

ICFA Mini-Workshop on Beam-Beam Effects in Hadron Colliders (BB2013)

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Book of Abstracts

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10 years of wire excitation experiments in the CERN SPS

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Analytical calculation of long range and head-on beam-beam invariants

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BTF measurements with beam-beam interactions

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Beam-beam and impedance

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Beam-beam compensation studies in the Tevatron

Strong-strong and coherent beam-beam effects II / 59

Beam-beam effects during the beam dump process

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Experience in Lepton Colliders / 39

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Beam-beam effects in HERA

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Beam-beam effects under the influence of external noise

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Single particle effects (head-on) I / 35

Beam-beam effects with a high pile-up test in the LHC

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Beam-beam observations in RHIC

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Beam-beam observations in the Tevatron

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Beam-beam predictions for SuperKEKB and Large Crossing Angles

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Beam-beam studies for the HL-LHC

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Beam-beam studies in the LHC and new projects

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Beam-beam study of the ERL based e-RHIC

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Beam-beam, impedance and damper

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Circular Modes

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Coherent beam-beam effects in experiments and implications for head-on compensation

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Strong-strong and coherent beam-beam effects II / 57

Coherent beam-beam modes in the LHC

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Strong-strong and coherent beam-beam effects I / 82

Comments on Beam-beam noise and e-lens instability

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Operational aspects of beam-beam effects II / 65

Consequences of missing collisions - beam stability and Landau damping

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Beam-beam Compensation II / 81

DAFNE experience with compensating wires

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Strong-strong and coherent beam-beam effects I / 54

Detection of coherent beam-beam modes with digitized BPM signals

Operational aspects of beam-beam effects I / 63

Diagnostics needs for beam-beam studies and optimization

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Experience in Lepton Colliders / 38

Experience with Large Piwinski Angle (LPA) and crabbed waist

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Experience with beam-beam effects in the SPS collider

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Single particle effects (parasitic) II / 33

Experience with long range beam-beam effects in the Tevatron

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Implementation and experience with luminosity levelling with offset beams

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Introduction and scope of the workshop

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Single particle effects (parasitic) II / 17

Long range beam-beam effects and experience in the LHC

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Summary:

Basic properties of long range beam-beam effects caused by many bunches and in the presence of a crossing angle are discussed. Observations and interpretation of the results for the LHC are presented.

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Long-range experiments in RHIC

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Operational aspects of beam-beam effects I / 61

Luminosity levelling techniques: implications for beam-beam interactions

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Luminosity measurements and optimization - consequences for beam-beam effects

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Single particle effects (head-on) I / 36

Measurements of the effect of collisions on transverse beam halo diffusion in the Tevatron and in the LHC

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Modelling beam-beam in the Tevatron

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Needs and requirements from the LHC physics experiments

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Strong-strong and coherent beam-beam effects II / 58

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Experience in Lepton Colliders / 37

Operational experience with crab cavities at KEK

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Poisson solvers for self-consistent multi-particle simulations

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Experience in Lepton Colliders / 40

Recent beam-beam effects at VEPP-2000 and VEPP-4

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Simulation of beam-beam induced emittance growth in the HL-LHC with crab cavities

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Simulation of long range compensation in the LHC with a wire

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Beam-beam Compensation I / 43

Six-dimensional weak-strong simulations of head-on compensation in RHIC

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Stability diagrams of colliding beams

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Beam-beam Compensation I / 41

Status of head-on compensation in RHIC

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Summary: Beam-beam Compensation

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Summary: Observations in hadron colliders

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Summary: Strong-strong and coherent effects

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Introduction and welcome / 1

Welcome address

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