Muon Collider ESPPU

Evaluation

Scope; Achieved conceptual and engineering design, and results of initial material and magnet R&D

Target solenoid conceptual and engineering design

- Plans for conductor testing
- Preliminary design of model coil

Cooling channel solenoid design

- Design procedure
- Design limits
- A-B plots for solenoids
- Evaluation of baseline cooling optics

Final cooling solenoids

- Engineering design
- Material R&D results
- Small model coils

Accelerator magnets

- Resistive magnet optimization and design, with selection of preferred design
- Evaluation of loss
- Superconducting magnets conceptual design
- Engineering of superconducting (HTS) magnets

Collider magnets

- Design procedure
- Design limits
- A-B plots for dipoles
- A-G plots for quadrupoles
- A-B-G plots for combined function magnets
- Engineering of superconducting (HTS) magnets

R&D

Summary of C&S of Magnet R&D for muon collider magnets

Synergies

Summary of links to other fields of Magnet R&D for muon collider magnets

Magnet R&D for muon collider magnets (separate document)

Motivation and challenges
Technology status, LTS and HTS
Demonstrators

- Target solenoid
- 6D cooling solenoids
- Final cooling solenoids
- Accelerator NC dipole string
- Accelerator SC dipole
- Collider SC dipole

Supporting technology
Links to other programs (HFM, MDP, other)
Links to other fields