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CULTASK, the Coldest Axion Experiment at CAPP/IBS in Korea (15' + 5')

Thursday, 4 August 2016 14:50 (20 minutes)

The axion is an excellent dark matter candidate motivated by the Peccei-Quinn solution to the strong-CP problem. The IBS Center for Axion and Precision Physics Research (CAPP) in Korea will explore the dark matter axion using a method suggested by P. Sikivie, converting axions into microwave photons in a resonant cavity permeated by a strong magnetic field. CAPP's first microwave axion experiment, CULTASK (CAPP's Ultra Low Temperature Axion Search in Korea) is being launched at KAIST (Korea Advanced Institute of Science and Technology) campus this spring utilizing top of the line equipment and technology. I will outline many R&D efforts that are currently being undertaken to make the axion search range broader and the sensitivity greater. I will also discuss the results from the recent engineering runs and future plans of the axion experiment.

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