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Status of baby-IAXO

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The International Axion Observatory, IAXO is a large-scale axion helioscope that will look for axions and axion-like particles (ALPs), produced in the Sun and it is conceived to reach a sensitivity on the axion photon coupling in the range of 10^{-12} GeV $^{-1}$. On the way to IAXO, a smaller experiment baby-IAXO is in the construction phase. Baby-IAXO will be important to test all IAXO subsystems (magnet, optics and detectors) and at the same time, as a fully-fledged helioscope, will reach a sensitivity on the axion-photon coupling of $1.5 \cdot 10^{-11}$ GeV $^{-1}$ for masses up to 0.25 eV, covering a very interesting region of the parameter space. Important milestones have been reached in the past years in the development of the different components of the experiment as low background x-ray detectors and x-ray optics as well as for the large magnet and the mechanical infrastructures. We report on the development of the x-ray photon detection instruments and on the construction of the baby-IAXO magnet. Finally, we discuss the schedule for seeing the first light in baby-IAXO in 2024.

Speaker

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