

Contribution ID: 409

Type: Parallel

Froggatt-Nielsen ALP

Monday 7 July 2025 14:00 (15 minutes)

Froggatt-Nielsen models typically predict the existence of a light axion-like particle, pushing the new dynamic to a very high scale.

In this talk I will focus on models based on Z_N discrete symmetries, which are counterexamples in which the new scale might in fact be much lower.

I will first chart the allowed parameter space from a set of theoretical considerations, and then focus on a minimal model based on Z_4 symmetry. For this, I will introduce an explicit renormalizable UV completion and study the model's phenomenology in detail, highlighting the interplay between the effects of the ALP and of the UV fields.

Secondary track

Author: VALENTI, Alessandro (University of Basel)Presenter: VALENTI, Alessandro (University of Basel)Session Classification: T09

Track Classification: T09 - Beyond the Standard Model