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MADMAX

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MADMAX, the MAgnetized Disc and Mirror Axion eXperiment, is a dielectric haloscope concept with the aim to detect the axion in the mass range 40-400 μeV through axion-photon conversion in the presence of a strong magnetic field.

In this talk I will review the MADMAX design concept, and discuss the status of ongoing research into booster systems for enhancing the weak axion signal.

Preliminary results will be presented from a prototype Closed Booster with 100 mm diameter disks, which was operated at room temperature in CERN's 1.6T MORPURGO magnet. The data provide the first limits on ALPs using a dielectric haloscope.

Significant progress has been made on the realization and calibration of an Open Booster prototype with three movable disks. These necessary steps towards the full scale dielectric haloscope will be presented, together with the outlook towards first ALPs run at cryogenic temperature.

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