

Title: Dr

Lecturer: Simone Gilardoni

Date and Times:

- Monday 19th July from 11:15am-12:00am
- Tuesday 20th July from 11:15am-12:00am
- Wednesday 21th July from 11:15am-12:00am
- Thursday 22th July from from 11:15am-12:00am
- Friday 23th July from from 11:15am-12:00am

Summary of the proposed talk: Accelerators

- 1a) Introduction and motivation
- 1b) History and accelerator types
- 2) Transverse beam dynamics
- 3a) Longitudinal beam dynamics
- 3b) Figure of merit of a synchrotron/collider
- 3c) Beam control
- 4) Main limiting factors
- 5) Technical challenges

Prerequisite knowledge and references:

Prerequisite knowledge: No prerequisite about accelerator physics.

References:

Wiedemann, Particle accelerator physics I,

Springer CAS CERN 85-19,

M. Martini CERN-ps 96-11,

P. Germain CERN 89-07 Wangler rf accelerators,

O. Bruning Summer Student Lecture 2005 Atlas web page for public, CMS web page for public

Biography-

Brief CV: Since August 2004: CERN staff in the Accelerator and Beam Physics Group (ABP).

Main working subjects:

- Ions for the I-LHC project, PS Machine Supervisor, Responsible of the PS machine physics aspects, New scheme for beam extraction from synchrotrons, LHC commissioning

March-August 2004: CERN fellow in the ABP group.

Subject of study: New scheme for beam extraction from synchrotrons.

2004: PhD student at CERN and University of Geneva.

Study of particle production and capture for a Neutrino Factory

Thesis in the domain of accelerators and neutrino physics.

2000: Diploma in high energy physics. Paris 6 and Ecole Polytechnique of Paris.

Working in the domain of neutrino physics and electron positron / collider physics.

1999: Diploma in Nuclear Engineering. Politecnico of Milano.

Determination of the LEP center-of-mass energy from Z / events / using a fitting method at the ALEPH experiment.

Publications: None