PLAN FOR FSR

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FCC-ee Optics Design Meeting #191 & 62st FCCIS WP2.2 meeting, 21 August 2024

Proposed TOC FCC-ee after discussion with Panos and Tor

1 **FCC-ee Design & Performance**

1.1 Design challenges, approaches, and parameters .incl. top-up injection
1.2 Beam optics, layout, and magnets, incl. tolerances, correction and emittance tuning
1.3 Vacuum design and collective effects
1.4 Collimation
1.5 Machine - Detector Interface (MDI) challenges and design
1.6 Energy Calibration and polarisation
1.7 Booster
1.8 FCC Pre-injector Complex (1.8.1 Linac, 1.8.1 Transfer lines)
1.9 Operation and performance (efficiency, physics goals, RF staging, machine protection, …)
1.11 On-going studies and possible upgrades
1.12 Dismantling FCC-ee

2. **FCC-ee Technical Systems**

2.1 Introduction
2.2 Main magnets
2.3 Vacuum system and electron-cloud mitigation
2.4 Radiofrequency systems
2.5 Beam Intercepting Devices (halo collimators, beam dumps)
2.7 Beam Transfer Systems & Separators
2.8 Beam diagnostics requirements (beam position, beam size/length, beam loss, beam current, polarization & spectrometry)
2.9 Control systems
2.10 Radiation environment

Michael suggested adding section on “specifications” (alignment, magnet errors, diagnostics,..)

Proposed TOC FCC-hh after discussion with Panos and Tor

3 **FCC-hh Design & Performance**

- 3.1. Design challenges, approaches, and parameters
- 3.2. Beam Optics & Layout
- 3.3 Collimation
- 3.4 FCC-hh injector options
- 3.5 **Synergies between FCC-ee/FCC-hh** (transfer lines/SRF system/power system…)
- 3.6 Ongoing studies

4 **FCC-hh Technical Systems**

- 4.1 High-field magnet options and R&D lines
- 4.2 Summary of other systems (vacuum, cooling)