

9th SYMPOSIUM ON LARGE TPCs FOR LOW-ENERGY RARE EVENT DETECTION



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Status of BabyIAXO to search for solar axions

The International Axion Observatory (IAXO) is the proposed fourth generation axion helioscope, aiming to improve the sensitivity of the currently most sensitive, third generation experiment (CAST) by more than one order of magnitude. This sensitivity is expected to come from an axion-physics dedicated magnet equipped with x-ray focusing devices that will be coupled to low-background detectors. A significant discovery potential is offered, as a substantial region of the axion (and ALP) parameter space, unexplored to date, will be probed. As a first step towards IAXO, Baby-IAXO will be built: a demonstrator of the IAXO magnet, with the prototype x-ray optics and the low-background detectors. Baby-IAXO will already have a higher sensitivity than CAST, and therefore will produce relevant physics results at an intermediate level. Here, we will report on the status of this project.

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