

Preparation for Dry Run and Engineering Run 2024

Peter Gerhard, Hanno Hüther

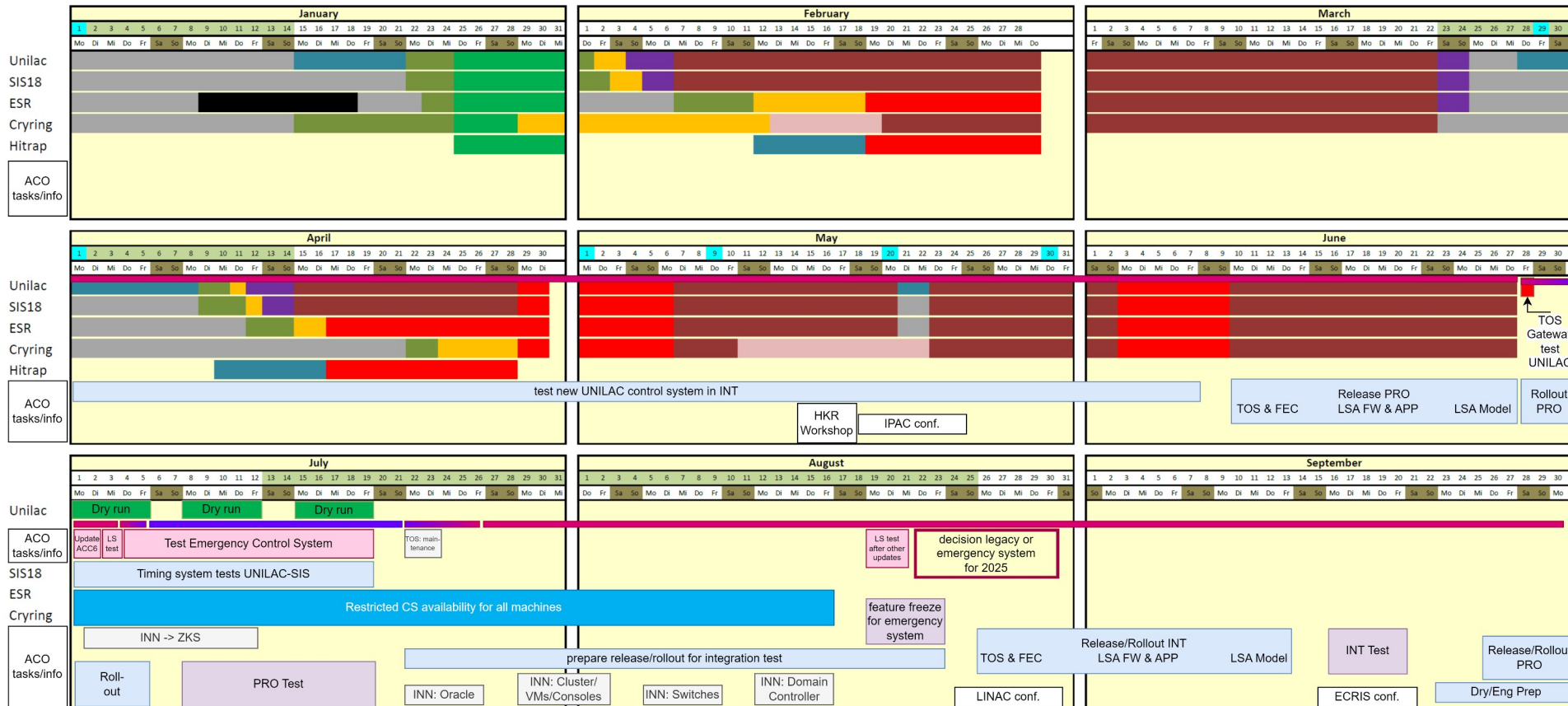
Overview 2024



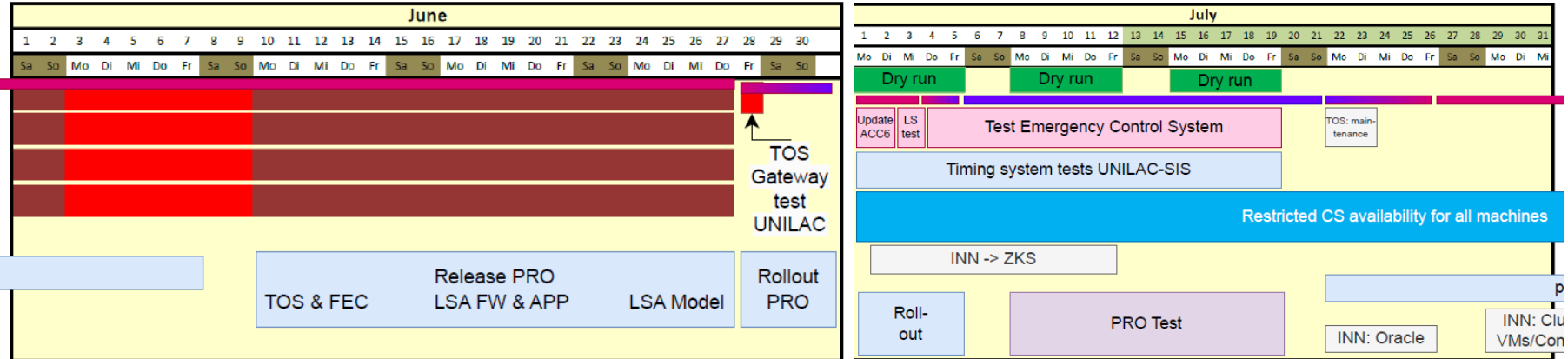
General Plan of Accelerator Operations 2024

General Plan of Acc Ops
status 20.12.2023

status ACO-planning: 22.04.2024



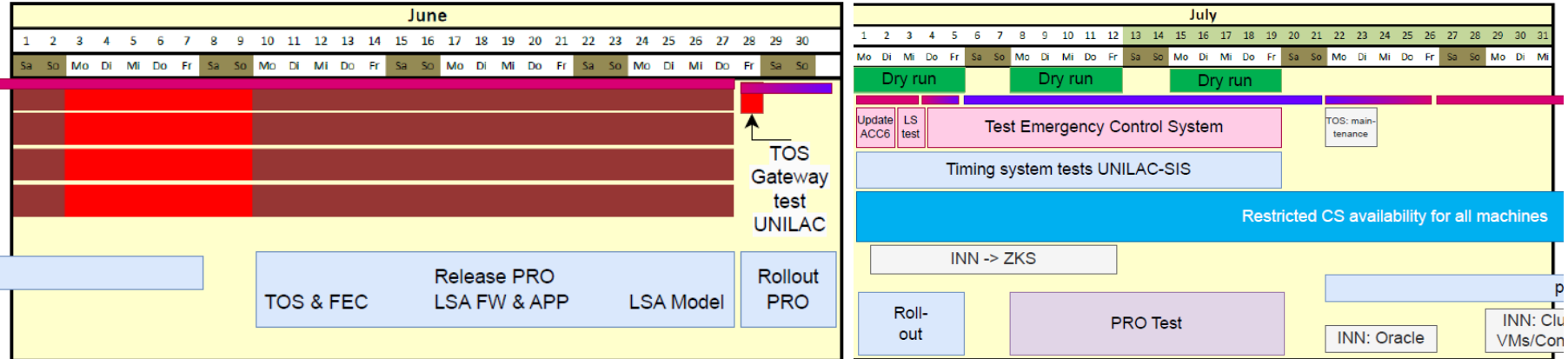
Dry Run 24_2 (2024-07-01 to 2024-07-24)



excerpt from ICU Project Test and Release Plan

- Preparation status: Still in rough planning
- Proposal for detailed planning to be prepared by Peter & Hanno until meeting with stakeholders on the topic

Dry Run 24_2: Major Phases



excerpt from ICU Project Test and Release Plan

- Timing Gateway tests with beam
- Update acc6 & legacy system test
- Tests with development/prototype state of new control system

RF:

- From July 1st all RF devices online (interface available for CS, no problem if some are unavailable), but power switched off.
- From July 15th (Monday 3rd week) minimum one RF device of each type in each timing section available for operation with power amplifier at low setting (3V).

Magnets:

- All magnets available where possible (no problem if some are unavailable). It would be ok to have them turned off (but interface available for CS) and turn them on for set/actual comparison, minimum one of each type and selected devices.

Choppers, beam diagnostics, vacuum, sources, strippers

- More detailed device availability requirements depend on testing activity in contributing groups and development progress
 - To be clarified during further dry run planning (next session: 2024-05-29)
 - To be discussed with respective departments
- In general, at least a few devices of each type along UNILAC should be made available for testing
- Some individual devices should be explicitly available for testing, e.g.
 - Sweeper Magnets TK2MW1, TK3MW2
 - Choppers UN3BC1L, UH2BC1L

The ICU Working Group aims to provide and test:

- Making multiple Chains & Patterns resident
- Supplying settings for various magnet and RF devices (including LEPT magnets, MAZ and Phasenvorschub)
- Executing prototype chain timing (i.e. timing for Virtual Accelerators) and checking device functionality
- Pattern timing / Chain scheduling prototype (e.g. defining Untersetzung and checking VA sequence)

The ICU Working Group aims to provide and test:

- Shortened pulses, no beam and profile grid protection timing and switching between these operation modes
- Transfer channel preparation / MAGN_DOWN
- Non-interruptive trims and non-interruptive changes to Pattern timing (e.g. Untersetzung)
- ...and more

For these tests, various contributions from subprojects are required. Amongst others:

- Device Access models adapted for LSA compatibility
- Data Master UNILAC
- WR-2-MIL-Gateways
- 50 Hz synchronization of Data Master
- Emergency App Prototype
- Scheduling App for UNILAC

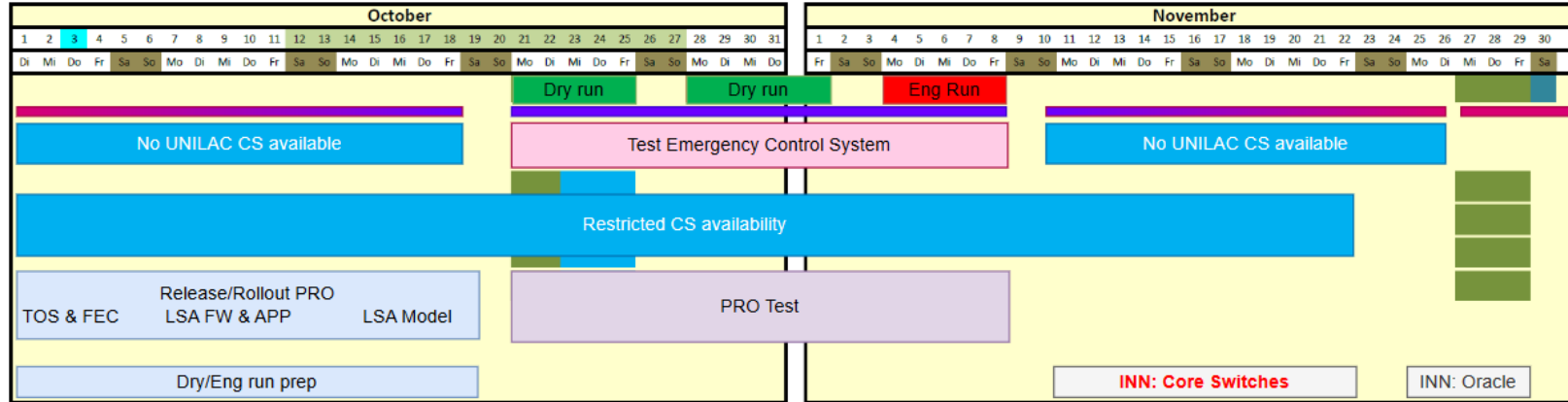
Various stakeholders are already planning tests, others may still join if they have testing needs and/or can build upon the planned feature set:

- APP (device interfaces, various applications)
- BEA? (new MAPS?)
- OPE (Potiboard, Sequencer?)
- SER? (BTM, Archiving?)

Currently planned as next steps for dry run preparation:

- Detailed planning (in preparation, to be discussed in ICU JF on 2024-05-29, 13:30 to 15:30)
- Discussion of open issues regarding Rahmen-/Klemmpulse for MAPS testing (any other stakeholders?)
- Clarification of organizational matters and documentation (ACO Lead Team meeting)
- Suggestions and issue reports welcome!

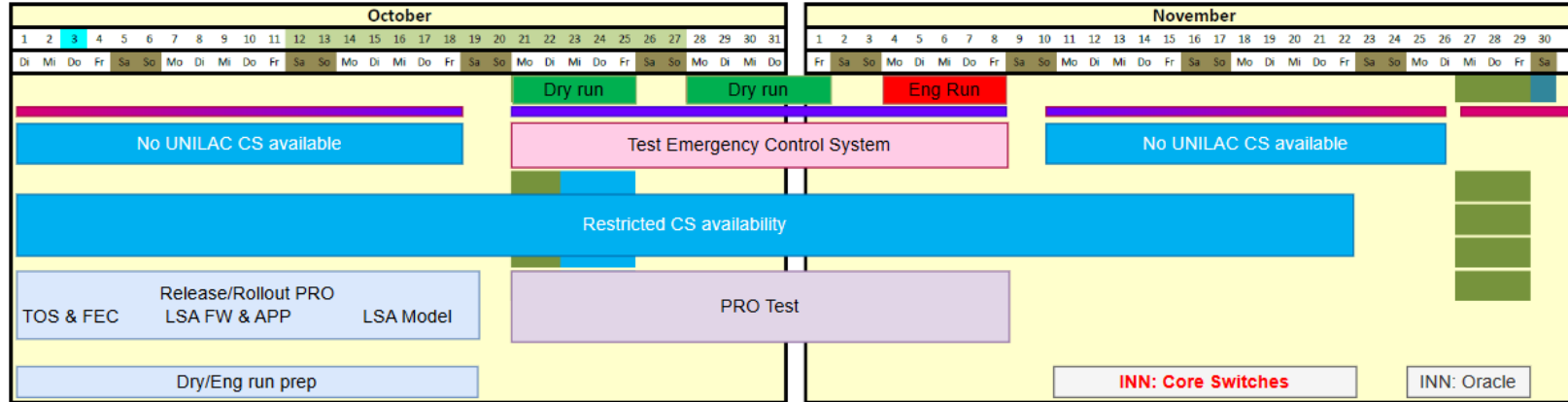
Outlook: Engineering Run



excerpt from ICU Project Test and Release Plan

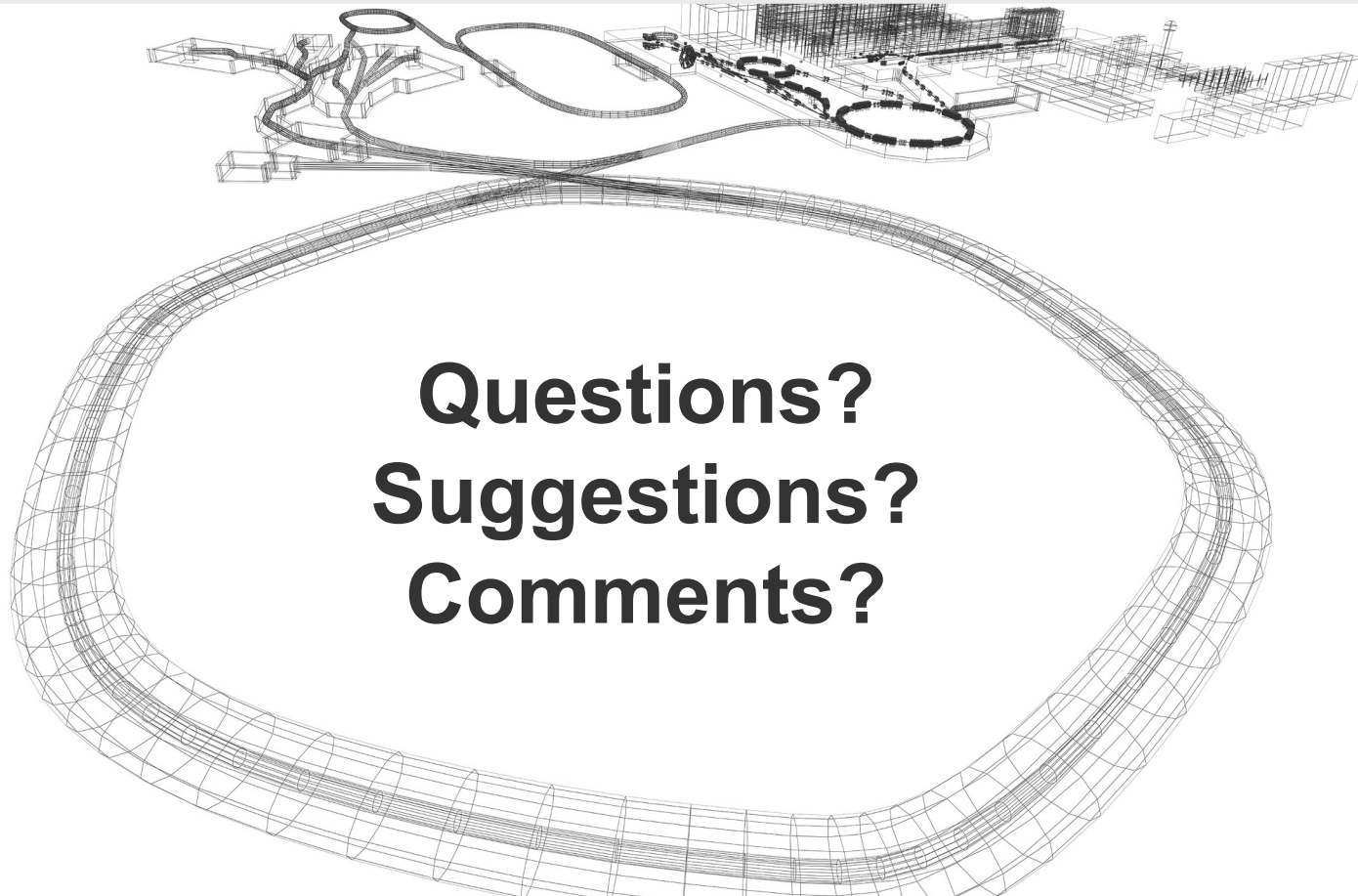
- Primary goal: Test feature set for (hopefully not required) emergency system operation
- Requested from OPE: Dry run from 2024-10-21 (2 weeks), Engineering Run with beam from 2024-01-11 (1 week)

Outlook: Engineering Run



excerpt from ICU Project Test and Release Plan

- Preparation status: Still being negotiated with OPE (currently only 2 weeks in **official annual schedule**)
- No beam transfer into SIS18 in 2024 due to excessive efforts that would be necessary for shielding, but promised for 2025



**Questions?
Suggestions?
Comments?**