DMUK Meeting - Oxford

Report of Contributions

https://indico.fnal.gov/e/9045

Contribution ID: **1** Type: **not specified**

Closing in on the velocity distribution of Dark Matter with direct detection and neutrino telescopes

Monday, 8 December 2014 13:30 (15 minutes)

The next generation of direct detection experiments not only will allow the reconstruction of the Particle Physics properties of Dark Matter (i.e. its mass and scattering cross section), but also the determination of its local velocity distribution. However, this measurement is hinder by the fact that direct detection experiments, being sensitive only above some energy threshold, do not probe down to very low velocities. I am going to show you how this problem can be solved by including the information provided by a (simulated) detection of neutrinos from the Sun. The complementary nature of such a signal will significantly improve the precision in the simultaneous reconstruction of the Dark Mass mass, cross section and velocity distribution.

Primary author: Dr FORNASA, Mattia (University of Nottingham)

Presenter: Dr FORNASA, Mattia (University of Nottingham)

Contribution ID: **2** Type: **not specified**

Axion search prospects with the LZ experiment

Monday, 8 December 2014 14:45 (15 minutes)

TBD

Primary author: Ms MARZIONI, Maria Francesca (University of Edinburgh)

Presenter: Ms MARZIONI, Maria Francesca (University of Edinburgh)

Contribution ID: **3** Type: **not specified**

First SD WIMP limits from DRIFT with full z-fiducialisation

Monday, 8 December 2014 13:45 (15 minutes)

First SD WIMP limits from DRIFT with full z-fiducialisation are presented, along with expected improvements in the near future.

Primary author: Mr SCARFF, Andrew (University of Sheffield)

Presenter: Mr SCARFF, Andrew (University of Sheffield)

Contribution ID: **7** Type: **not specified**

Boulby underground laboratory

Monday, 8 December 2014 15:00 (15 minutes)

TBD

Primary author: Mrs MEEHAN, Emma (STFC)

Presenter: Mrs MEEHAN, Emma (STFC)

Contribution ID: **8** Type: **not specified**

Recent progress with the DEAP-3600 Dark Matter experiment

Monday, 8 December 2014 14:00 (15 minutes)

DEAP-3600 is a single phase liquid argon (LAr) dark matter experiment. It is located 2 km underground at SNOLAB, in Sudbury, Ontario. The detector has 1 tonne fiducial mass target of LAr. Construction of DEAP-3600 is nearly complete and commissioning will start in January 2015. The target sensitivity to spin-independent scattering of 100 GeV WIMPs is 10−46 cm2 which improves the current limits by one order of magnitude. The DEAP- 3600 background target is 0.6 background events in the WIMP region of interest in 3 tonne-years from all sources. This is achieved by selecting ultra low radioactive materials, sanding DEAP-3600 acrylic vessel and developing external calibration sources and deployment systems. The β/γ backgrounds are mitigated by LAr excellent pulse shape discrimination. This talk will present an overview and status of the experiment.

Primary author: Dr FATEMIGHOMI, Nasim (Royal Holloway University London)

Presenter: Dr FATEMIGHOMI, Nasim (Royal Holloway University London)

Contribution ID: **9** Type: **not specified**

Calibrating the LUX Detector

Monday, 8 December 2014 09:15 (30 minutes)

Presenter: Dr DOBSON, James (University of Edinburgh)

Contribution ID: **10** Type: **not specified**

The Search for Dark Matter @LHC

Monday, 8 December 2014 09:45 (30 minutes)

Presenter: Dr WORM, Steve (RAL)

Contribution ID: **11** Type: **not specified**

Theoretical Uncertainties in Direct Dark Matter Detection and how to deal with them.

Monday, 8 December 2014 10:15 (45 minutes)

Presenter: Dr KAHLHOEFER, Felix (DESY)

Contribution ID: **12** Type: **not specified**

Dark Matter from Astrophysics/Cosmology

Monday, 8 December 2014 11:30 (1 hour)

Presenter: Prof. DUNKLEY, Jo (University of Oxford)

Contribution ID: **14** Type: **not specified**

LZ Project Status

Monday, 8 December 2014 14:15 (15 minutes)

Presenter: Dr ARAÚJO, Henrique (Imperial College London)

Contribution ID: **15** Type: **not specified**

LZ background estimation and sensitivity goal

Monday, 8 December 2014 14:30 (15 minutes)

Presenter: Dr BELTRAME, Paolo (University of Edinburgh)

Contribution ID: **16** Type: **not specified**

UK Screening Facilities

Monday, 8 December 2014 15:15 (15 minutes)

Presenter: Dr SCOVELL, Paul (University of Oxford)