

PHYSICS COLLOQUIUM

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Putting the Electroweak sector of Standard Model of Particles to test

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The observation of a Higgs boson at the LHC in 2012 presents a new paradigm of precision physics aiming at the investigation of the Electroweak (EW) symmetry breaking. The EW sector of the Standard Model (SM) of particle physics can be explored with direct tests of the underlying non-Abelian gauge and Higgs sectors. I will discuss new CMS measurements of the EW production of vector boson pairs using the Run 2 LHC data sample. I will show the first observation of the EW WZ production with the CMS detector along with the first detailed characterization of the same-sign EW WW production.