Rencontres de Moriond EW 2013



ID de Contribution: 41 Type: Ordinary

The electroweak fit after the discovery of a new boson at the LHC

jeudi 7 mars 2013 09:05 (20 minutes)

In view of the discovery of a new boson by the ATLAS and CMS collaborations at the LHC, we present an update of the global Standard Model (SM) fit to electroweak precision data. Assuming the new particle to be the SM Higgs boson, all fundamental parameters of the SM are known allowing, for the first time, to overconstrain the SM at the electroweak scale and assert its validity.

Within the SM the W boson mass and the effective weak mixing angle can be accurately predicted from the global fit. The results are compatible with, and exceed in precision, the direct measurements. An updated determination of the S, T and U parameters, which parametrise the oblique vacuum corrections, is given. The obtained values show good consistency with the SM expectation and no direct signs of new physics are seen. We conclude with an outlook to the global electroweak fit for a future e+e- collider.

Auteur principal: KOGLER, Roman (University of Hamburg)

Orateur: KOGLER, Roman (University of Hamburg)

Classification de Session: Beyond the SM

Classification de thématique: Experiment