



# Update from the Experimental Coordinator

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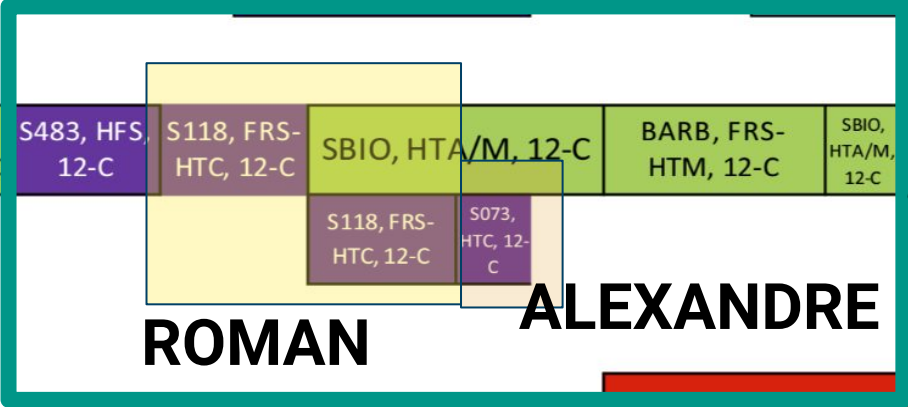
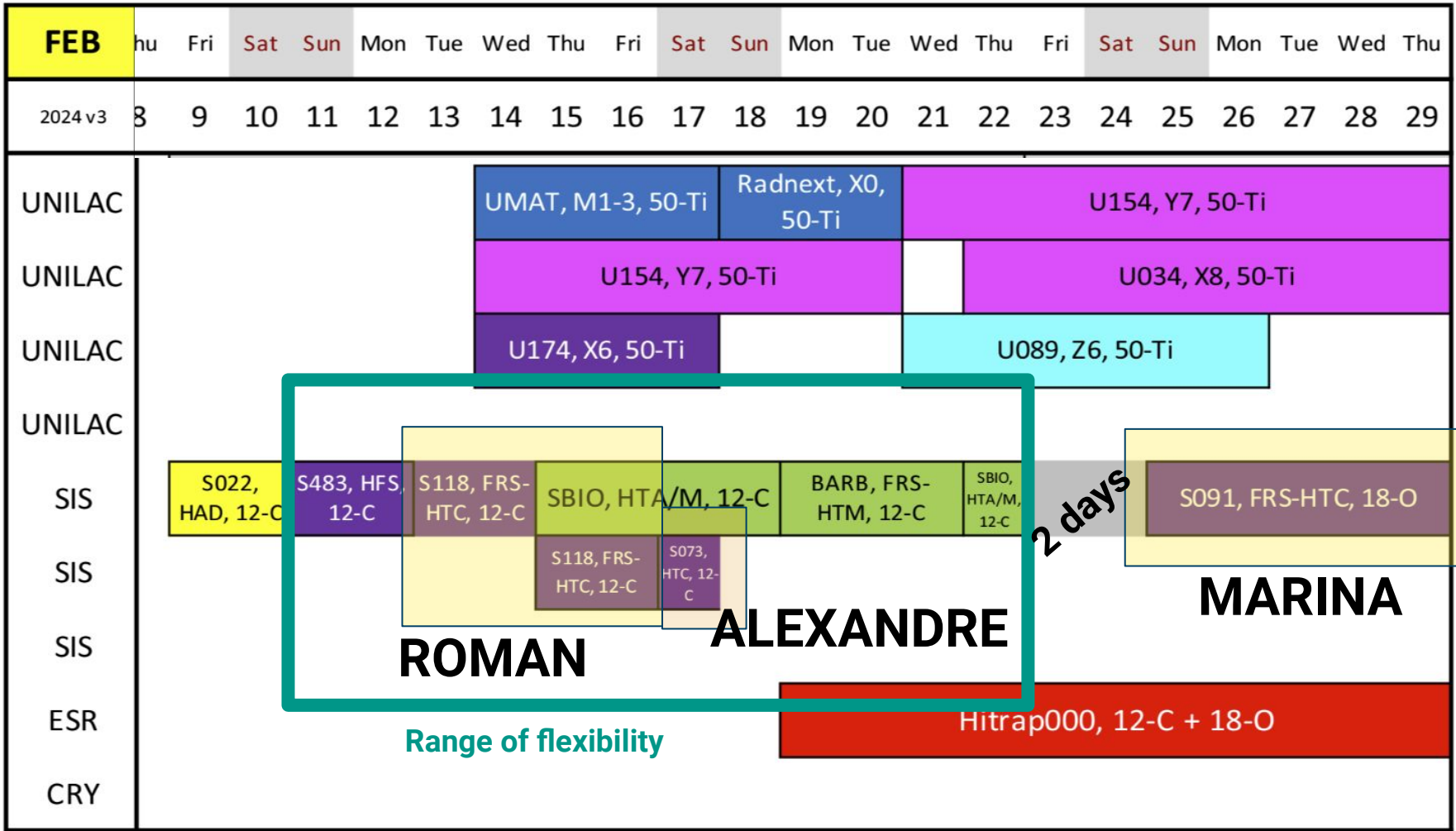
Andrea Jedele



# Information for next year's experiments

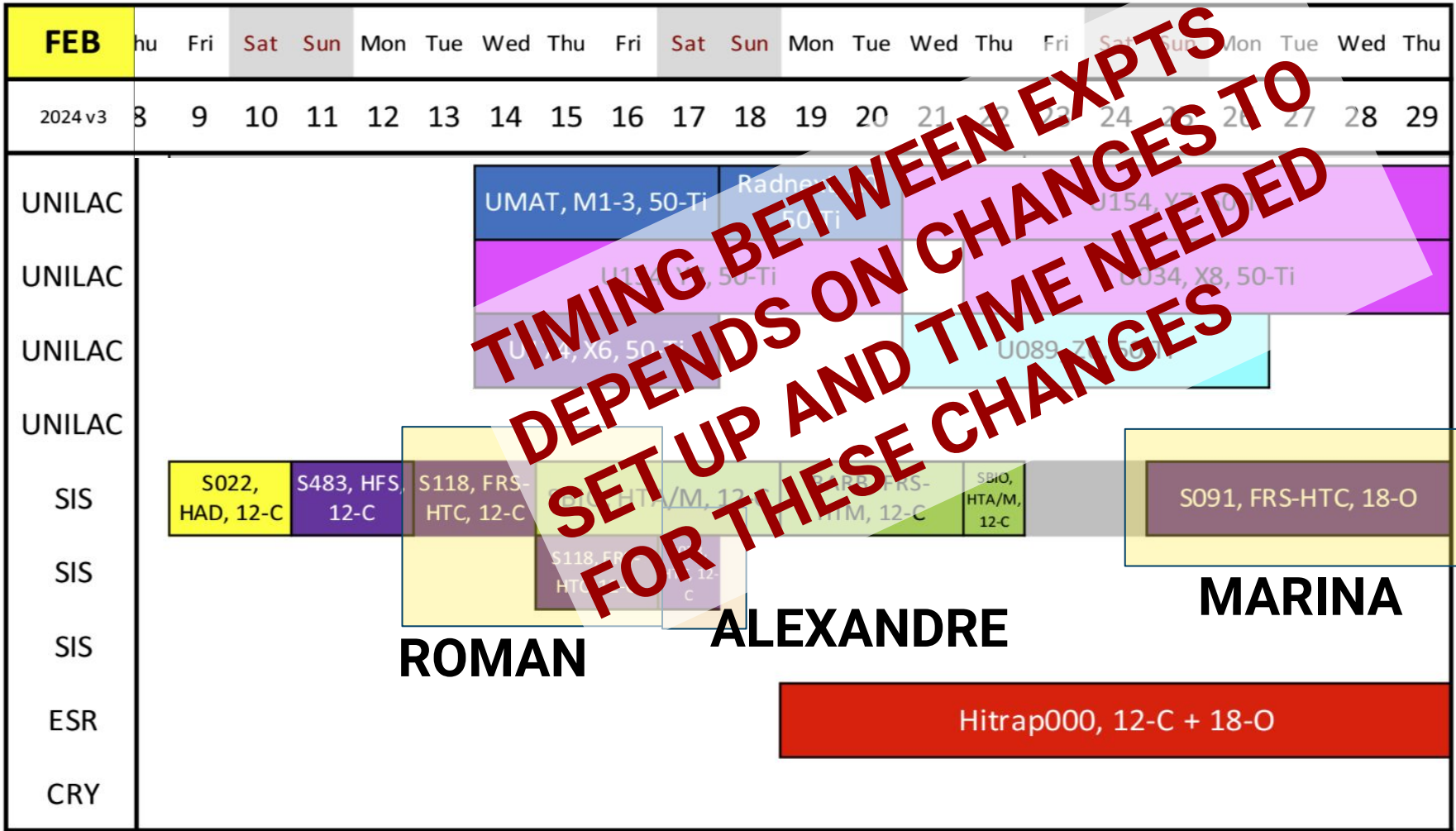
- Chiara -November 2023
  - Not 100% set
- Roman s118 - February 2024
  - Alexandre's test beam
    - **Details still in discussion!**
- Marina s091 - February 2024
  - 1 week later
- ASY-EOS test beam
  - Parasitic during HADES Au runs
- Alexandre s073 - February 2025

Different colors represent different experimental configurations



Range of flexibility

Hitrap000, 12-C + 18-O



What is the set-up for next  
year's experiments?



Need answer **now**

Sun	Mon	Tue	Wed	Thu
25	26	27	28	29
54, Y7, 50-Ti				
U034, X8, 50-Ti				
0-Ti				
S091, FRS-HTC, 18-O				
<b>MARINA</b>				
2-C + 18-O				

MAR	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun
2024 v3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
UNILAC				UMAT, X0, 197-Au														U110, X0, 197-Au						
UNILAC				UMAT, M1-3, 197-Au																				
UNILAC																								
UNILAC																								
SIS	S022, HAD, 197-Au																							
SIS	p-S110, HTD, 197-Au																							
SIS																								
ESR	E000, 197-Au								E025, ESR-CRY, 197-Au										CMAT, ESR-CRY					
CRY									E025, ESR-CRY, 197-Au										CMAT, ESR-CRY					

## ASY-EOS Parasitic

# Limited Time

- To assure ASY-EOS has appropriate length of time to run need to know following:
  - What is the set-up for parasitic beam?
    - How much time does it take to set-up?
  - What needs to be removed from beam line?
  - What calibrations need to be performed after the experiment?
    - How long do the calibrations take?

	Sun	Mon	Tue	Wed	Thu
	25	26	27	28	29
	S091, FRS-HTC, 18-O				

<b>MAR</b>	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun							
2024 v3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
SIS		S022, HAD, 197-Au																						

# Resources for the Beam Times

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- To Do List:

[https://docs.google.com/spreadsheets/d/14tQyOr8yOldKCYvl-rN11UAcns3Mwv3q\\_0Xd4FWeRRE/edit#gid=0](https://docs.google.com/spreadsheets/d/14tQyOr8yOldKCYvl-rN11UAcns3Mwv3q_0Xd4FWeRRE/edit#gid=0)

- Wiki pages:

- <https://wiki.r3b-nustar.de/experiments/commissioning/overview>
- <https://wiki.r3b-nustar.de/experiments/s091/overview>
- <https://wiki.r3b-nustar.de/experiments/HYDRA/overview>
- <https://wiki.r3b-nustar.de/experiments/ASY-EOSII/overview>

- Elogs:

- <https://elog.gsi.de/land/S118/>
- <https://elog.gsi.de/land/S091/>
- <https://elog.gsi.de/land/S073/>



# Current Points of Emphasis

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- Start detector
  - Current LOS too thin
- Position of FOOT + ALPIDE
  - Greater coverage of forward angles
  - Still being optimized using simulations and input from Enrique and Daniel
    - Needs to be decided ASAP
- Detectors between target and GLAD
  - Roman needs FOOT
  - Marina needs alternative (MUSIC + MWPC)

# Other major changes

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- CALIFA
  - Removed - currently in preparation room
  - Problematic crystals removed - being diagnosed
  - New cabling for Wixhausen part of barrel
  - Addition of CEPA
  - Reinstall in September
- NeuLAND
  - 2 additional double-planes
- TOFD
  - New cabling schematic proposed
  - Mechanics exist
  - Cable connectors need to be added and tested
- ALPIDE
  - Testing and development of new tracking Si detectors
  - Tested with FOOT is Jülich (July 2023)

# Now it time to start assembling 'teams'!

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- DAQ:
  - Who will write the unpacker?
  - Who will assist in the lab?
- Detectors:
  - Who will test/operate each detector?
    - Point of emphasis is tracking detectors!
  - Need to be able to start 4-6 months ahead of experiment
    - Depending on detector and number of people
- Online analysis tools

# Over-arching point: R3BRoot

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## Implementation of clang-tidy and clang-format in R3BRoot

- Advantages:
  - Uniform coding standards
  - Code less likely to have compilation errors
  - Less likely to be rewritten due to structural/coding issues
    - Less likely to introduce experiment specific errors
  - Less ambiguous
- Disadvantages:
  - Requires minimum standard of coding
    - Is this realistic for our students and standard users?
      - (What is a 'user' vs 'developer'?)
  - Discourage people to commit code if too many errors and above skill level
  - Maintenance? Especially long-term
  - Education/Documentation

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Philipp's suggestion: Only add to clang-tidy what we teaches the collaboration (for example, dynamic casting)

# Summary

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- Very tight beam schedule for 2023!
- Would like set-up before target ready by Chiara's beam time
  - November
- Need finalized set-up **now** to ensure readiness for next year

# Set-up Schematic

