

DIS2023: XXX International Workshop on Deep-Inelastic Scattering and Related Subjects



Contribution ID: 40

Type: **Parallel talk**

Searches for Dark Matter with the ATLAS Experiment at the LHC

Thursday 30 March 2023 14:00 (20 minutes)

The presence of a non-baryonic Dark Matter (DM) component in the Universe is inferred from the observation of its gravitational interaction. If Dark Matter interacts weakly with the Standard Model (SM) it could be produced at the LHC. The ATLAS Collaboration has developed a broad search program for DM candidates in final states with large missing transverse momentum produced in association with other SM particles (light and heavy quarks, photons, Z and H bosons, as well as additional heavy scalar particles) and searches where the Higgs boson provides a portal to Dark Matter, leading to invisible Higgs decays. The results of recent searches on 13 TeV pp data from the LHC, their interplay and interpretation will be presented.

Submitted on behalf of a Collaboration?

Yes

Participate in poster competition?

No

Primary author: STUPAK, John (The University of Oklahoma)

Presenter: STUPAK, John (The University of Oklahoma)

Session Classification: WG3

Track Classification: WG3: Electroweak Physics and Beyond the Standard Model