

International
UON Collider
Collaboration



MuCol

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.



Workshop goals

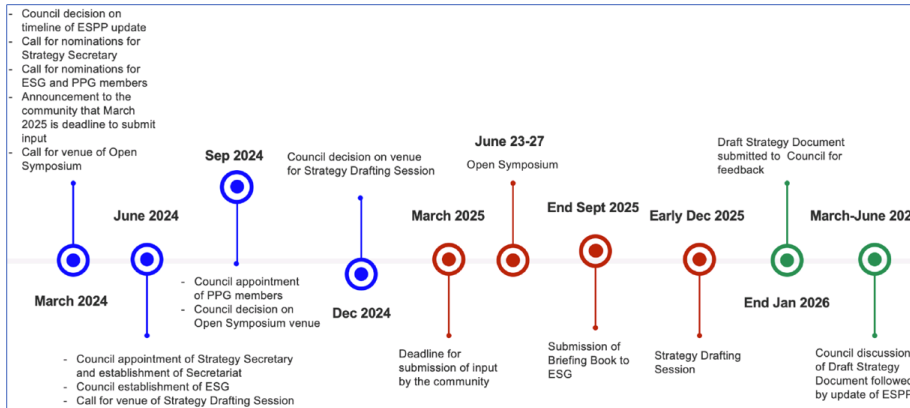
D. Lucchesi and A. Lechner,
IMCC MDI&Detector Workshop June 2024
June 25, 2024

Introduction

European Strategy for Particle Physics Update

- Last week: appointment of Strategy Secretary, Strategy Secretariat and European Strategy Group
- **March 2025: deadline for submission of community input**
- June 23-27, 2025: Open Symposium
- Early Dec 2025: Strategy Drafting Session
- June 2026: Strategy update by CERN Council - end of the process

Have to “freeze” reference configurations now to leave enough time for finishing studies by the end of the year



M. Lamont at CERN
ATS town hall meeting
(24 June 2024)

Workshop goals for IR & MDI

- Define the **reference IR and MDI configuration** for ESPPU background and detector studies
 - IR lattice and magnet apertures
 - Shielding inserts in magnets
 - Nozzle configuration
- **Status of beam-induced background studies**
 - Decay-induced background
 - Incoherent pair production

Is the radiation damage in magnets acceptable?
Are the assumed magnet apertures realistic? Can we “freeze” the present IR layout for the ESPPU studies or do we need a further iteration?

Are we ready to produce a high statistics reference sample for the detector studies?

Workshop goals for Detector

1. Define detector configurations

- Do we proceed with one or two configurations? Do we have enough people to perform relevant studies? Should we take one configuration for physics performance and present the other as a under study detector?

2. Define sub-detectors:

- Configuration and technology for tracker: vertex, inner and outer tracker
- EMCal, HCal technology
- Position of the magnet and return yoke
- Muon detector

3. Software version

- Which software version will be used for the studies



Early Career Researchers & Muon Colliders

Wed 28th August 2024 - Via Zoom

Open for the public

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

Q&A with experts

Discussions on physics & the future

Design Overview of the Muon Collider

Call for External Speakers to present research



 indico.cern.ch/e/muoncollider_ecr

 ecr_muoncollider@cern.ch

Open to:

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

Interested in:

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

Have a nice workshop!

