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MuCol



# *Workshop on the Cooling Cell WP8*

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CERN

Funded by the European Union (EU). Views and opinions expressed are however those of the author only and do not necessarily reflect those of the EU or European Research Executive Agency (REA). Neither the EU nor the REA can be held responsible for them.





# Goal of the workshop

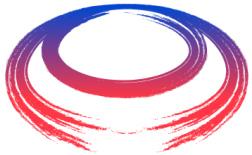
- The goal of WP8 is to produce a full 3D model of a Cooling Cell
- Within our roadmap we want to select the cell to be built, and identify as many issues as possible by the end of the first year
- This workshop prepares the discussions we will have at the annual meeting to endorse the main principle that will guide the design
- We want to hear about opinions, feedback from previous experiences (especially related to things to avoid...)



# Goal of the workshop

- Some of the questions we have

- Do we embed everything in a single cryostat, or do we put solenoids in separated cryostats?
- What is the experience from MAP and MICE?
- How do we manage the different ancillaries for the RF cells
- Do we design independent cells or multicell RF Structures?
- What type of Absorbers to use?
- Do we have Vacuum Windows that can stand the pulse energy?
- What specs we have for instrumentation, and what are the possibilities vs needs?



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# Terminology

- Absorber



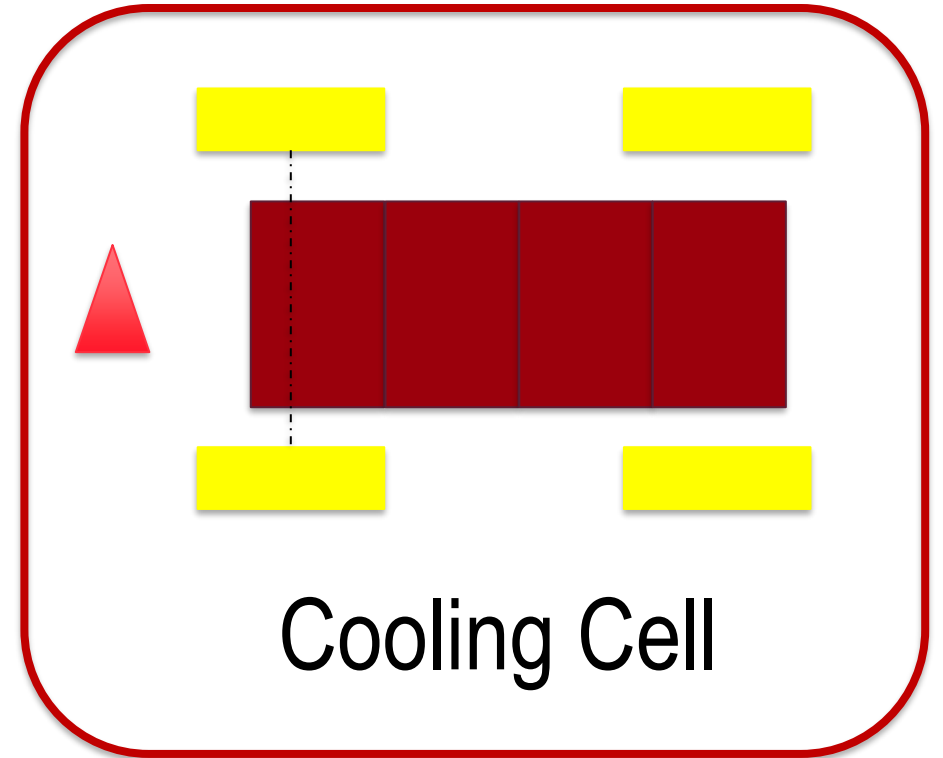
- RF Cell



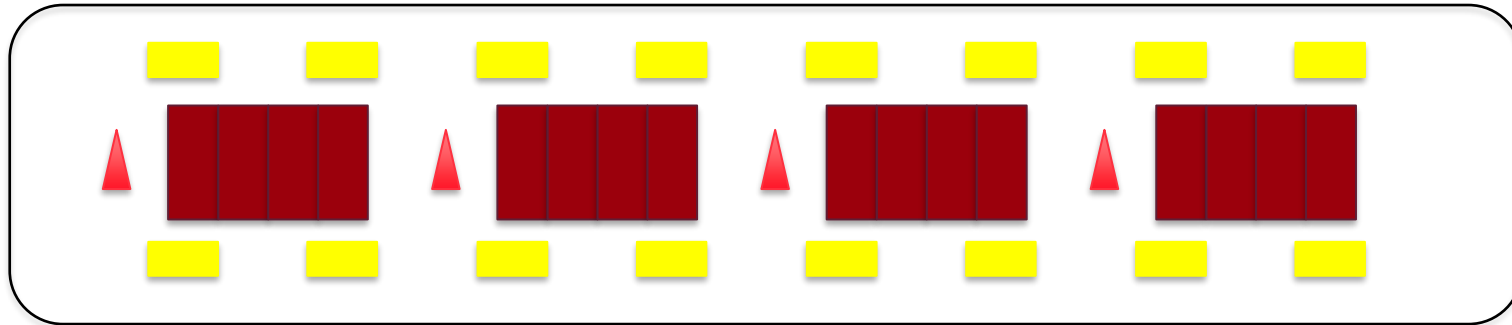
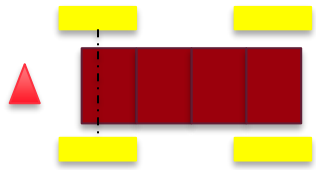
- RF Structure



- Solenoid



# Terminology



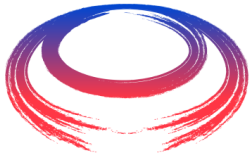
- Cooling Cell
- Cooling Module
- Cooling section

# Thursday Morning

	<b>Welcome</b>	
	<i>30/7-018 - Kjell Johnsen Auditorium, CERN</i>	09:30 - 09:45
	<b>Ionisation cooling and different types of cells</b>	<i>Chris Rogers</i> 
10:00	<i>30/7-018 - Kjell Johnsen Auditorium, CERN</i>	09:45 - 10:15
	<b>Magnets for RFMTF</b>	<i>Lucio Rossi et al.</i>
	<i>30/7-018 - Kjell Johnsen Auditorium, CERN</i>	10:15 - 10:45
	<b>3 GHZ RF for the RFMTF</b>	<i>Giorgio Sebastiano Mauro</i> 
11:00	<i>30/7-018 - Kjell Johnsen Auditorium, CERN</i>	10:45 - 11:15
	<b>Coffee break</b>	
	<i>30/7-018 - Kjell Johnsen Auditorium, CERN</i>	11:15 - 11:45
	<b>Status of 650 MHZ cavity design</b>	<i>Dario Augusto Giove</i> 
12:00	<i>30/7-018 - Kjell Johnsen Auditorium, CERN</i>	11:45 - 12:15
	<b>Status of 704 MHz cavity design</b>	<i>Carmelo Barbagallo</i> 
	<i>30/7-018 - Kjell Johnsen Auditorium, CERN</i>	12:15 - 12:45
	<b>Considerations on isolated RF cells or multicells</b>	<i>Alexej Grudiev</i>
13:00	<i>30/7-018 - Kjell Johnsen Auditorium, CERN</i>	12:45 - 13:15
	<b>Lunch</b>	

# Thursday afternoon

	30/7-018 - Kjell Johnsen Auditorium, CERN	13:15 - 14:30
	<b>Review of the experience on RF in magnetic fields</b>	Guillaume Ferrand et al.
	30/7-018 - Kjell Johnsen Auditorium, CERN	14:30 - 15:00
15:00	<b>Feedback from MICE: Magnets</b>	Bruce Strauss 
	30/7-018 - Kjell Johnsen Auditorium, CERN	15:00 - 15:30
	<b>Consideration about an Ionisation cooling demonstrator</b>	Mr Paul Bogdan Jurj
	30/7-018 - Kjell Johnsen Auditorium, CERN	15:30 - 16:00
16:00	<b>Coffee break</b>	
	30/7-018 - Kjell Johnsen Auditorium, CERN	16:00 - 16:30
	<b>US situation, feedback from MAP</b>	Diktys Stratakis
17:00	30/7-018 - Kjell Johnsen Auditorium, CERN	16:30 - 17:15



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# Friday Morning

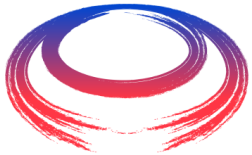
09:00	<b>Absorbers</b> <i>Rui Franqueira Ximenes</i> 30/7-018 - Kjell Johnsen Auditorium, CERN 09:00 - 09:30
	<b>Windows</b> <i>Dr Jose Antonio Ferreira Somoza</i> 30/7-018 - Kjell Johnsen Auditorium, CERN 09:30 - 10:00
10:00	<b>CERN Beam Instrumentation relevant to the Muon Collider Study</b> <i>Inaki Ortega Ruiz</i> 30/7-018 - Kjell Johnsen Auditorium, CERN 10:00 - 10:30
	<b>Coffee break</b> 30/7-018 - Kjell Johnsen Auditorium, CERN 10:30 - 11:00
11:00	<b>Discussion and conclusions</b> <i>Daniel Schulte et al.</i> 30/7-018 - Kjell Johnsen Auditorium, CERN 11:00 - 13:00
12:00	
13:00	





# General Considerations

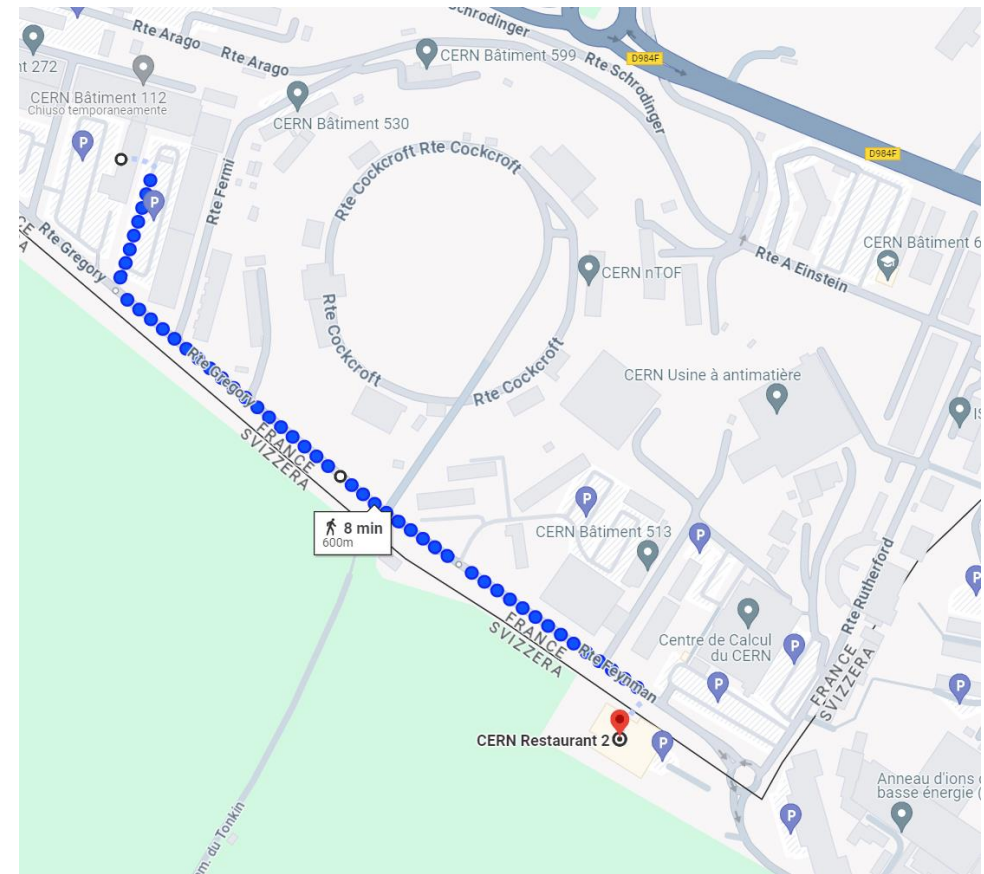
- We left plenty of time for discussions, let's use it to drill down on both strategic and detailed questions!
- We have left the last session completely available for brainstorming and discussion, if you think you have anything to present that is not already in the agenda let me know...

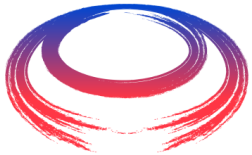


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# Practical information

- Caffeteria here provides cold dishes and a limited offer of warm
- Restaurant 2 is at walking distance (10 minutes)

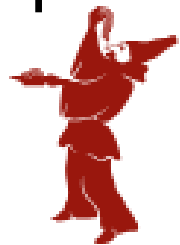




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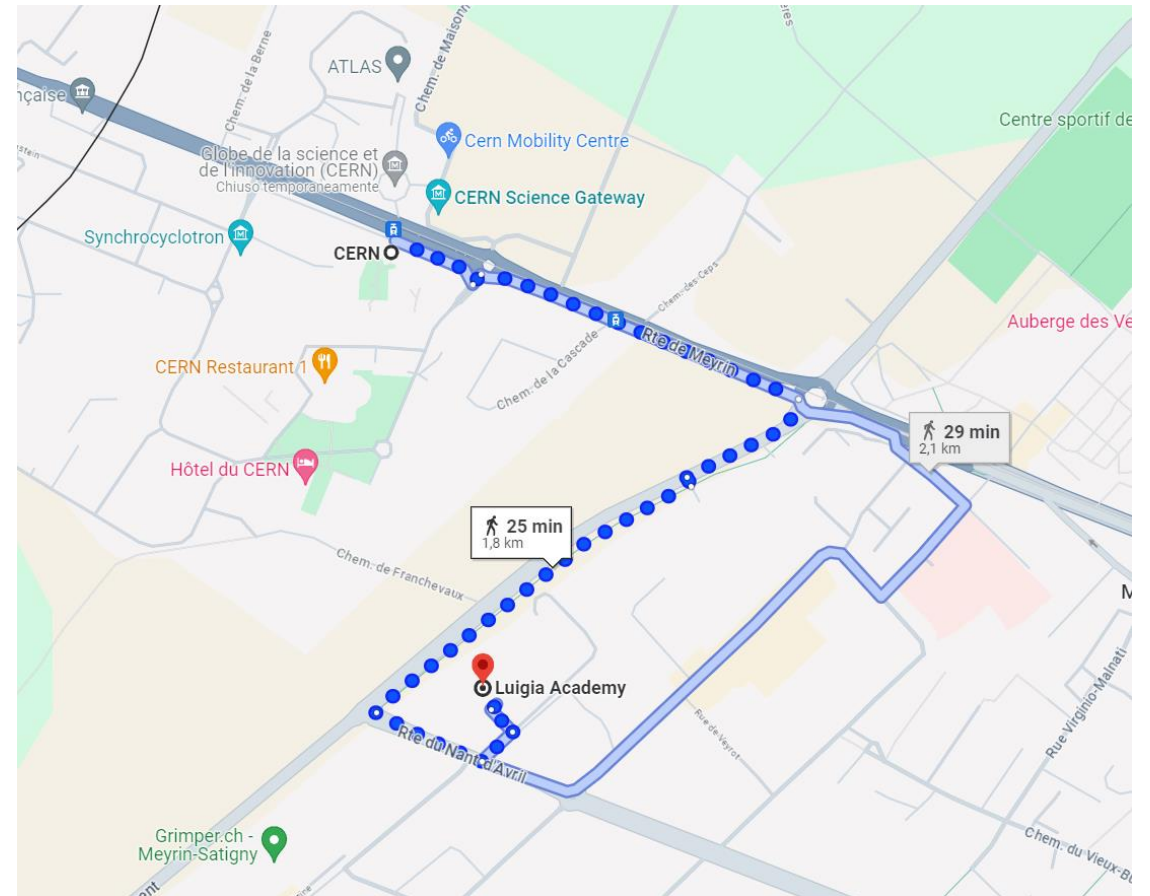
# Practical information

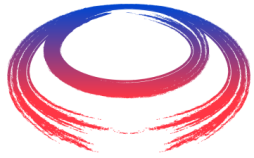
- We have reserved this evening at Luigia, be there at 19h30
- Inform Michela if you didn't confirm yet
- Let us know if you need a lift, we can meet at the CERN hostel (B41 parking) at 19h20



# LUIGIA

*The best of Italy*





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**Enjoy the workshop!**