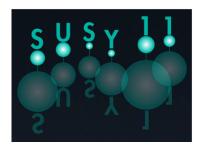
## **Supersymmetry 2011 (SUSY11)**



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## Direct Detection Constraints on a Magnetic Fluffy WIMP

Sunday, 28 August 2011 11:55 (20 minutes)

We explore a scenario in which Magnetic inelastic Dark Matter can scatter to a tower of heavier states. The splitting between successive states is assumed to be a constant  $\delta \sim \mathcal{O}(\text{keV})$ . Such a spectrum with small mass splittings can arise naturally in an extra dimensional model with a large compactification radius. We find that a region of parameter space corresponding to  $m_\chi \sim 14$  GeV and  $\delta < 20$  keV is allowed by the constraints from XENON100, KIMS, CDMS, CRESST II and ZEPLIN III.

**Presenter:** Mr KUMAR, Kunal (Northwestern University)

Session Classification: Parallel Session 1