

## New Perspectives 2016



Contribution ID: 11

Type: **not specified**

## DarkSide in 10 Minutes

*Tuesday, 14 June 2016 12:15 (15 minutes)*

Decades of evidence from numerous fields of astronomy suggests that a majority of the mass content of the universe is invisible” – that is, it doesn’t interact via the electromagnetic force. Indirect evidence for thisdark matter” can be found in galactic rotation curves, gravitational lenses, and debris from colliding galactic clusters, among other places. One of the most promising theoretical components of dark matter is the WIMP: a weakly-interacting massive particle, which arises naturally out of a supersymmetric extension to the standard model of particle physics. The DarkSide program is a search for direct evidence of the existence of these particles via their weak-interaction scattering within a dual-phase argon time-projection chamber (TPC). This talk gives a brief summary of the evidence in support of WIMPs and dark matter in general, followed by an overview of the DarkSide experimental effort, present and future.

### Summary

This talk will give a brief review of the evidence for the existence of dark matter, and an overview of the DarkSide experimental effort to directly detect the particles which may comprise it.

**Primary author:** Mr WATSON, Andrew (Temple University)

**Presenter:** Mr WATSON, Andrew (Temple University)

**Session Classification:** Session 6