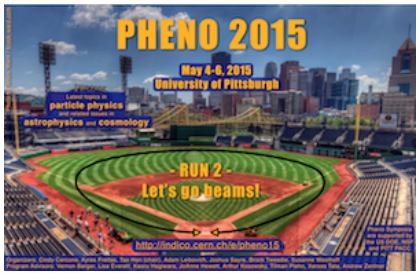


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# Single Top quark production cross section and properties using the ATLAS detector at the LHC

*Tuesday 5 May 2015 15:00 (15 minutes)*

Measurements of single top-quark production in proton proton collisions at 7 and 8 TeV are presented. In the leading order process, a W boson is exchanged in the t-channel. The single top-quark and anti-top total production cross sections, their ratio, as well as a measurement of the inclusive production cross section is presented. In addition, a measurement of the production cross section of a single top quark in association with a W boson is presented. All measurements are compared to state-of-the-art theoretical calculations and the CKM matrix element |Vtb| is determined. In addition, the s-channel production is explored and limits on exotic production in single top quark processes are discussed. This includes the search for flavor changing neutral currents and the search for additional W'bosons or a search for monotops.

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**Session Classification:** Top

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