HAP Dark Matter 2015

Monday, September 21, 2015 - Wednesday, September 23, 2015

Karlsruhe Institute of Technology

Scientific Program

HAP DM 2015 will have overview talks (typically 30 or 35 minutes with 10 minutes discussion time) on the following topics:
1) CMB and its impact on DM

Planck results focussing on consequences for WIMP DM
2) CDM vs. WDM scenarios

N-body simulations with LCDM parameters: general overview and special results on dwarf galaxies

Simulations of galactic structures with warm DM

Astrophysical observations of dwarf galaxies/ dwarf galaxy surveys

Searches for DM annihilation in dwarf galaxies

Production of Sterile Neutrino dark matter

Observation of a 3.5keV line from X-ray observations of galaxy clusters – evidence for sterile neutrinos?
3) WIMP models and (laboratory) searches

WIMP interactions in EFT and simplified models

LHC DM search: results and perspectives

Asymmetric Dark Matter

Two-Component Dark Matter

SUSY NMSSM WIMPs

Direct searches for WIMPs, challenges & perspectives with liquid noble gas detectors

Direct searches for WIMPs, challenges & perspectives with cryogenic bolometers
4) Axions, ALPs and dark photons

Phenomenology of dark photons and ALPs

The experimental search for axions and ALPs
5) Indirect DM searches

Modelling of astrophysical foreground

Update on Fermi-LAT & the case for a 1-3 GeV excess in GC data

Positron excess, the search for nuclei and prospects with AMS-02

Searching for a neutrino signal from DM annihilation in IceCube and SuperK