IMCC documents for the ESPPU

Tentative Timeline

Long report(s)

- April 2024: Parameter revision is starting
- End of June 2024: Parameters updated (to EU October)
- September 2024: Overleaf in place for authors to start
- End of October 2024: Report ready for content editing
- End of December 2024: Draft ready for collaboration and the IAC
- End of January 2025: Report ready for copy editing (language)
- End of February 2025: Start of signature process
- End of March 2025: Report ready

Concise report(s)

- End of September 2024: Overleaf in place
- End of October 2024: Start of editing to integrate long report
- End of December 2024: Draft ready for editing and IAC
- February 2025: Start of copy (language) editing
- End of March 2025: Report submission

Report Structure (Status and Progress)

1 **Physic opportunities**
(staging, synergies, …)

2 **Interface**
2.1 Phenomenology
2.2 MDI

3 **Detector**
3.1 Overview
3.2 MUSIC
3.3 MAIA
3.4 Performance
3.5 Technologies
3.6 Software and computing

4 **Accelerator complex concepts**
4.1 Proton driver
4.2 Target & front-end
4.3 Cooling
4.4 Acceleration
4.5 Collider
4.6 Collective effects and integration

5 **Technologies**
5.1 Magnets
5.2 Power converter
5.3 RF
5.4 Target
5.5 Radiation shielding
5.6 Muon cooling cell
5.7 Cryogenics
5.8 Vacuum
5.9 Instrumentation
5.10 Radiation protection
5.11 Movers
5.12 Infrastructure
5.13 General Safety

Detector (DL+ others)

- Overview
- Concepts:
  - Music
  - Maia
- Performance
- Technology R&D
- Software and Computing (Federico will organize that)

Report Structure (R&D, Implementation)

1 R&D, Objectives, Timeline, Plan and Cost

Overview, introduction, focus 2025-2035

2 Physics R&D

3 Detector R&D

Detector concept

Detector technologies

Software and computing for detectors

4 Magnet R&D

Including integration with HFM

5 Accelerator R&D

5.1 Accelerator design

5.2 Machine-detector interface

5.3 Neutrino flux mitigation system

5.4 RF Systems

5.5 Target system

5.6 Instrumentation

5.7 Radiation shielding

5.8 Cryogenics

5.9 Vacuum

5.10 Radiation protection

5.11 Infrastructure

5.12 General Safety

5.13 Other technologies

5.14 Software for the accelerator

Detector R&D (Nadia+ others)

- Detector concepts
- Detector technologies
- Software and Computing (Federico will organize that)