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Search for Axion Dark Matter with the TASEH experiment

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Haloscoope experiment, with the assumption that the Dark Matter is completely made of Axions, provides the highest Axion search sensitivity. The TASEH experiment is a Haloscope experiment with a copper coated stainless steel cavity inside a 9T magnet in a Dilution Refrigerator operating at 50 mK base temperature. An amplification chain with a self-developed Josephson Parametric Amplifier has been implemented and successfully achieved a noise level corresponding to 1.2 photon around 2.1 GHz. Data taking around this frequency is ongoing. Preliminary analysis indicates that a sensitivity of 1.5 times the benchmark KSVZ model of QCD Axion can be achieved. The contribution reports the latest progress of the TASEH experiment and the plans for the near future.

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