

# The Physics Department Invites you to a: Seminar

Monday, April 25, 2011 428 Pupin 1:00 PM

## **The Search for Dark Matter with the XENON100 Experiment**



The XENON100 experiment is designed to search for interactions of dark matter Weakly Interacting Massive Particles (WIMPs) in a liquid xenon time projection chamber. Featuring a large target mass and an extremely low background, XENON100 is the most sensitive dark matter direct detection experiment in operation today. Located deep underground at the Gran Sasso National Laboratory, in Italy, XENON100 has recently reported results on the elastic scattering of dark matter WIMPs with nucleons, based on 100 days of data acquired in 2010. The recent findings, the status of the experiment and the work towards the next generation XENON1T experiment will be presented.

Elena Aprile, Columbia University