

Hints of ALPs from the sky?

Monday 22 June 2015 13:00 (25 minutes)

I will review some of the recent bounds on axion-like particles (ALPs) from stellar evolution. In most cases, these bounds improved only marginally on the previous results, showing instead a little preference for new physics with couplings accessible by proposed experiments, particularly IAXO. I will briefly discuss the statistical significance of these hints and the need to understand better the source of possible systematics. Though individually each single hint is statistically weak, globally these results point to some particularly interesting regions in the ALP parameter space which could be accessed by the next generation ALP detectors.

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