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## Axion helioscopes update: the status of CAST & IAXO

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After almost 25 years since their suggestion as a good solution to the strong CP-problem, axions remain one of the viable candidates for the Dark Matter, although still eluding detection. Most of the methods for their detection are based on their coupling to photons, one of the most promising ones being the helioscope technique.

We will report on the current status of the CERN Axion Solar Telescope and the future International Axion Observatory (IAXO). Recent results from the second part of CAST phase II, where the magnet bores were filled with  $^3\text{He}$  gas at variable pressure achieving sensitivities on the axion mass up to  $1.2 \text{ eV}/c^2$ , will be presented. Currently CAST is expecting to improve sensitivity to solar axions with rest mass below  $0.02 \text{ eV}/c^2$  after the upgrade of the X-ray detectors and with the implementation of a second X-ray optic. On the other hand IAXO, a fourth generation axion helioscope, aims at improving CAST's performance in terms of axion-photon coupling by 1-1.5 orders of magnitude. The details of its projected toroidal magnet, x-ray optics and x-ray detectors will be given.

### Summary

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