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## Measurements of the effective weak mixing angle in dimuon events at D0

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We present the measurements of forward-backward charge asymmetry  $A_{FB}$  in  $p\bar{p}\to Z/\gamma^*\to \mu^+\mu^-$  events using  $9.7~{\rm fb}^{-1}$  of  $p\bar{p}$  data collected at  $\sqrt{s}=1.96~{\rm TeV}$  by the D0 detector at the Fermilab Tevatron collider.  $A_{FB}$  is measured as a function of the invariant mass of the dimuon system to extract the effective weak mixing angle  $\sin^2\theta_{eff}^{lep}$ . 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  $\sin^2\theta_{eff}^{lep}$  yield indirect extractions of the W mass.

## **Experimental Collaboration**

D0

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