

2d FCC-ee Energy calibration working group meeting

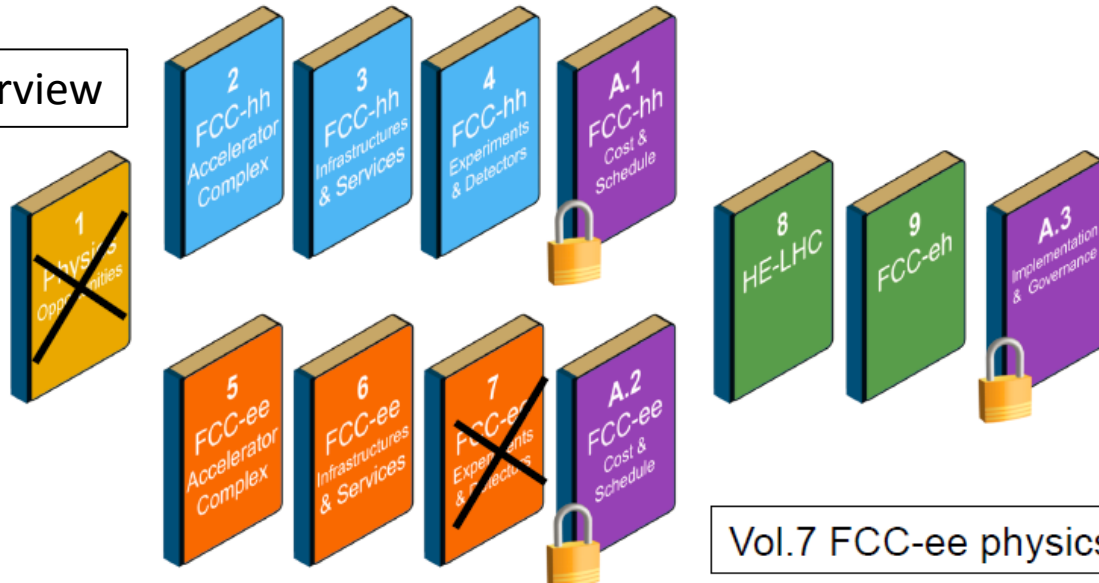
13-01-2017

some news

- **FCC week 2017 in Berlin (29 May-2 June 2017)**
 - ◆ <https://indico.cern.ch/event/556692/>
 - early fees deadline postponed until 5 February 2017.
 - 173 participants so far : [Register](#) !
 - Preliminary timetable [here](#)
 - ◆ The FCC week will give the opportunity to the FCC Advisory Board (*) to review us
 - Slight change in format and scope since the FCC week in Rome
- **The European Strategy update will be approved in May 2020**
 - ◆ European strategy meeting at the end of 2019, CDR distributed Spring 2019
 - CDR ready for print at the end of 2018.

We will have a session at Berlin on Energy Calibration and Polarization
→ will this be included in the review material?

Vol. 1 FCC-ee overview




Vol. 5 FCC-ee accelerator complex


There should be a section in the Vol. 5 about beam polarization and energy calibration describing in particular design and integration of specific equipment (polarimeter, wigglers, various correction schemes and online-control of energy, follow up on tides etc..) as well as simulation results, and some of the systematic errors on beam and center-of-mass energy.


There should also be section(s) in the FCC-ee physics that specifies the scan parameters and propagation of energy errors on physics parameters, for Z, WW and H.




Today:















2d FCC-ee Energy Calibration and Polarization WG meeting

 Friday 13 Jan 2017, 16:00 → 18:00 Europe/Zurich

 866-2-D05 (CERN)

 Alain Blondel (Universite de Geneve (CH)) , Jorg Wenninger (CERN)

Videoconference Rooms  FCC-ee_EPOL [Join](#)  866-2-D05 

- 16:00** → 16:10 **news**  10m 
Speakers: Alain Blondel (Universite de Geneve (CH)) , Jorg Wenninger (CERN)
- 16:10** → 16:30 **from LEP: relationship between spln tune and center-of-mass energies (saw toothing and RF phases):**  20m 
Speakers: Mike Hildreth (Department of Physics-College of Science-University of Notre Da) , Mike Hildreth (University of Notre Dame (US))
 RF_Model.pdf
- 16:30** → 16:50 **requirements on optics and power for the polarimeter**  20m 
Speakers: Nikolai Muchnoi , Wolfgang Hillert (Universität Bonn)
 requirements.pdf
- 16:50** → 17:00 **comments on polarimeter optics requirements**  10m 
Speakers: Katsunobu Oide (High Energy Accelerator Research Organization (JP)) , Katsunobu Oide
- 17:00** → 17:20 **status of Polarization studies**  20m 
Speaker: Eliana Gianfelice-Wendt (Fermi National Accelerator Lab. (US))
- 17:20** → 17:40 **a.o.b.**  20m 

Apologies from W. Hillert – we should reschedule his talk...

Other news:

-- we contacted Attilio Milanese for the design of the polarization wigglers according to the LEP emittance/damping wigglers →

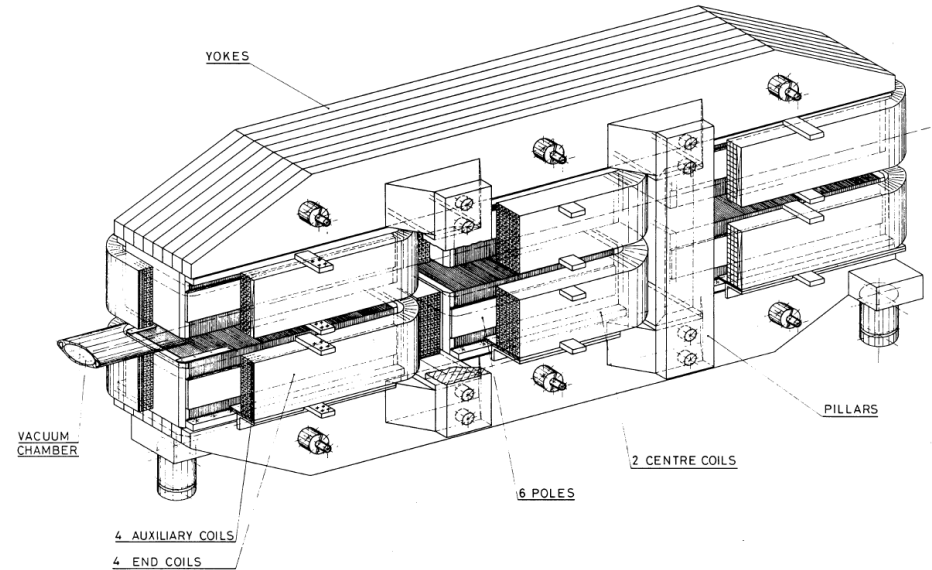
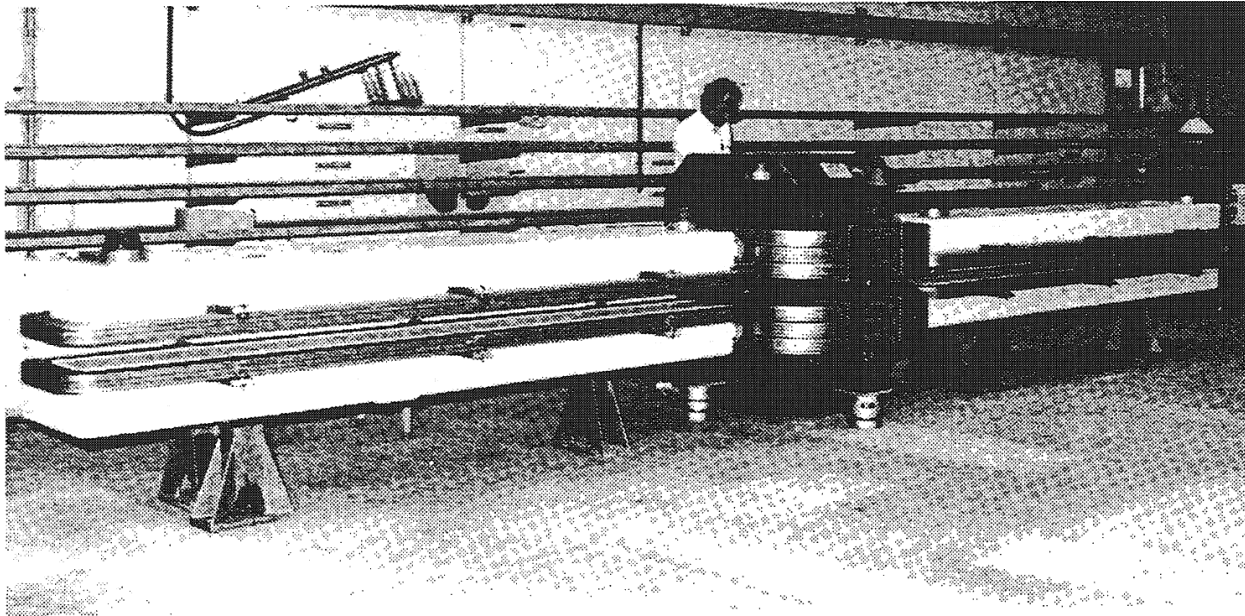


Fig. 3 Proposed LEP wiggler magnet

!not the polarization wigglers which were difficult to operate!.



I've been running some 2D to have a first look at this magnet, keeping a design similar to the LEP emittance wigglers (not the later LEP polarization ones). As a first guess I kept:

- the same vertical aperture of the dipole, 90 mm
- a central field of $B+ 0.7\text{ T}$
- a central length $L+$ of 740 mm
- a ratio $L-/L+$ of 4

Here's how the field would look longitudinally through half the magnet.

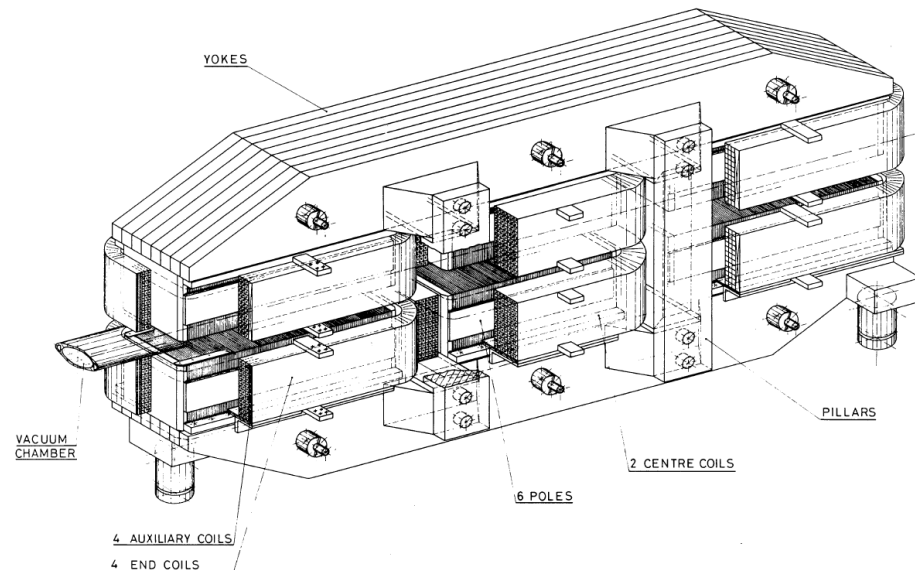


Fig. 3 Proposed LEP wiggler magnet

