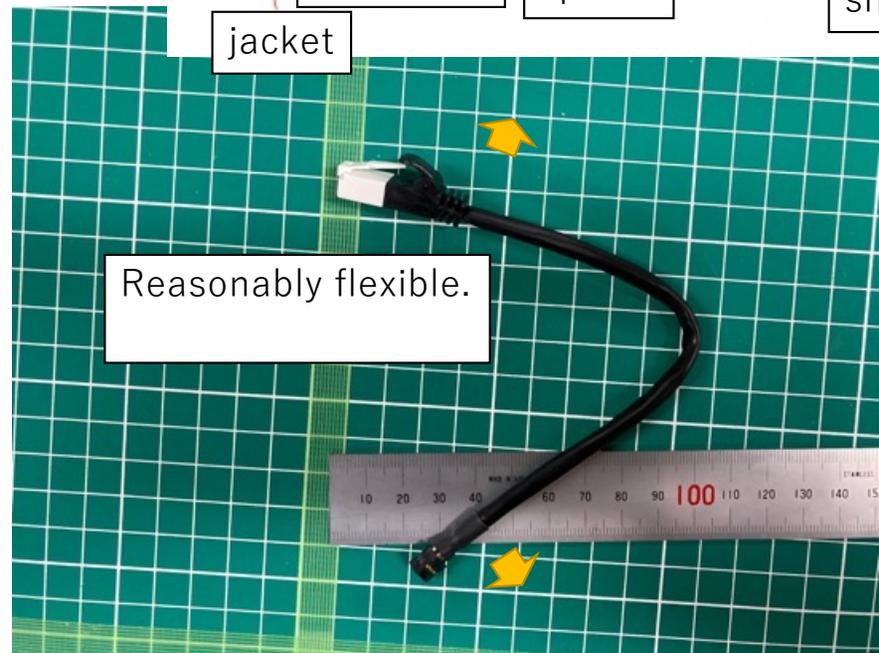
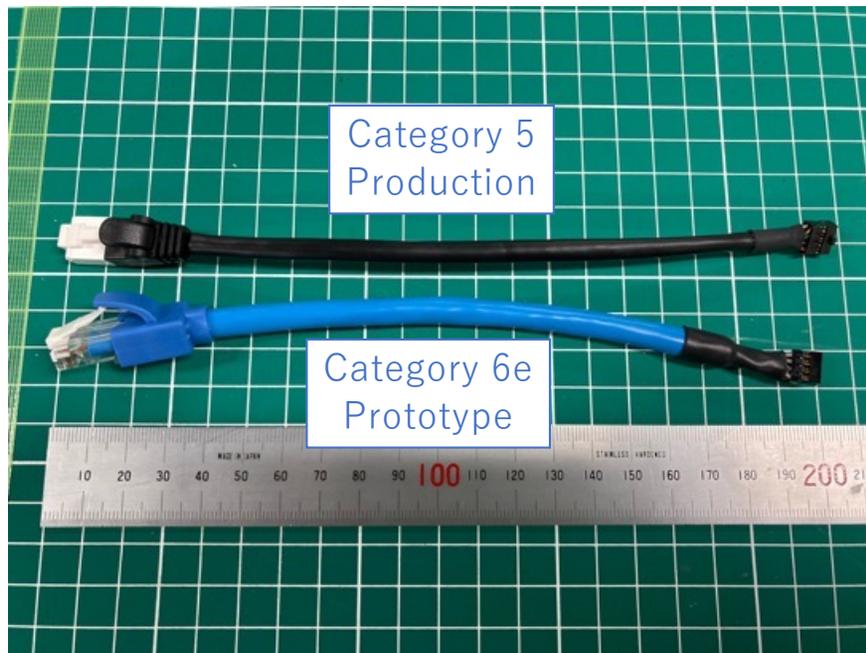
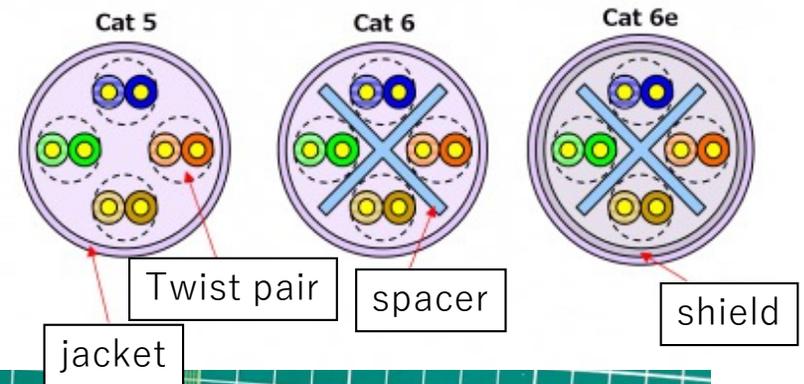


# Beam Clock Cables



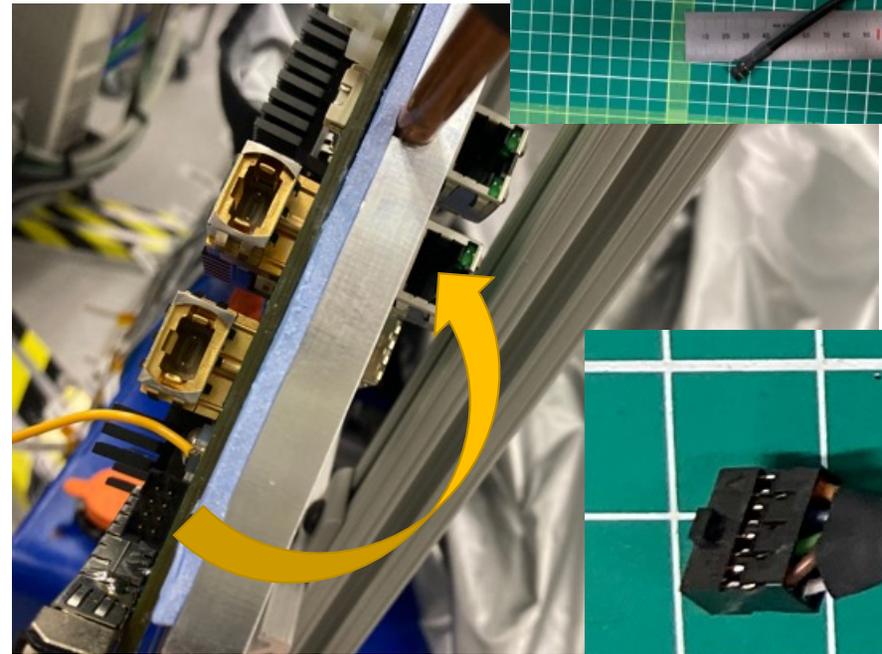
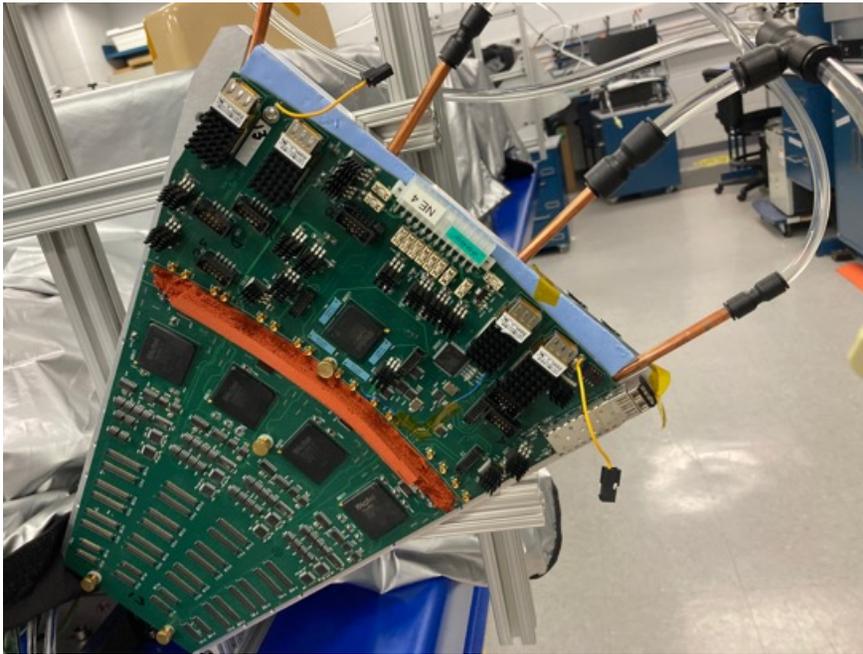
- Total 24 Beam clock cables have been delivered on Sept. 29<sup>th</sup>.
- They haven't been tested. Since there is no new BCB in Japan (all in BNL by now), we cannot test these cables in RIKEN.
- Itaru will hand carry cables to BNL on October 3<sup>rd</sup>.
- These cables are to be tested in BNL using new BCB.

# Beam Clock Cable



The production beam clock cable was made of category 5 LAN cable. The prototype 6e appeared to be too stiff to bend within 20 cm length.

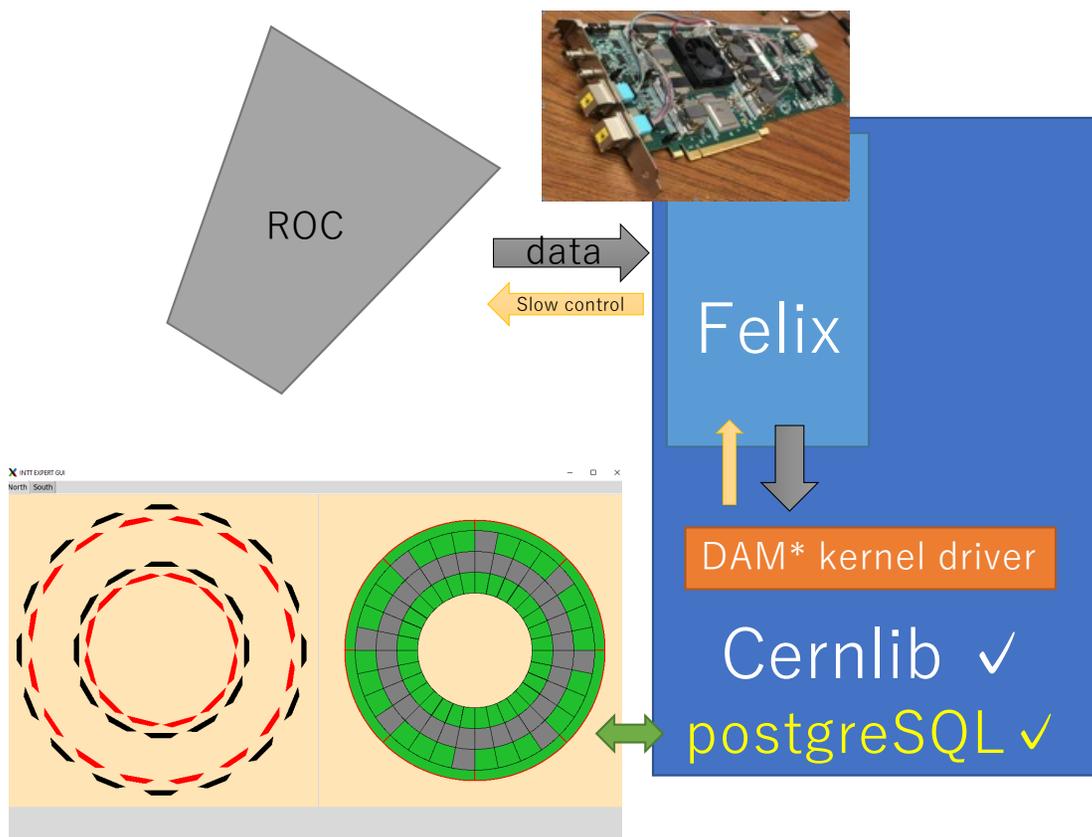
# Beam Clock Cabling



We'll make sure the connector on the ROC side won't pop-up or becomes loose due to the stress of 180 degrees bending of the cable. The connector doesn't have a lock feature.

# Plan for October in BNL

# Load map Towards 1008 DAQ Configuration



My proposal is to Install postgreSQL to Felix server-2 as well as cern-library as a transition to Felix base data acquisition.

We need a volunteer to install postgreSQL.  
-> **Thanks to Genki!**

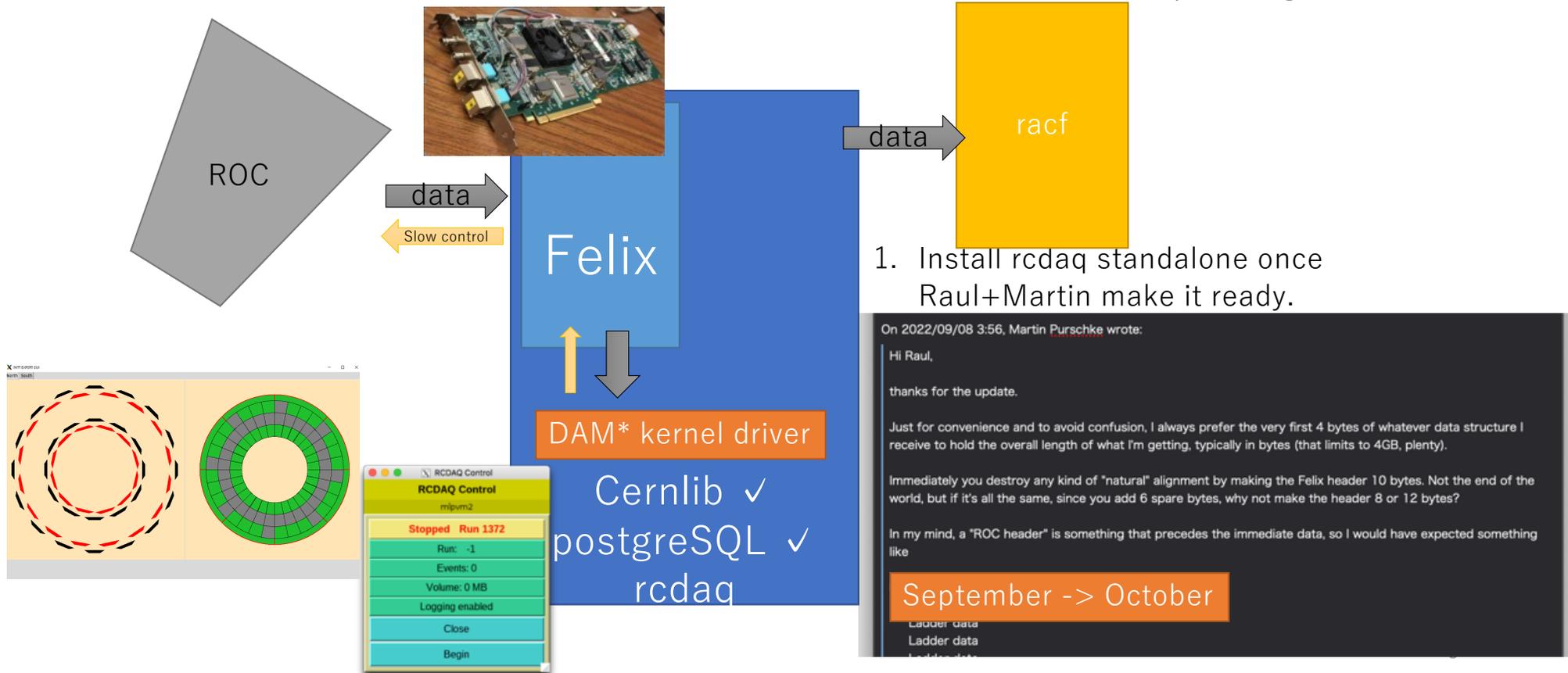
The next step is to analyze data locally in 2<sup>nd</sup> Felix server until RCDAQ is ready for testing. We need to cumulate experiences to take data with Felix DAQ system even before rcdaq becomes operational.

- Python data format
- Converter to text
- Text to root tree
- Calibration plot from root tree



# Load map Towards 1008 DAQ Configuration

Raul+Martin is now started optimizing the data format.

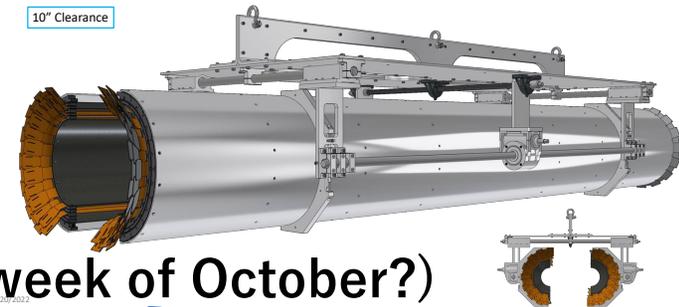


# October Plan in BNL

## • **Barrel Clamshell Engineering Test (~ 2<sup>nd</sup> or 3<sup>rd</sup> week of October?)**

- Fix network environment of 2<sup>nd</sup> Felix Server ✓
- postgres-SQL install on 2<sup>nd</sup> Felix ✓
- Setup analysis environment in 2<sup>nd</sup> Felix
- 2<sup>nd</sup> Felix DAQ test and feedback to Raul
- Slow control function tests before implementation to the Expert GUI
- SC-FPGA download to ROC
- Windows-10 upgrade from Windows-7 (is this worthy?)
- Establish calibration database (Joseph+....) -> what's needed for this (Takashi's discussion)
- Continue debugging ROC Fiber Latch Issue (Itaru + John Kuczewski)
- Debug noisy issue of Taiwan Ladder on the barrel (Cheng-Wei)
- Assist LV control system development with NWU (Mai + onsite crew)
- Etc

## • **Multiple ladder readout test after barrel closure test with production conversion cables. (4<sup>th</sup> Week of October ~ ?)**



Felix Activities

# Can we keep Felix-DAQ in the Silicon Lab during sPHENIX operation period?

On 2022/09/30 3:52, Huang, Jin wrote:

Dear Itaru and Tom

Thanks for your persistence and story 😊

Well, I would suspect we ever reach a stage with FELIX card idling in cabinets during the run: **early on, sPHENIX made the decision to run FELIX production with very low spare: 38 installed and 6 spares.** And from the production so far, I see 5 boards need some nontrivial fix. **And during the run, these few spare cards may be in constant cycles of fixing, testing and swapping with 1008 cards, like the life of the FVTX FEM cards in PHENIX days.** That is why I was suggesting if possible use the FVTX test stand at 510 for INTT lab.

**Nonetheless, I understand you would want to use a FELIX for test stand. And I recharacterized the FELIX card you are using in 510 as a spare in our FELIX board tracker. And let's will use 8 new cards for INTT installation.**

**And please note there is real chance that we would need this board from the INTT lab during the installation and Run23, given we are rather close to the edge of FELIX spares.**

PS: and follow Tom's story, after the sPHENIX runs, we will have a cabinet of FELIX cards. It would be of course too late for INTT test stand. But it would be a good resource for stealing for e.g. EIC work. Hope we have a new generation of "Julia" realizing that.

Cheers,

Jin

Conclusion: Yes, we can keep the Felix DAQ in the silicon lab, but we still need to keep Windows-base DAQ as a back up. Do we still want to upgrade to Windows-10?