

Discovering dark matter

Subir Sarkar*

University of Oxford and NBI Copenhagen

E-mail: s.sarkar@physics.ox.ac.uk

Much effort has been devoted to the study of weak scale particles, e.g. supersymmetric neutralinos, which have a relic abundance from thermal equilibrium in the early universe matching that of the dark matter. This does not however provide any connection to the comparable abundance of *asymmetric* baryons, which must have a non-thermal origin. ‘Dark baryons’ from a hidden sector with a similar asymmetry and mass of $\mathcal{O}(5)$ GeV would naturally provide the dark matter. Low-threshold direct detection experiments are required to find such particles, while monojet searches at colliders provide a complementary probe.

*Frontiers of Fundamental Physics 14 - FFP14,
15-18 July 2014
Aix Marseille University (AMU) Saint-Charles Campus, Marseille*

*Speaker.