

# Run plan an others

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# Operations for next week

## Temperatures from DCS

FR

Filippo Resnati

NP04 cooldown and fill

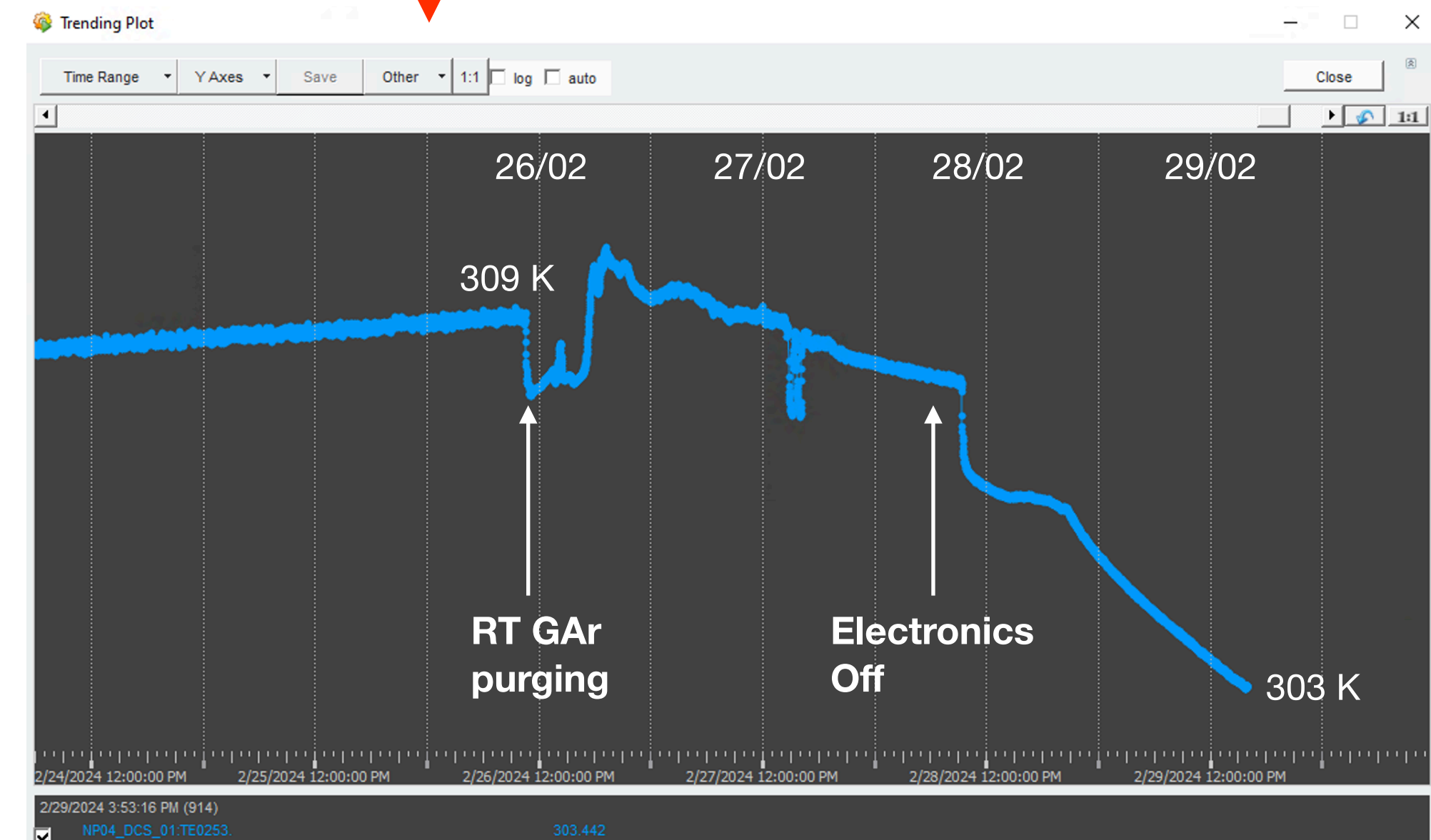
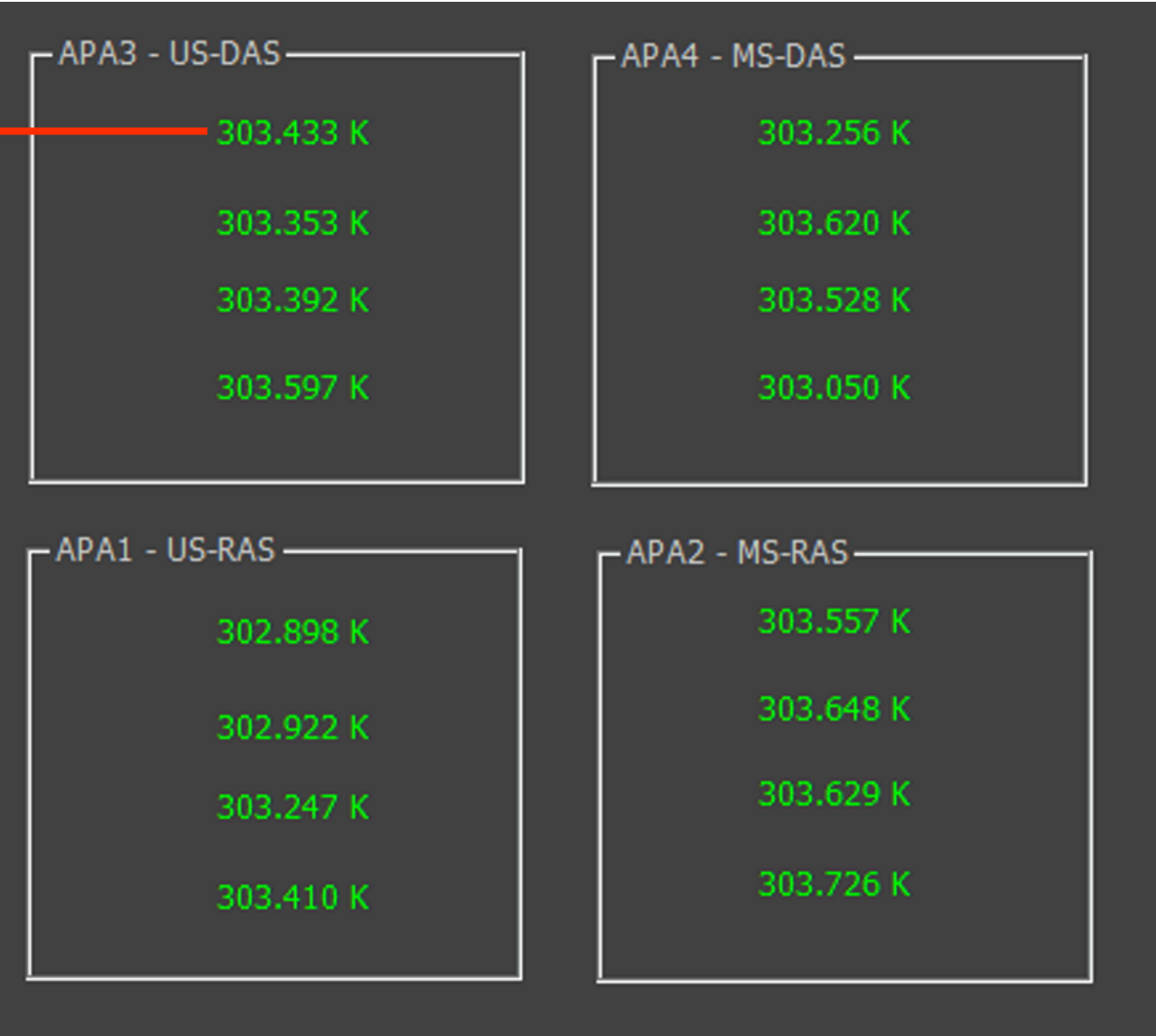
To: CENF-NP04-II (NP04-II team)

Dear all,  
NP04 is being purged with argon gas at room temperature at a rate of about 35 g/s. This situation will continue till Monday. On the week of the 4th of March, we'll receive five trucks of LAr. From the week after we'll receive 7 deliveries/week. With no surprises, we expect to start the cooldown of NP04 in the morning of Tuesday 5th of March.  
Best regards,

Filippo

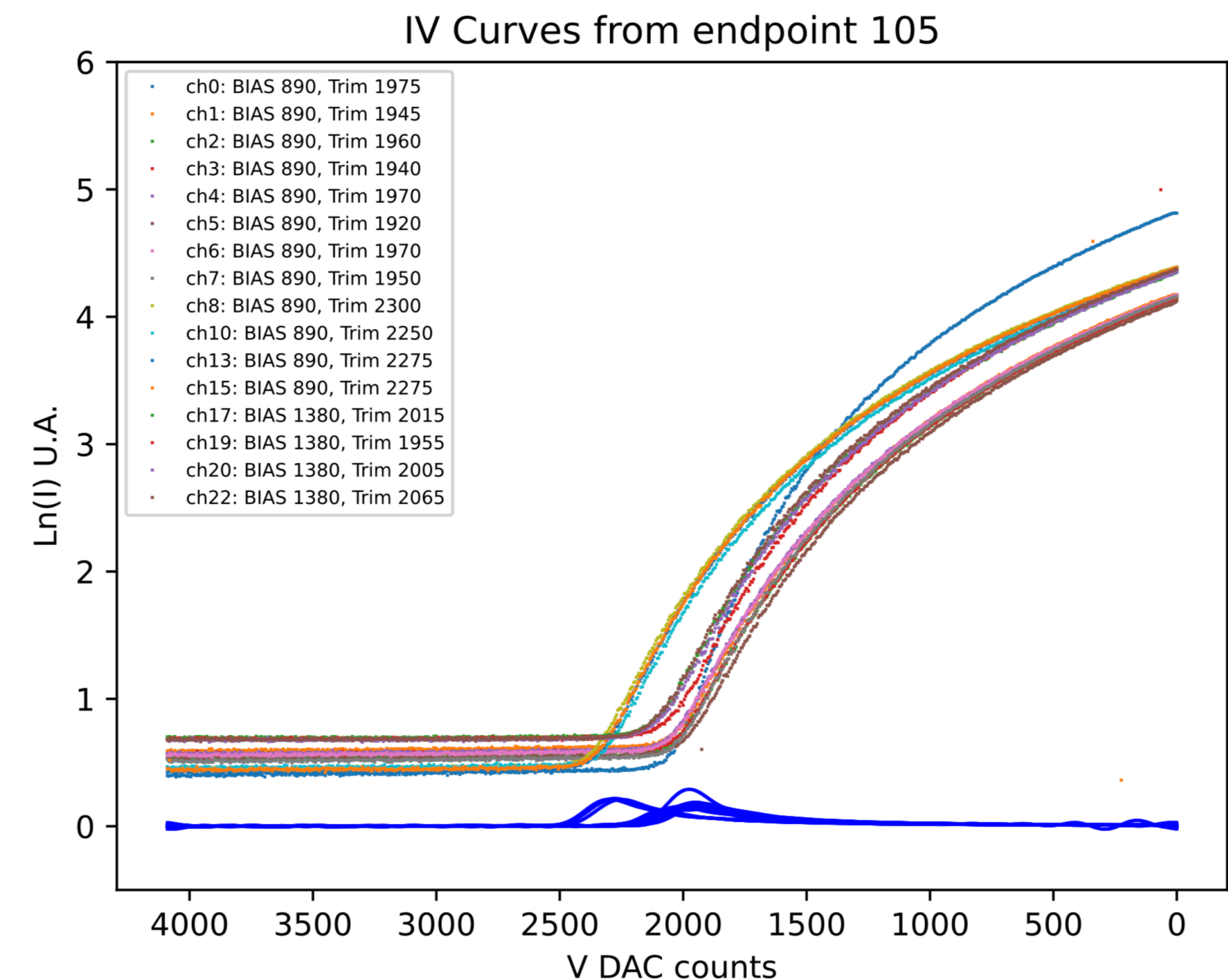
- In principle cooldown will start next Tuesday
- Purging rate with Room Temperature GAr increased last Monday (26/02)
- Electronics was powered off yesterday
- We plan to scintillation data with GAr in the next few days in order to start testing the full machinery

Inbox - Exchange



# IV curves

- Manuel working on it, with some help from Federico and Renan
- All IV curves at room-T recorded daily and  $V_{bd}$  computed. Data saved for posterior analysis refinement
  - Motivation is to check stability and small variations with temperature
  - Need PDS space at CERN eos to save this data
- **IV curves during cooldown and filling:** working in the preparation of the code for large temperature variations (large gradients in the same AFE)
  - Must be ready next Tuesday, before cooldown starts





# Various things

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- **Calibration trigger (aka 0x7 or TI command):** implementation in Daphne firmware completed by Carlos. Discussions with TI people about where to find the 0x7 word
- **Integration with DAQ:** We were able to setup the DAQ environment in the DAQ machines to develop our code and test it. Manuel has a proto-implementation of the main functions. Waiting for DAQ OK for integration
- **Online monitoring:** ongoing discussions with West (DAQ) for integration of PDS plots in the DAQ DQM
- **Slow controls:** Since no access to SiPM current, bias voltages, temperature, etc. will be available from the NP04 DCS (only DAPHNE power control), we will do it via spy buffers in DAPHNE. Scripts written by Manuel. Working on a friendly user interface.

# Practical info

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- Link to the NP04 PDS data taking docs. Please indicate your presence at CERN in the first tab. Tasks will be distributed soon.

<https://docs.google.com/spreadsheets/d/14fpCjNZFnyq72wugfSGXdAcTrgFroA1Al2In7VeyZIY/edit?usp=sharing>

- **Shifts:** waiting for overall NP04 run coordinator appointment to understand general NP04 vs PDS-only shifts
- **Housing** (from Eric James): some, limited resources to help support long stays. This support is just monetary. We don't have specific housing options available to us that we can assign to people.

# Run plan

- Preliminary run plan available with description of the different configurations

<https://docs.google.com/document/d/1mQsr1uxxwAuwMQ7IffBRHQ15HBT72zaVZ70qr7zIAzQ/edit?usp=sharing>

(credits: M. Arroyave, D. Christian, F. Terranova, D. Warner, A. Minotti, A. Cervera)

- Thanks to those that made comments. Please continue making comments, this is an evolving document
- A summary with the relevant information was sent last Friday to DAQ group. No feedback yet (Alessandro Thea is on vacation)

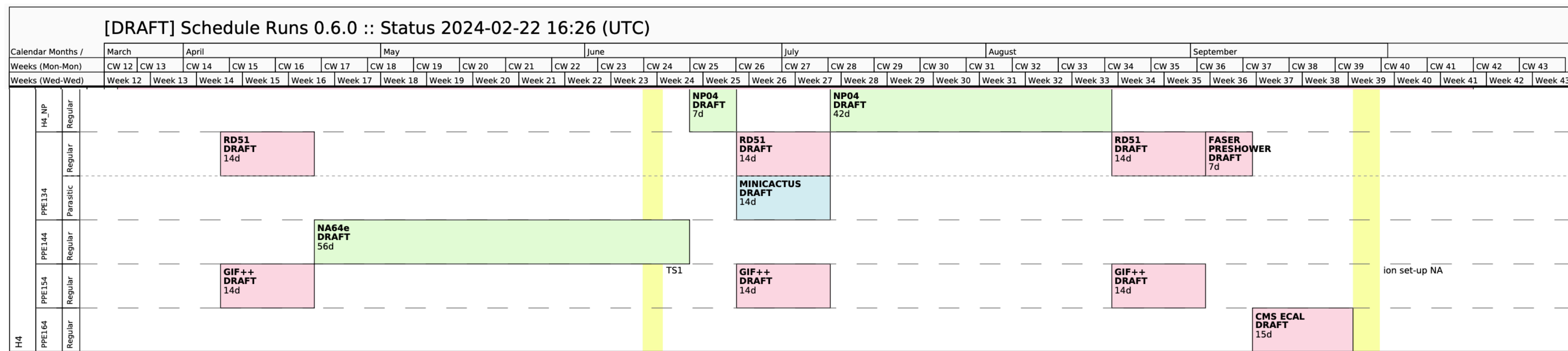
		February			March			April			May			June			
		purging			cool filling			purification			regular operation						
<b>Study</b>	<b>trigger</b>																
IV curves and Vbd	none				d	d	d	d	d	d							
Test data in GAR	self																
DCR	TI				d	d	d	d	d	d							
Light yield vs pur.	self										d	d	d	d			
Gain calibration	TI													w	w	w	w
Self-trigger efficiency	TI+self																
Light yield map with laser	self												?		?		
Physics	self																

d=daily, w=weekly, TI=Timing interface command

# Preliminary beam period allocated

- Available in the NP04 PDS spreadsheet (under useful links)
- One week in June + 6 weeks from July to mid August

## Small portion of the document



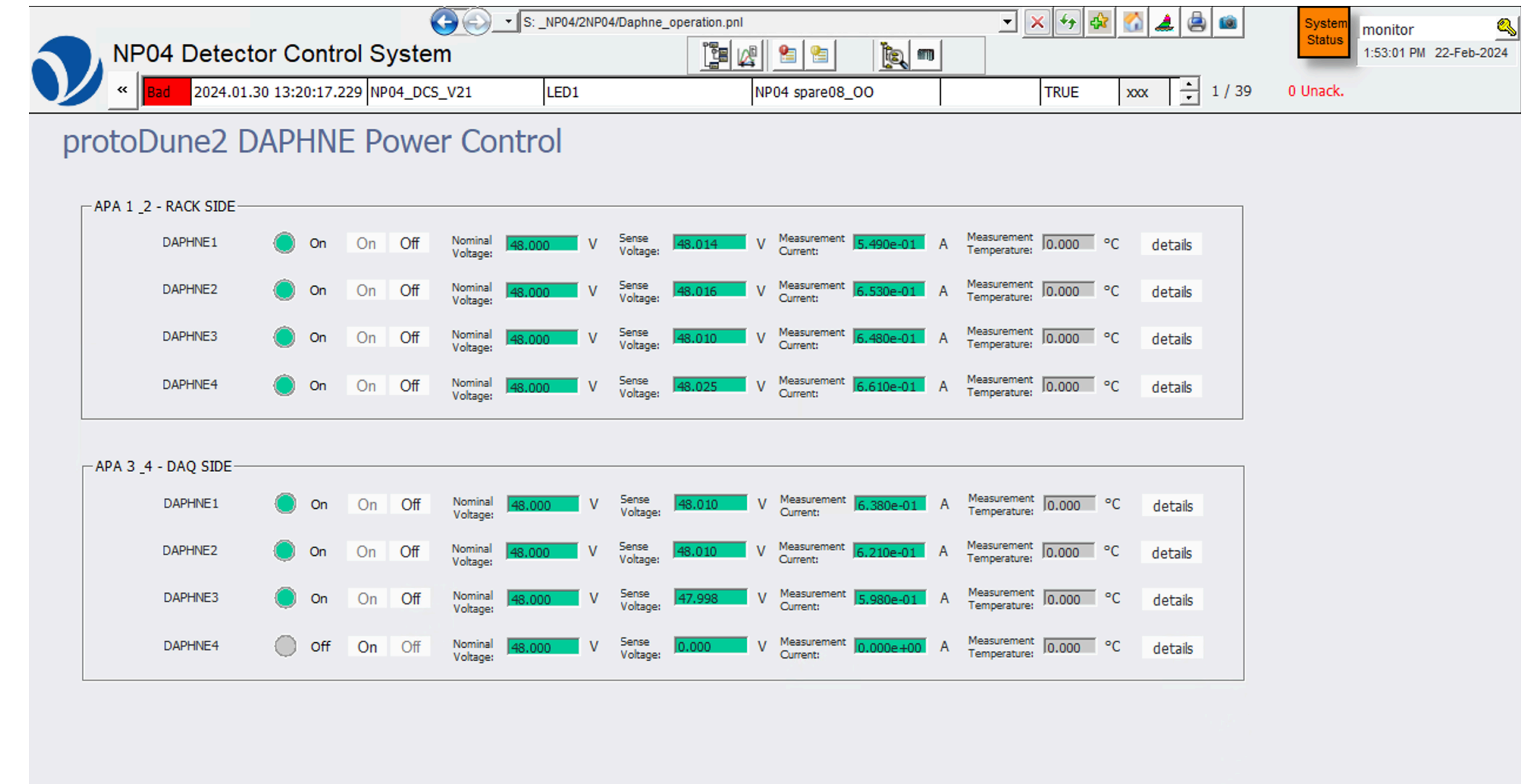
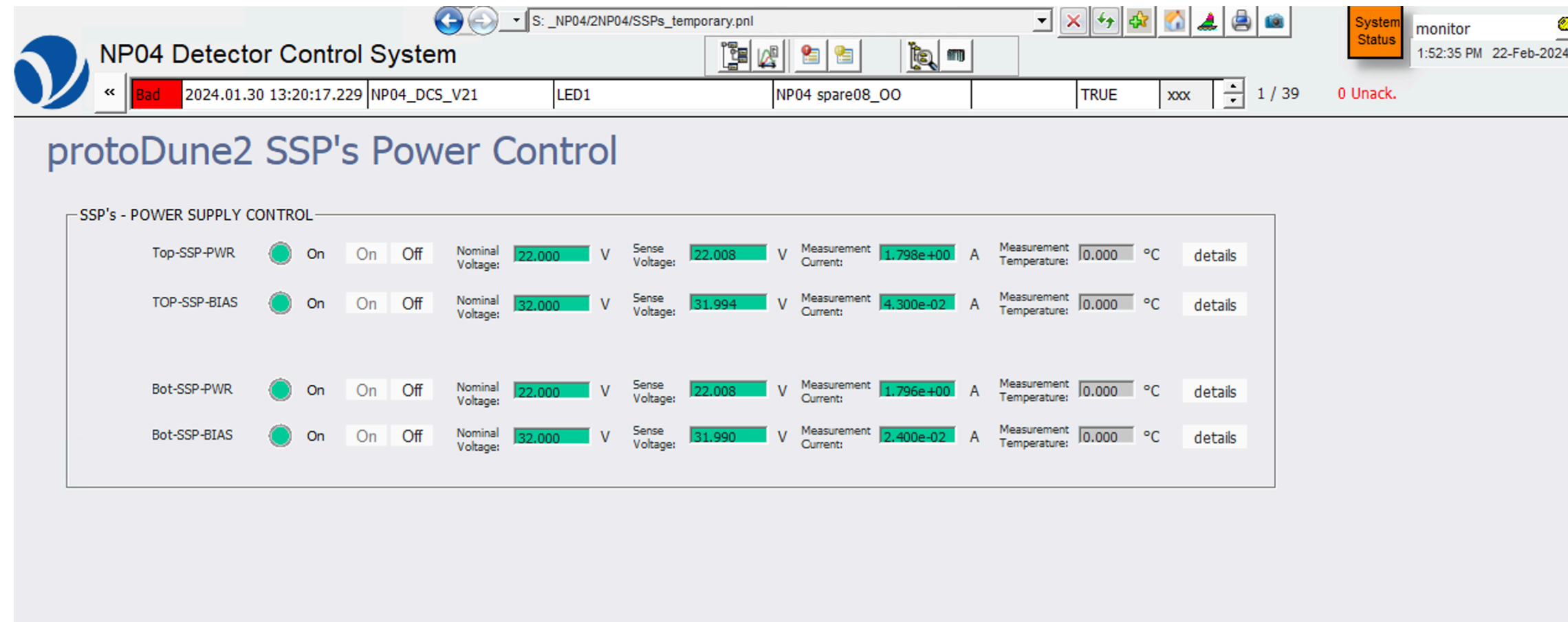
Backup

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# Slow controls I

- Currently available through DCS: power control for DAPHNE and calibration module



- No hardware interlock for purity monitors (PrMs) possible at this moment, instead a button indicating powered SiPMs will be added to the DAPHNE power control panel. Current PDS expert should manually take care of this button, which will prevent PrM operation. Ongoing discussions with Jianming and Xavier

# Slow controls II

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- Not possible at this point to monitor through DCS additional quantities:
  - SiPM bias voltage and current
  - DAPHNE temperatures
  - DAPHNE-DAQ synchronisation
  - ...
- This will be done through online monitoring using DAPHNE spy buffers
  - Scripts available (Manuel)
  - Working on a user friendly interface