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Dark Matter and Complementarity

Monday, 5 May 2014 14:00 (15 minutes)

We present on the role which complementarity plays in dark matter modeling. Experimental dark matter results provide a wealth of information for dark matter modeling in terms of both positive and negative results. The utilization of input from a variety of complementary experimental probes can provide useful insight into the parameter space of the model by offering new bounds upon the parameter space or new channels for possible discovery. This talk will focus on the complementary phenomenology of three examples. The first is an effective theory of dark matter and quarks in the framework of isospin violation. The second is a simplified model to explain the CDMS signal. The final example is simplified model to explain the GeV galactic center excess from the Fermi satellite.

Summary

We present on the role which complementarity plays in dark matter modeling. Experimental dark matter results provide a wealth of information for dark matter modeling in terms of both positive and negative results. The utilization of input from a variety of complementary experimental probes can provide useful insight into the parameter space of the model by offering new bounds upon the parameter space or new channels for possible discovery. This talk will focus on the complementary phenomenology of three examples. The first is an effective theory of dark matter and quarks in the framework of isospin violation. The second is a simplified model to explain the CDMS signal. The final example is simplified model to explain the GeV galactic center excess from the Fermi satellite.

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