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Towards a combination of electroweak mixing angle measurements from hadron colliders

The effective electroweak mixing angle has been measured with high precision in hadron collider experiments at the Tevatron and the LHC. These measurements use different sets of parton distribution functions (PDFs) and theoretical frameworks. This fact, together with unknown correlations, makes a concise combination of these measurements impossible. We present a study of the dominant source of correlations between the measurements, stemming from the PDFs, using state-of-the art predictions. This allows to update the measurements to recent global PDFs before combining them. We discuss the difference between our combination and a naive average of the electroweak mixing angle. The effect on the SM global electroweak fit are also presented.

Collaboration / Activity

HEP-ph

Primary authors: VAZZOLER, Federico (CMS (CMS Fachgruppe QCD)); KOGLER, Roman (DESY FH, CMS); AMOROSO, Simone (CMS (CMS Fachgruppe QCD))

Presenter: VAZZOLER, Federico (CMS (CMS Fachgruppe QCD))

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