



Contribution ID: 149

Type: 20 minutes talk

## Searching for dark-matter waves with pulsar polarimetry

*Friday, 17 December 2021 10:15 (30 minutes)*

In this talk I will explain how the polarization of photons emitted by astrophysical sources might be altered as they travel through a medium of dark matter composed of ultra light axion-like particles (ALPs). I will describe a new, more robust, analysis we developed to search for this effect. Afterwards, I will show the resulting strong limits on the axion-photon coupling for a wide range of masses. Finally, I will comment on possible optimal targets and the potential sensitivity to axionic dark-matter in this mass range that could be achieved using pulsar polarimetry in the future.

### Could you please give the most relevant category for your talk?

Astroparticle

### Will you be pre-recording your talk?

No

### Would you be interested in receiving feedback on your presentation?

Yes

### Are you happy for your talk to be recorded?

Yes

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**Session Classification:** Full-length talks