

# Training Reduction (Status)

MDP Meeting  
January 17, 2023

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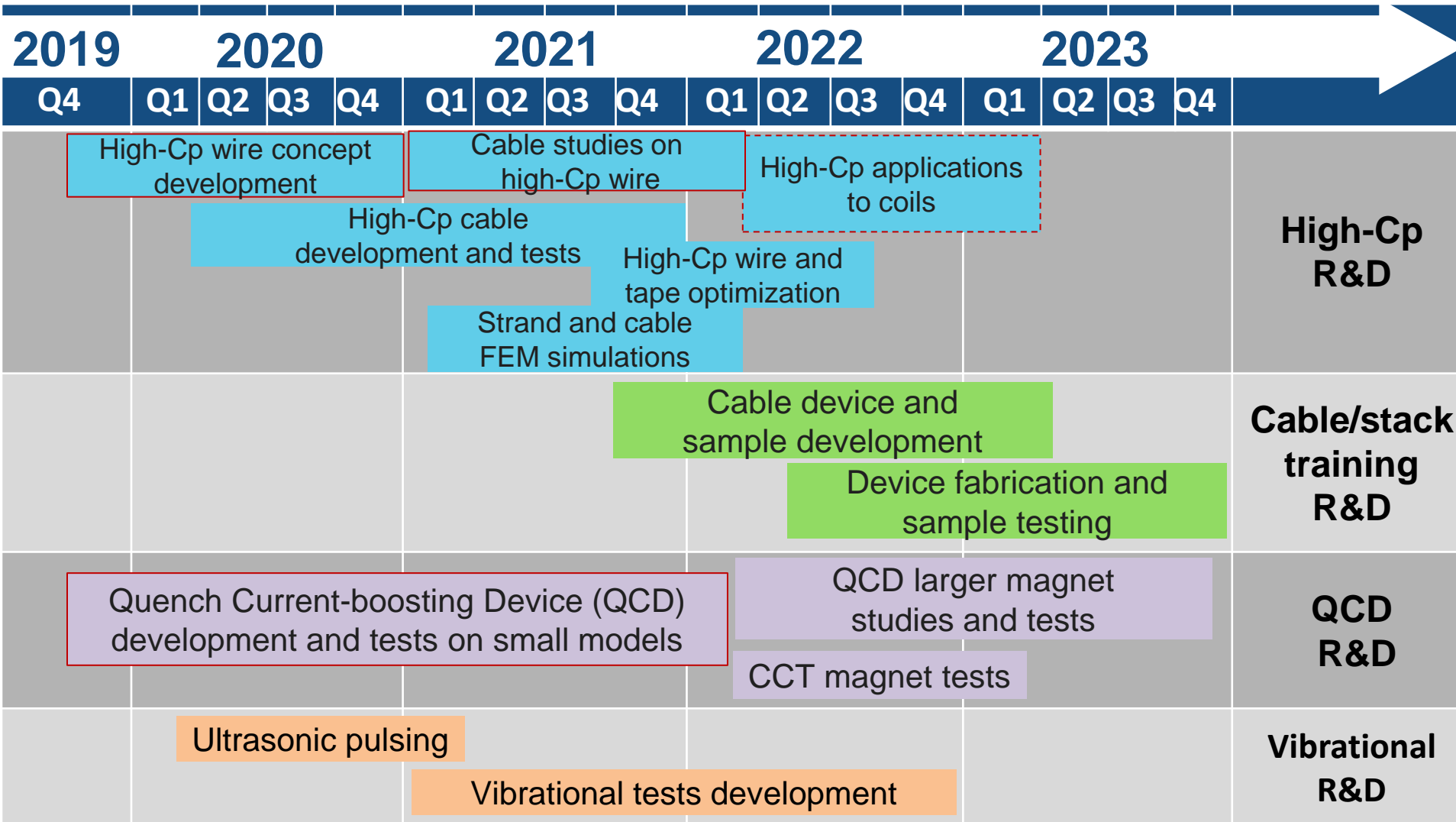
US Magnet Development Program

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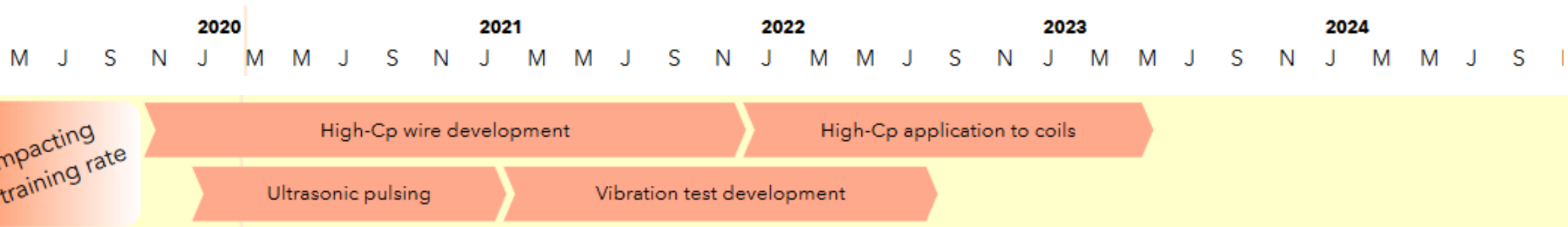
**US Magnet Development Program**

# Training reduction topics (as presented in 2020)



# Official training reduction roadmap

Roadmap as in the official document:



<https://science.osti.gov/hep/Community-Resources/Reports>  
MDP roadmap there

# Milestones

Milestone #	Description	Target		Updated Target	Requestor	Comments
AIIIe-M1	Commissioning of QCD		Done		S. Stoynev	
AIIIe-M2	First Ultrasound based test		Obsolete		S. Stoynev	It should be retired (removed), it is not a viable option anymore
AIIIe-M3	First high-Cp cable fabrication	n/a	In progress	n/a	E. Barzi	Target dates cannot be provided without allocated resources
AIIIe-M4	First magnet test with QCD		Done		S. Stoynev	
AIIIe-M5	Results from High-Cp cable studies	n/a	In progress	n/a	E. Barzi	Target dates cannot be provided without allocated resources
AIIIe-M6	Optimized strand and cable FEM simulations	n/a	Not started	n/a	E. Barzi	Target dates cannot be provided without allocated resources
AIIIe-M7	First CCT test with QCD	Feb-24	In progress	Apr-24	S. Stoynev	QCD testing depends on agreements with LBNL on the test plan, the CCT magnet is at FNAL; timing depends on facility availability
AIIIe-M8	High-Cp wire and tape optimized versions		Obsolete		S. Stoynev	We have split this milestone (in 2022)
AIIIe-M8a	High-Cp wire optimized versions	n/a	In progress	n/a	X. Xu	Schedule is hard to predict
AIIIe-M8b	High-Cp tape optimized versions	n/a	In progress	n/a	E. Barzi	Target dates cannot be provided without allocated resources
AIIIe-M9	Fabrication of first coil with High-Cp conductor	n/a	Not started	n/a	X. Xu	Schedule is hard to predict as it involves many efforts from collaborators, e.g., cabling, coil fabrication, etc.
AIIIe-M10	Design of a dedicated device/technique using vibrational methods	Sep-24	In progress	Apr-25	S. Stoynev	Activities started but at minimum involvement of a junior engineer (low burn effort, when resources allow)
AIIIe-M11	Design of a "cable/stack" testing device and samples		Obsolete		S. Stoynev	See the new Milestone
AIIIe-M12	QCD preparations and test on a large magnet		Obsolete		S. Stoynev	It should be retired (removed), it is not a realistic option anymore
AIIIe-M13	Fabrication of a "cable/stack" testing device		Obsolete		S. Stoynev	See the new Milestone
AIIIe-M13a	Design and fabrication of a "cable/stack" testing device	Apr-25	Not started	Sep-25	S. Stoynev	No concrete agreements for support yet (the milestone will move next time if status remains)
*Status						
Done						
In progress						
Not started						
Obsolete						

**Non-trivial update (Xingchen): The large billet for making long high-Cp wires has been drawn to 1.3mm diameter without breakage. It is now on hold, waiting for CPRD evaluation.**

<https://science.osti.gov/hep/Community-Resources/Reports>  
MDP roadmap there

# Related activities

There are activities in the USA not among milestones in “Training Reduction” related to the “Training” topic

- Samples/magnets with TELENE impregnation (FNAL, Emanuela)
- Development of training “samples” (FNAL, Sasha et al.)
- Magnets with wax impregnation (LBNL)

I am probably missing more but those are what I am aware of

Just acknowledging such efforts are on going.

It is up to researchers to decide about the association of their efforts and formal goals.

# Session

1. Training Reduction Status | (Stoyan, 5+5 min)
2. (MQXFA) Magnet Training and CLIQ | (25 + 5 min)