White Paper

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White Papers

General papers (everybody will be author):
  – Will set up a mechanism to collect names

• Muon collider potential
  – Physics potential summary
  – Detector considerations

• Muon collider accelerator complex (AF4)

Specific papers (specific authors):

• Muon collider potential at 3 TeV

• Muon collider detector studies
White Paper for AF4

Group of editors to organise writing and editing of the paper

- Mark Palmer, Tor Raubenheimer (tbc), Diktys Stratakis (tbc), Vladimir Shiltsev (tbc), Nikolai Mokhov (tbc), Akira Yamamoto, Jingyu Tang, Nadia Pastrone, Chris Rogers, Daniel Schulte

Contributions from working groups

Will use material from Roadmap

- not yet clear when this is publicly available
- but many editors know the report
- all working groups and conveners contributed to it
  - no surprises in the report compared to the community meetings

Andrea and Donatella will propose similar structure for physics potential paper
1. Design Overview
   1. Status
   2. Performance matrix
   3. Design summary
   4. Challenges

2. Technology Requirements
   1. Technology readiness
   2. Required R&D
   3. Required and desirable demonstrators

3. Staging Options and Upgrades
   1. Energy upgrades
   2. Luminosity upgrades
   3. Experimental system upgrades

4. Synergies
   1. Synergies on machine technologies
   2. Synergies on detector technologies
   3. Synergies on conventional facilities and green power
   4. Synergies with other fields of physics?
1. Design Overview
   1. Status short, reuse text for Accelerator R&D Roadmap
   2. Performance matrix need a bit of parameter work here, but much exists
   3. Design summary base on Accelerator R&D Roadmap
   4. Challenges from Accelerator R&D Roadmap

2. Technology Requirements
   1. Technology readiness should have some US view on this
   2. Required R&D use workplan for Accelerator R&D Roadmap
   3. Required and desirable demonstrators use Accelerator R&D Roadmap

3. Staging Options and Upgrades
   1. Energy upgrades in Accelerator R&D Roadmap
   2. Luminosity upgrades can comment on upgrades with better technology
   3. Experimental system upgrades this should come from the detector whitepaper

4. Synergies
   1. Synergies on machine technologies should expand on Accelerator R&D Roadmap
   2. Synergies on detector technologies should come from physics potential white paper
   3. Synergies on on conventional facilities and green power should expand on Accelerator R&D Roadmap
   4. Synergies with other fields of physics? NuSTORM, ENUBET, physic potential team