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## **Axion dark matter search with gravitational wave detectors: ADAM-GD**

*Monday, 27 September 2021 12:15 (15 minutes)*

Axion is a promising candidate for ultralight dark matter which may cause a polarization rotation of laser light. Recently, a new scheme of probing the axion dark matter by optical linear cavities used in the arms of gravitational wave detectors has been proposed. This scheme is called ADAM-GD. If this scheme is applied, the sensitivity to the axion-photon coupling of the ground-based gravitational wave detector, such as KAGRA, with 1-year observation is estimated to be better than that achieved by the CERN Axion Solar Telescope below the axion mass of  $10^{-10}$  eV.

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