

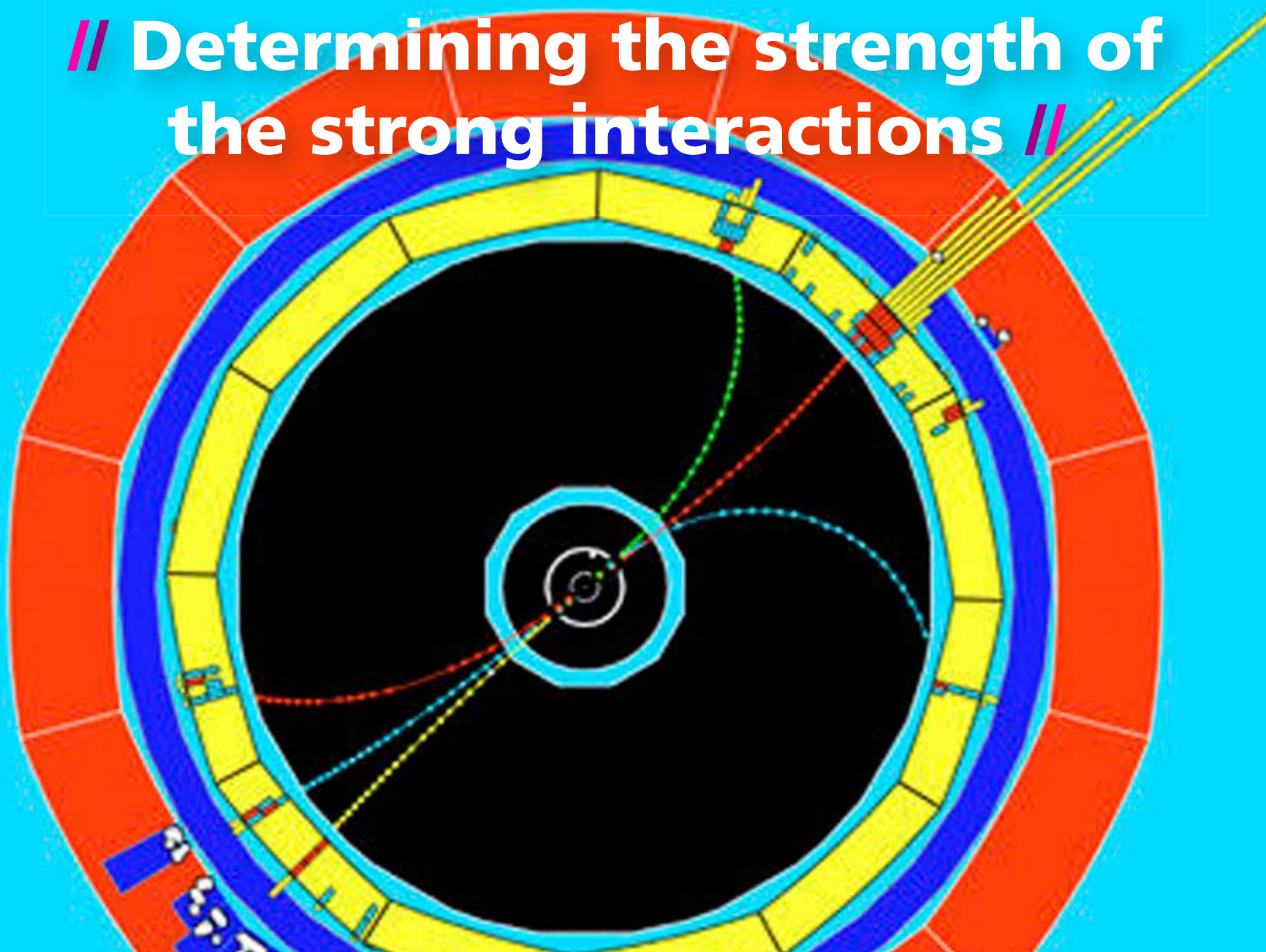


UNIVERSITÀ DEGLI STUDI DI MILANO
SCUOLA DI DOTTORATO IN FISICA
ASTROFISICA E FISICA APPLICATA

2011/2012

Physics
Colloquia

// Determining the strength of
the strong interactions //



Quantum Chromodynamics (QCD), the quantum field theory describing the strong nuclear force, contains only one free parameter: the dimensionless strong coupling characterizing the strength of the interaction.

Quantum effects make possible to explain with this single parameter both the low-energy regime, where the interaction is very strong, and high-energy phenomena where asymptotic freedom (weak coupling) manifests.

The most important properties of the strong coupling will be discussed and its precise experimental determination will be reviewed.

The beautiful agreement between theoretical predictions (at fourth order in perturbation theory) and experimental data provides a highly non-trivial successful confirmation of QCD, establishing this quantum field theory as the correct dynamical description of the strong interactions.

24 JAN 2012

Antonio Pich
Universitat de Valencia, Spagna
Determining the strength of the strong interactions

Gli incontri si terranno alle **ore 15:00**
nell'**aula A** del **DIPARTIMENTO DI FISICA**
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