



ID de Contribution: 111

Type: Ordinary

## Precision Measurements of Electroweak Parameters with Z Bosons at the Tevatron

*mardi 15 mars 2016 11:05 (15 minutes)*

We report on the extraction of  $\sin 2\theta_{\text{eff}}(MZ)$  and an indirect measurement of the mass of the W boson from the forward-backward asymmetry of dilepton events in the Z boson mass region at the Tevatron. The data samples of  $e^+e^-$  and  $\mu^+\mu^-$  events collected by the CDF detector correspond to the full  $9.4 \text{ fb}^{-1}$  run II sample and yield an effective electroweak mixing angle  $\sin 2\theta_{\text{eff}}(MZ) = 0.23222 \pm 0.00046$ . The corresponding result reported by the D0 collaboration with the full  $9.4 \text{ fb}^{-1}$   $e^+e^-$  sample is  $\sin 2\theta_{\text{eff}}(MZ) = 0.23146 \pm 0.00047$ . The CDF collaboration also extracts the on-shell electroweak mixing angle  $\sin 2\theta_W = 0.22401 \pm 0.00044$  which corresponds to an indirect measurement of the W boson mass  $M_W(\text{indirect}) = 80.327 \pm 0.023 \text{ GeV}$ . The quoted uncertainties include both statistical and systematic contributions.

**Auteur principal:** Prof. BODEK, Arie (University of Rochester)

**Orateur:** Prof. BODEK, Arie (University of Rochester)

**Classification de Session:** Standard Model

**Classification de thématique:** Experiment