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Type: **Parallel session talk**

## Searches for Dark Matter with the ATLAS Experiment at the LHC

*Wednesday 23 August 2023 08:50 (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.

### **Collaboration / Activity**

ATLAS

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**Session Classification:** Joint T03+T10 Dark Matter + Searches for New Physics

**Track Classification:** Searches for New Physics