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Search for the Sagittarius Tidal Stream of Axion Dark Matter around $4.55 \mu\text{eV}$

We report the first search for the Sagittarius tidal stream of axion dark matter around $4.55 \mu\text{eV}$ using CAPP-12TB haloscope data acquired in March of 2022. Our result excluded the Sagittarius tidal stream of Dine-Fischler-Srednicki-Zhitnitskii and Kim-Shifman-Vainshtein-Zakharov axion dark matter densities of $\rho_a \gtrsim 0.184$ and $\gtrsim 0.025 \text{ GeV}/\text{cm}^3$, respectively, over a mass range from 4.51 to $4.59 \mu\text{eV}$ at a 90% confidence level.

Primary author: KO, Byeong Rok

Presenter: KO, Byeong Rok