



Contribution ID: 30

Type: Gong show talk (5 mins)

## Astrophysics Searches for Oscillations in the Axiverse

*Thursday, 15 December 2022 14:20 (10 minutes)*

String compactification can give rise to a large spectrum of pseudo-scalar, axion like particles (ALPs). These ALPs will generally have different masses and so, akin to neutrinos, may oscillate among their flavour states. By considering the large distance scales present in astrophysical scenarios, the phenomenological implications of this behaviour can be investigated. The excessive transparency of the universe to blazar photons hints at the existence of a spectrum of ALPs. Through a numerical study we are able to place limits on the cardinality of this spectrum. We consider ALPs with a stringy mass distribution and anarchical standard model couplings.

### Type of presentation

5 minute talk

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