



Contribution ID: 59

Type: **Talk**

## Searches for dark matter with the ATLAS detector

*Monday 5 September 2022 11:30 (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 experiment 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, their interplay and interpretation will be presented.

### Details

Mr Alex Zeng Wang  
awang89@wisc.edu (University of Wisconsin Madison (US))

### Is this abstract from experiment?

Yes

### Name of experiment and experimental site

ATLAS

### Is the speaker for that presentation defined?

Yes

### Internet talk

Maybe

**Authors:** WANG, Alex Zeng (University of Wisconsin Madison (US)); VARNES, Erich Ward (University of Arizona (US))

**Presenter:** WANG, Alex Zeng (University of Wisconsin Madison (US))

**Session Classification:** High Energy Particle Physics