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Measurements and combinations of effective weak angle in Drell-Yan di-electron and di-muon channels at CDF and D0 (15'+5')

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We present the measurements of forward-backward charge asymmetry A_{FB} in
$p\bar{p} \to Z/\gamma^* \to e^+e^-/\mu^+\mu^- + X$ events
using ~ 10 fb^{-1} of $p\bar{p}$ data collected at $\sqrt{s} = 1.96$ TeV by the D0
and CDF detectors at the Fermilab Tevatron collider. A_{FB} is measured as a function
of the invariant mass of the dilepton system to extract the effective weak mixing angle $\sin^2\theta^{lep}_{eff}$.
In the context of the standard model, using the on-shell renormalization scheme where
$\sin^2\theta_W = 1 - M_W^2/M_Z^2$, measurements of $\sin^2\theta^{lep}_{eff}$
yield indirect extractions of the W mass. We discuss the recent measurement of $\sin^2\theta^{lep}_{eff}$
using di-muon events at D0 and its combination with the di-electron channel [PRL 115, 041801 (2015)].
We also present the CDF-legacy measurement of $\sin^2\theta^{lep}_{eff}$ using electron pairs
and its combination with the previous CDF-legacy measurement using muon pairs [PRD 89, 072005 (2014)].
We also present the combination of the D0 and CDF results.

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