

# **HAP Workshop 2014 on data analysis for indirect dark matter searches**

**Monday, 10 March 2014 - Thursday, 13 March 2014**

**Berlin (Adlershof)**

## **Scientific Programme**

## Topics

### Experimental status of dark matter detection

(Thomas Lohse, HU Berlin)

Evidences for DM, status of direct and indirect measurements, accelerator (LHC), theoretical frameworks (SUSY, KK, ...), cosmological constraints  
Supersymmetry

(Karol Kovarik, Uni Münster)

Motivation and theoretical view, SUSY models, DM candidates in SUSY  
Dark matter particle physics and codes

(Joakim Edsjö, Stockholm University)

Annihilation cross section and radiative corrections, annihilation spectra, Sommerfeld enhancement; introduction into dark matter codes  
N-body simulations

(Miguel Sánchez-Conde, SLAC)

introduction, impact of baryons, limitations, comparison of different codes  
Astrophysics and J-factor calculation

(David Maurin, LPSC)

J-factor measurements and calculations for dwarf galaxies, the milky way, galaxy clusters; clumping, systematic uncertainties  
Foregrounds

(Miguel Sánchez-Conde, SLAC)

Astrophysical scenarios, lines and continuous spectra

Complementarity of LHC / direct / indirect searches

(Philip Bechtel, Uni Bonn)

LHC results on Higgs and SUSY searches, extraction of bounds on SUSY parameters, implications for DM searches  
Statistics for DM searches

(Philip Bechtel, Uni Bonn)

Bayesians vs Frequentists, calculation of confidence intervals, inclusion of systematic uncertainties