



PPD Seminar

Double Higgs production in ATLAS

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In the post-Higgs discovery era, studying the Higgs properties and understanding the Higgs mechanism is crucial. The next major milestone in understanding the Higgs mechanism is measuring the trilinear self-coupling (λ_{HHH}) via Higgs boson pair-production (HH). This would be, arguably, the most important result at the LHC since the Higgs discovery. The HH cross-section is predicted to be very small in the Standard Model (SM) however it can be enhanced in case new physics is present. In the seminar I will discuss the current status of HH searches in ATLAS along with some estimations of what we can achieve in the future.