Dark Matter and Heavy Quarks at Colliders (EF03-EF09-EF10)

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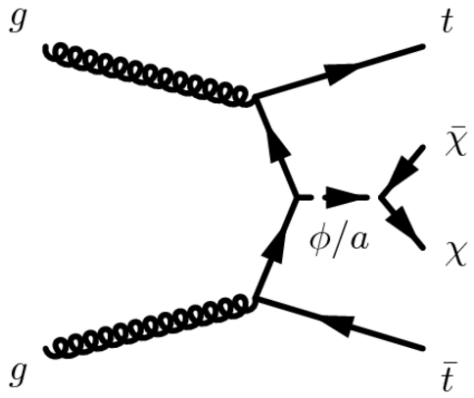
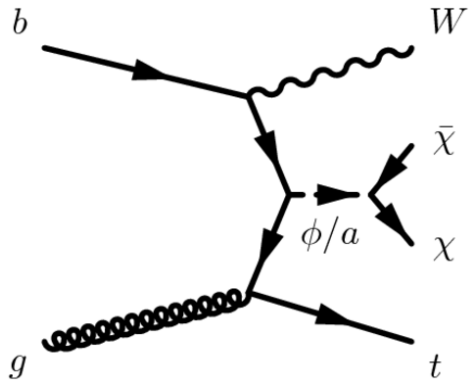
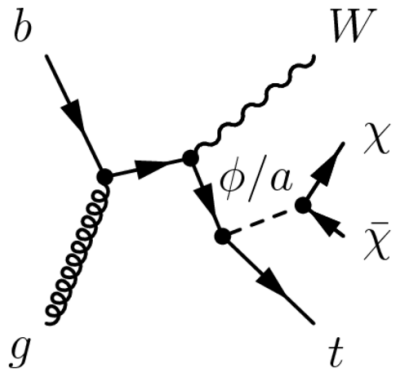
Topic's Objectives...

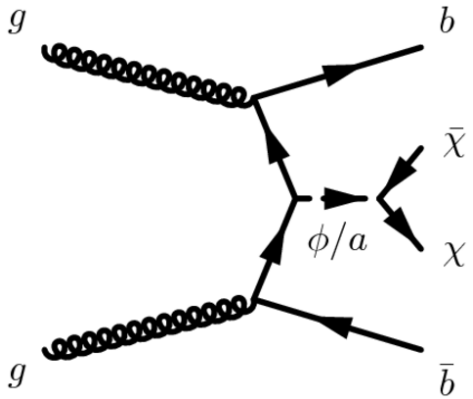
- **Study DM production in association with a pair of top quarks, with a pair of bottom quarks, with a single top quark... at present and future colliders...**
  - **Extend the studies of the ES in the context of the HL-LHC and HE-LHC to other colliders (EF10) and other models (EF09).**
  - **Heavy quark PDF uncertainties (EF10)** arXiv:1901.01553 [hep-ex], arXiv:1710.11412 [hep-ex], arXiv:1712.03874 [hep-ph]....
  - **Observables in new kinematic regimes: spin correlations, asymmetries, polarization...**

Associated Production of DM and Heavy Flavor Quarks at HL-LHC



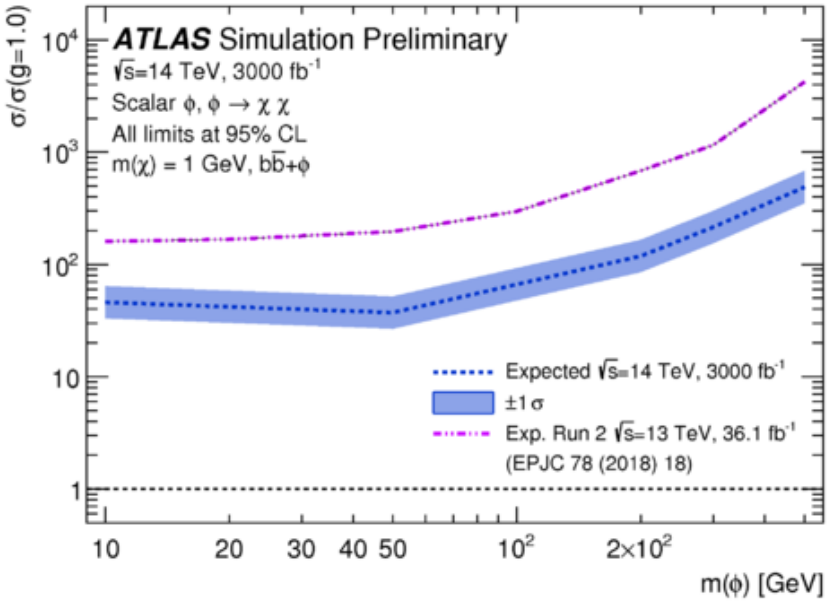


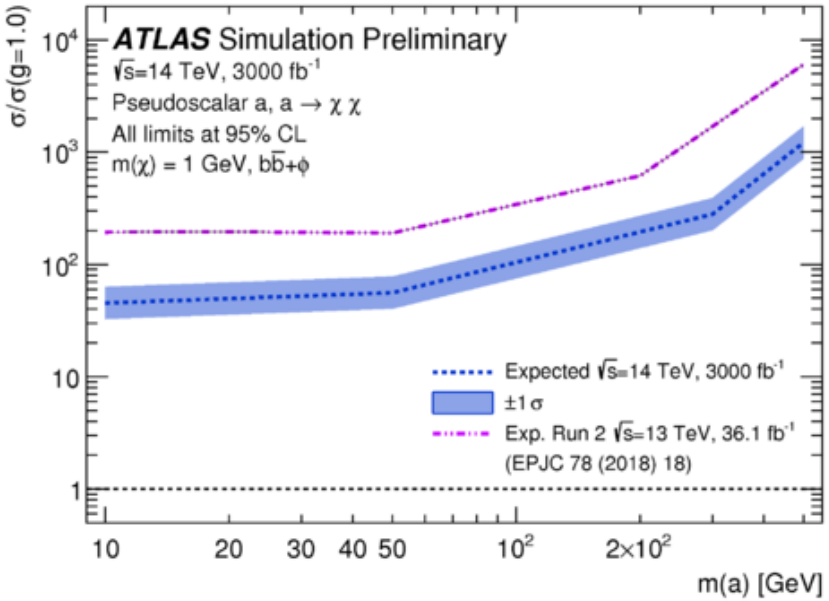




arXiv:1902.10229 [hep-ex]
arXiv:1812.07831 [hep-ph]

ATL-PHYS-PUB-2018-036, 2018





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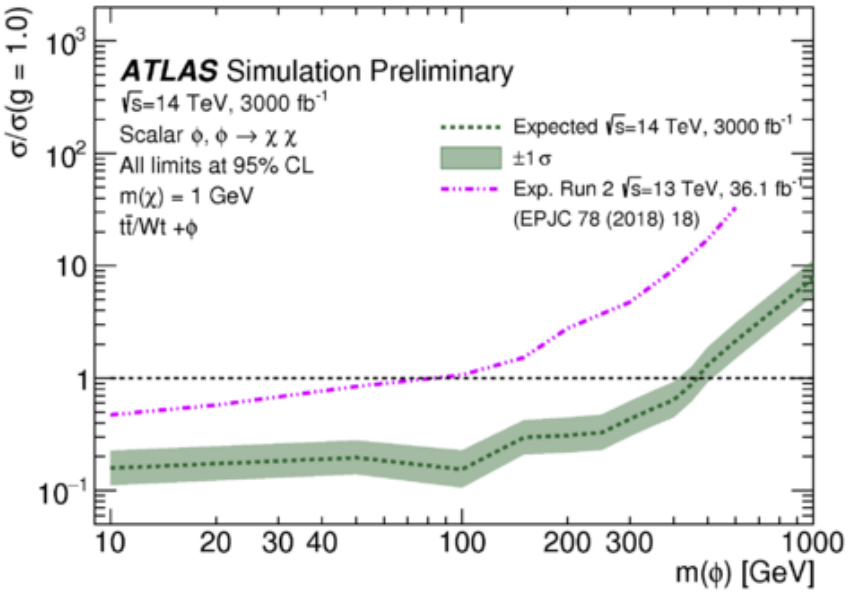

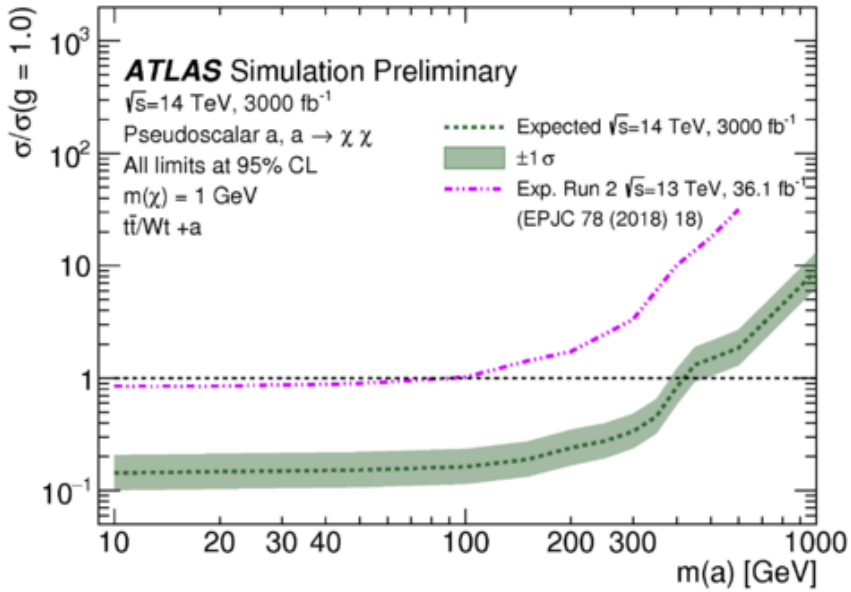

A statistical combination of all relevant top decay channels was not explored.

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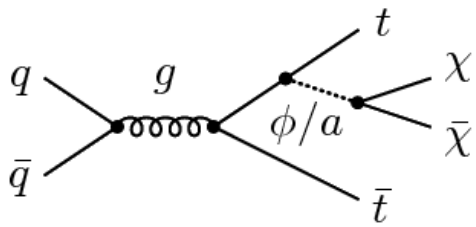
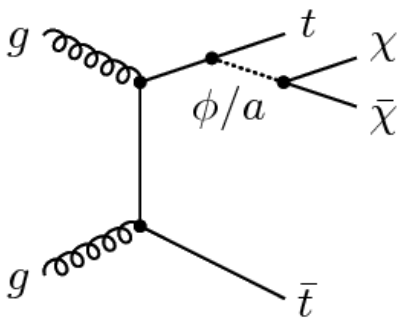
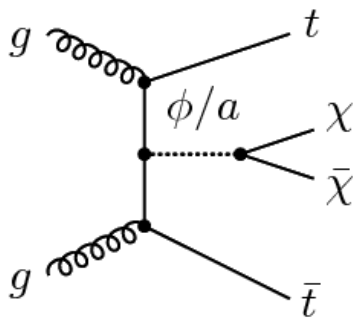
ATL-PHYS-PUB-2018-036, 2018

Production of Dark Matter in association with Top Quarks at HL- and HE-LHC



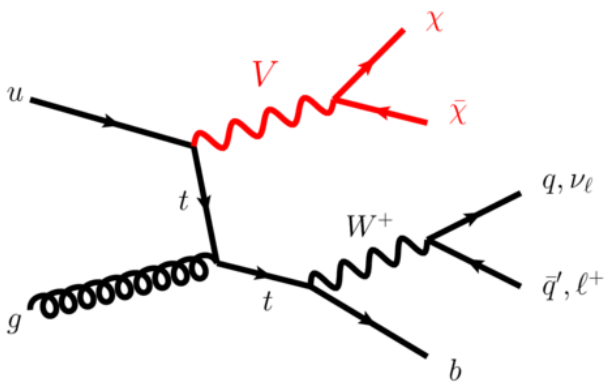


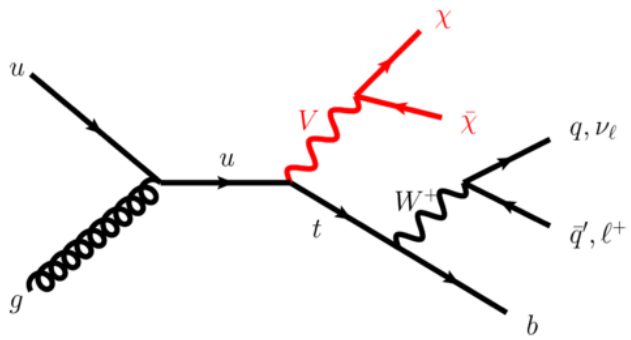


arXiv:1611.09841 [hep-ph]

arXiv:1712.03874 [hep-ph]

Dark Matter in Single-Top Events at HL-LHC





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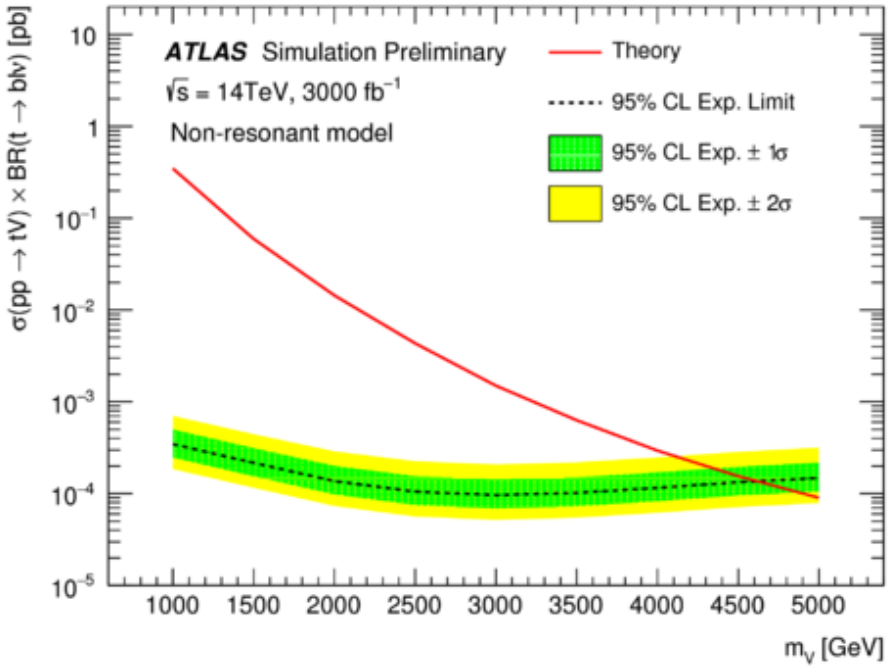
ATL-PHYS-PUB-2018-024, 2018



arXiv:1902.10229 [hep-ex]
arXiv:1812.07831 [hep-ph]

ATL-PHYS-PUB-2018-024, 2018