

Exploring high mass regions for axion dark matter at IBS/CAPP

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The Center for Axion and Precision Physics Research (CAPP) of the Institute for Basic Science (IBS) in Korea has completed the construction of the infrastructure for axion dark matter search experiments. An experiment utilizing a 9 T superconducting magnet with a 127 mm bore diameter placed in a He-3 cryogenic system is currently under preparation. This experiment will explore a broad range of axion mass of 10 to 30 μeV (equivalent frequency range of 2.8 to 7 GHz) by employing a new cavity design, dubbed 'pizza-cylinder cavity', which provides a capability of searching relatively high mass regions. We present the status of the experiment and discuss the future prospects.

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