DESY
Physics Seminar

Single top-quark physics at the LHC.

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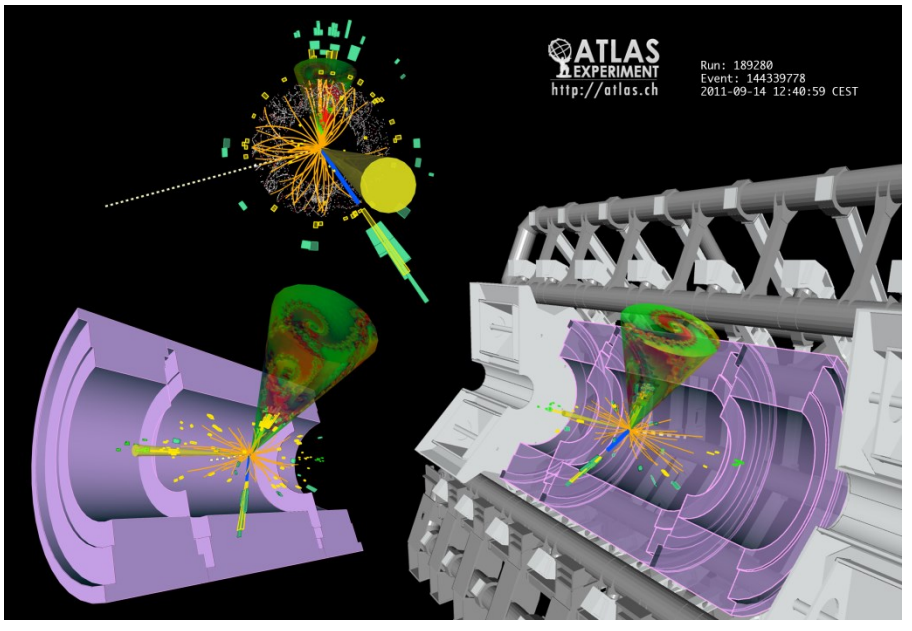
Tuesday, 18 March 2014
16:45 h, Auditorium

With the large LHC collision datasets an increasing number of measurements testing the Standard Model is possible in single top quark production: cross-section and coupling measurements as well as searches for exotic particles. This talk summarizes the highlights in the area of single top-quark physics obtained with the two general purpose detectors ATLAS and CMS during the first three years of the LHC. It covers the 2011 and 2012 data taking periods, where the LHC provided pp collisions at a center-of-mass energy of 7 and 8 TeV. Measurements of single top-quark production in the t- and Wt-channels are shown and the determination of the CKM matrix element $|V_{tb}|$ is discussed. Measurements of the top-quark to top anti-quark production cross-section ratio are sensitive to the parton distribution function in the proton, while measurements of angular distributions can be used to determine anomalous couplings of the Wtb vertex.



Coffee, tea and cookies will be served at 16:30h

After the seminar there is a chance for private discussions with the speaker over wine and pretzels

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