Welcome and Introduction

Peter Baker, Alessandro Cerri, Adrian Hillier, <u>Karol Krizka</u>, Stefania Ricciardi, Chris Rogers, Karolos Potamianos, Ben Smart **July 3, 2024**



This Workshop

Introduce the challenges and opportunities at a Muon Collider to the UK Physics and Detector community.

The μC accelerator technology is currently UK driven.

Let's expand to physics!

UK μC P&D July 3, 2024

International Collaboration

WP	Title	Coordinator	Institutes
1	Coordination and Communication	Roberto Losito (CERN)	CERN
2	Physics and Detectors Requirements	Donatella Lucchesi (UNIPD)	UNIPD, INFN, CEA, DESY, UOS, LIP, CERN
3	Proton Complex	Natalia Milas (ESS)	ESS, UU, CERN
4	Muon Production & Cooling	Chris Rogers (STFC - UKRI)	UKRI, Imperial, UWAR, CERN
5	High Energy Complex	Antoine Chancé (CEA)	CEA, INFN, CERN
6	RadioFrequency System	Claude Marchand (CEA	CEA, ULA, UROS, INFN, CERN, Strathclyde
7	Magnet Systems	Luca Bottura (CERN)	CERN, CEA, INFN, SOTON, TUDa, UTWENTE
8	Cooling cell Integration	Lucio Rossi (CERN)	UMIL, INFN, Imperial, CERN

IMCC Annual Meeting 2023 (Orsey, France)

- 188 participants
- IMCC and MuCol Annual Meeting 2024 (CERN)
- 192 participants
 Interim MuCol report out soon
- 388 authors
- Major progress towards a CDR

- Formed as a result of European Strategy for Particle Physics Update 2020 report
- Hosted by CERN
- Covers all necessary areas
 - Accelerator
 - Detector
 - Physics
- Main driver for the experimental work
- Some funding via MuCol project

Existing UK Effort (Accelerator)

- Huge UK involvement already.
 - Mostly on the accelerator side.
 - Increased participation for detector would be good synergy.





UK





















Science and **Technology**





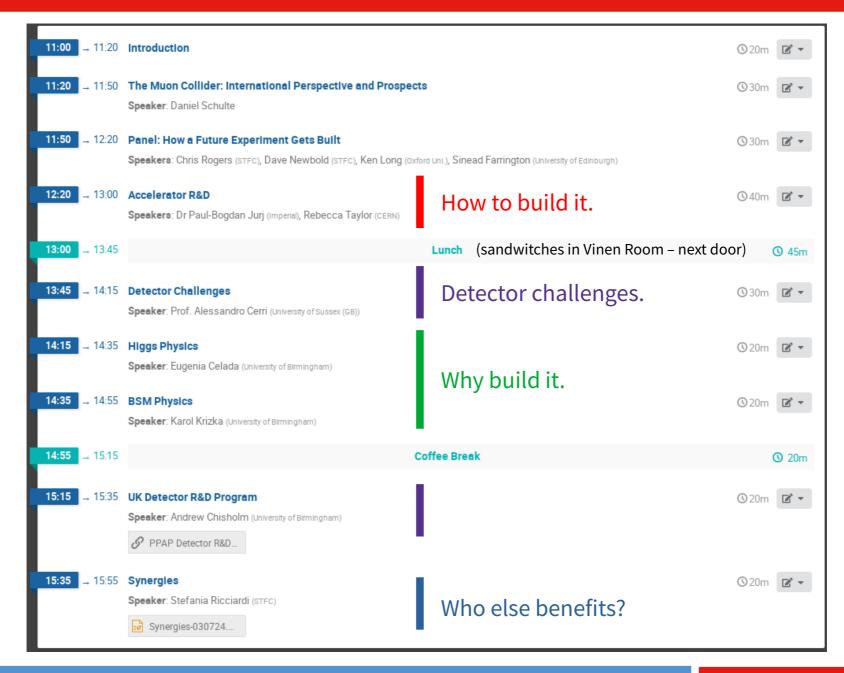


UK Effort (Detector)

- Catch-up meetings: first Monday of Month at 3pm
 - UK Mailing List: UK-MUON-DETECTOR@JISCMAIL.AC.UK
 - Also attended by some of our accelerator friends.

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Agenda



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Early Career Researchers & Muon Colliders

Wed 28th August 2024 - Via Zoom

14:00-18:00 (CEST) & 08:00-12:00 (EST)

Open for the public |



https://indico.cern.ch/e/muoncollider_ecr

Q&A

with experts

Discussions

on physics & the future

Design Overview

of the Muon Collider

Call for External Speakers

to present research

Open to:

- Undergraduates
- Masters
- PhDs
- Postdocs
- Students etc.

Interested in:

- Physics
- Engineering
- Computing
- Mathematics
- · Communication etc.





