

Determination of the strong-coupling constant from the Z-boson transverse-momentum distribution

Thursday 18 July 2024 14:30 (15 minutes)

The coupling constant of the strong force is determined from the transverse-momentum distribution of Z bosons produced in 8 TeV proton-proton collisions. The Z-boson cross sections are measured in the full phase space of the decay leptons. The analysis is based on predictions evaluated at third order in perturbative QCD, supplemented by the resummation of logarithmically enhanced contributions in the low transverse-momentum region of the lepton pairs.

Alternate track

I read the instructions above

Yes

Authors: DELIOT, Frederic (Université Paris-Saclay (FR)); SCHMIEDEN, Kristof (Johannes Gutenberg Universitaet Mainz (DE))

Presenter: SCHMIEDEN, Kristof (Johannes Gutenberg Universitaet Mainz (DE))

Session Classification: Strong interactions and Hadron Physics

Track Classification: 06. Strong Interactions and Hadron Physics