

IDM2010



Monday 26 July 2010 - Friday 30 July 2010

Montpellier 2 University

Scientific Program

Dark Matter Candidates

Neutralinos, super-WIMP dark matter, non-supersymmetric dark matter, leptophilic dark matter, axions, Q-balls, Kaluza-Klein dark matter, WIMP dark matter, sterile neutrinos,... Plenary Speakers : Bayesian constraints on supersymmetric neutralino dark matter - Roberto Ruiz de Austri (Valencia) On the stability of particle dark matter - Thomas Hambye (ULB) Super-WIMP dark matter - Manoj Kaplinghat (UC Irvine) Axions - Pierre Sikivie (Florida) Feebly Interacting Dark Matter - John March-Russell (Oxford) Sterile neutrino dark matter - Oleg Ruchayskiy (Lausanne)

Dark Matter Direct Searches

microwave cavity searches, CDMS, XENON, XMASS, DAMA, EdelweissII, CresstII, ZeplinIII, ArDM, LUX, DEEP/CLEAN, Eureka, WARP,... Plenary Speakers : Theoretical Perspectives on DAMA in Light of Recent Searches - Neal Weiner (New York) Microwave cavity searches for axions - Les Rosenberg (Seattle) CDMS - Tarek Saab (Florida) Xenon - Marc Schumann (Zurich) DAMA - Pierluigi Belli (Rome) Edelweiss-II - Eric Armengaud (CEA/IRFU) Cresst-II - Wolfgang Seidel (Munich) Zeplin-III - Tim Sumner (Imperial College) ArDM - Filippo Resnati (CERN) LUX - Tom Shutt (Case Western) DEAP/CLEAN - Mark Boulay (Queen's University) EURECA - Hans Kraus (Oxford)

Dark Matter Indirect Searches

the Pamela/Atic/Fermi anomaly, cosmic ray neutrinos, photons, antiprotons, positrons, cosmic ray propagation uncertainties, multi channel cosmic ray signatures of dark matter, dark matter signatures in the CMBR,... Plenary Speakers : Positrons and Antiprotons - Piergiorgio Picozza (Roma 2) Gamma-rays - Jan Conrad (Stockholm) IceCube - Carlos Perez de los Heros (Uppsala) Antares - Pascal Gay (LPC) The Pamela/Atic/Fermi Anomaly - Dark Matter or not ? - Julien Lavalle (Torino) Cosmic Ray propagation uncertainties and Dark Matter - Richard Taillet (Annecy) Multi-channel cosmic ray signatures of dark matter - Joakim Edsjö (Stockholm) Constraining neutrinos masses in the PLANCK era - Stephane Plaszczynski (Orsay) Radio and Microwave Constraints on Dark Matter - Douglas Finkbeiner (Harvard)

Structure Formation & N-body simulations

numerical simulations of structure formation with dark matter, simulations including baryons, understanding the Galactic center, the Lyman-alpha forest, weak lensing, dwarf galaxies, tidal streams, CDM galaxy core/satellite problems, dark stars,... Plenary Speakers : Baryons in structure formation simulations - Andrew Zentner (Pittsburgh) Do we understand the Galactic Center ? - Joe Silk (Oxford) Dwarf Galaxies, Milky Way satellites, and stellar streams - Wyn Evans (Cambridge)

Dark Matter Searches at the LHC

expectations, experimental issues, meta-stable new particles,... Plenary Speakers : Theoretical expectations of dark matter detection at the LHC - Howard Baer (Oklahoma) Experimental Issues of Dark Matter Detection at the LHC - Claus Horn (SLAC) Metastable Particles at the LHC - Chris Hill (Bristol)

