



Contribution ID : 339

Type : **Oral presentation**

Results of the LUX Dark Matter Experiment

Friday, 4 July 2014 09:00 (19)

LUX (Large Underground Xenon) is a dark matter direct detection experiment deployed at the 4850' level of the Sanford Underground Research Facility (SURF) in Lead, SD, operating a 370 kg dual-phase xenon TPC. We have recently published the results of the first WIMP search run, presenting the analysis of 85.3 live-days with a fiducial volume of 118 kg, taken during the period of April to August 2013. The experiment exhibited a sensitivity to spin-independent WIMP-nucleon elastic scattering with a minimum upper limit on the cross section of $7.6 \times 10^{-46} \text{ cm}^2$ at a WIMP mass of $33 \text{ GeV}/c^2$, becoming the world's leading WIMP search result, in conflict with several previous claimed hints of discovery. In this talk I will provide an overview of the experiment, focusing in the recent science results, and an update on the next steps in the LUX program.

Summary

Primary author(s) : CARMONA, Carmen (UC Santa Barbara)

Presenter(s) : CARMONA, Carmen (UC Santa Barbara)

Session Classification : Astroparticle Physics and Cosmology

Track Classification : Astroparticle Physics and Cosmology