

FCC RF Coordination Meeting

#15

#12

September 27, 2017

news

- Feedback International Advisory Committee

- New set of parameters for FCC_ee:
 - less number of bunches
 - reduced timeline

-> see Ivan's presentation

- FCC week 2018 in preparation

- Next SCRF FCC meeting: October 18th !!

FCC-ee Parameter Changes since Berlin Meeting

Frank Zimmermann
49th FCC Coordination Group Meeting
25 August 2017

Table 1: Latest machine parameters

Parameter	Z	W	H	ttbar
Beam energy in GeV	45.6	80	120	175
Beam current in mA	1390	147	29	6.4
Nb of bunches	16640	2000	393	48
Beam RF voltage in MV	100	440	2000	9500

Table 2: Machine timeline

	Z	W	H	ttbar
Runtime [years]	4	1	3	4

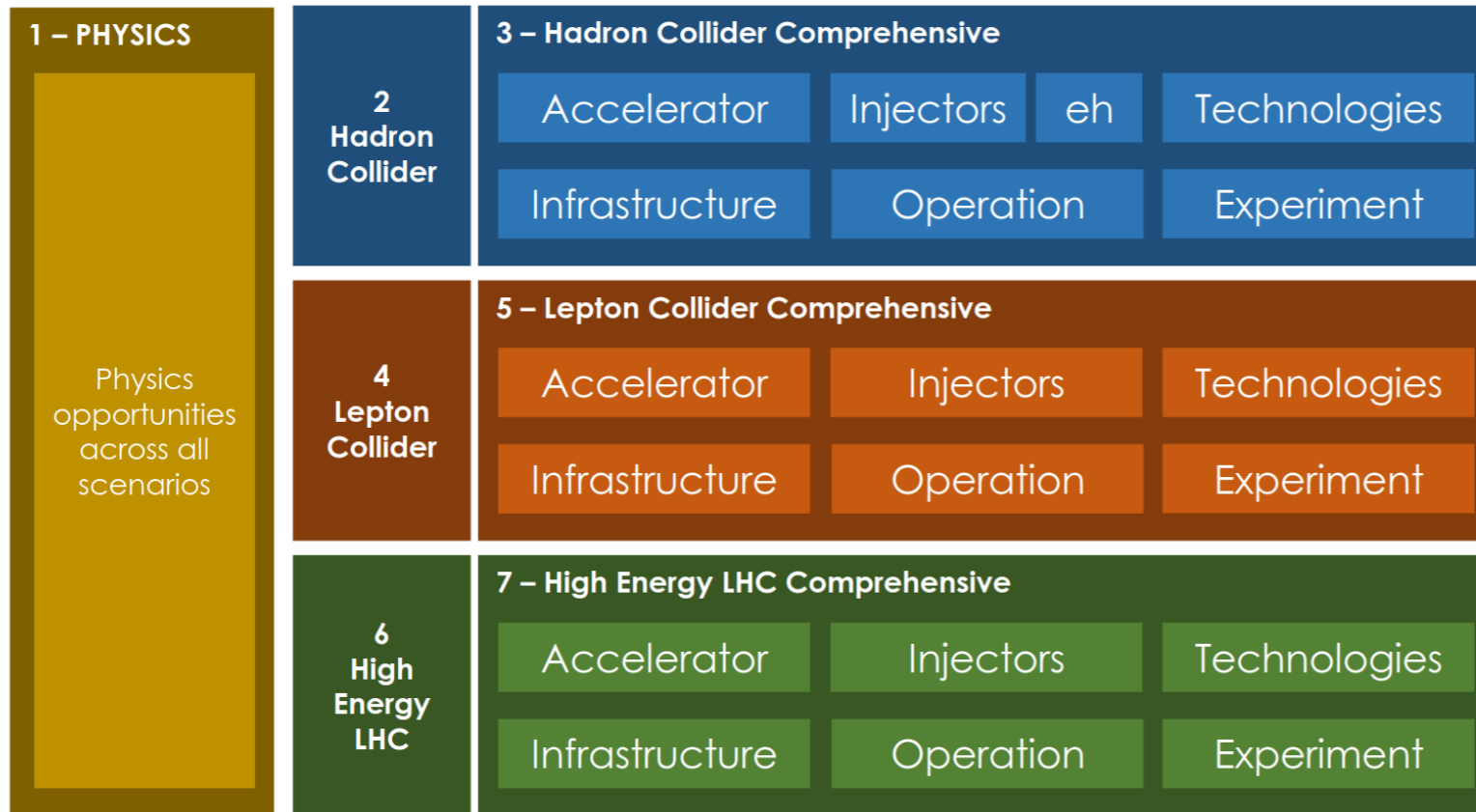


FCC Week Amsterdam (NL)

- Beurs van Berlage Conference Centre
- Monday 9 April – Friday 13 April 2018
- EASITrain satellite WS on 14.4.
- Recommended by LQC
- Hotel dispatching by Beurs via Web-based system
- Lunch + 3 coffee breaks/day
- Welcome dinner + banquet

The slide features a background image of the Beurs van Berlage building at night and a map of Amsterdam's city center with a red pin marking the conference location.

CDR in preparation



Contents

FCC Collaboration	3
Executive Summary	5
1 Physics Opportunities and Reach	9
1.1 Requirements and Opportunities	9
1.2 Standard Model Processes	9
1.3 Higgs and EW Symmetry Breaking	9
1.4 Beyond the Standard Model Phenomena	9
1.5 Physics with Heavy Ions	9
1.6 Lepton-Hadron Physics	9
1.7 Physics Opportunities with Injectors	9
2 Collider Design and Performance	11
2.1 Requirements and Design Considerations	11
2.2 Parameter Optimisation	11
2.3 Design Challenges and Approaches	11
2.4 Optics Design and Beam Dynamics	11
2.5 Operation and Performance	11
2.6 Ion Operation	11
2.7 Lepton-Hadron Operation	11
3 Collider Technical Systems	13
3.1 Requirements and Design Considerations	14
3.2 Main Magnet System	14
3.2.1 Overview	14
3.2.2 Superconducting Main Dipole	14
3.2.3 Low Temperature Superconductors	14
3.2.4 Final Focus Magnets	14
3.2.5 Other Magnets	14
3.3 Cryogenic Beam Vacuum System	14
3.3.1 Overview	14
3.3.2 Beam Screen	14
3.3.3 Vacuum	14
3.4 Radiofrequency System	14
3.4.1 Overview	14
3.4.2 Superconducting Cavities	14
3.4.3 Powering	14
3.4.4 Feedback	14
3.5 Beam Transfer Systems	14