

ALP Dark Matter from Kinetic Fragmentation

Opening up the parameter window and observational consequences

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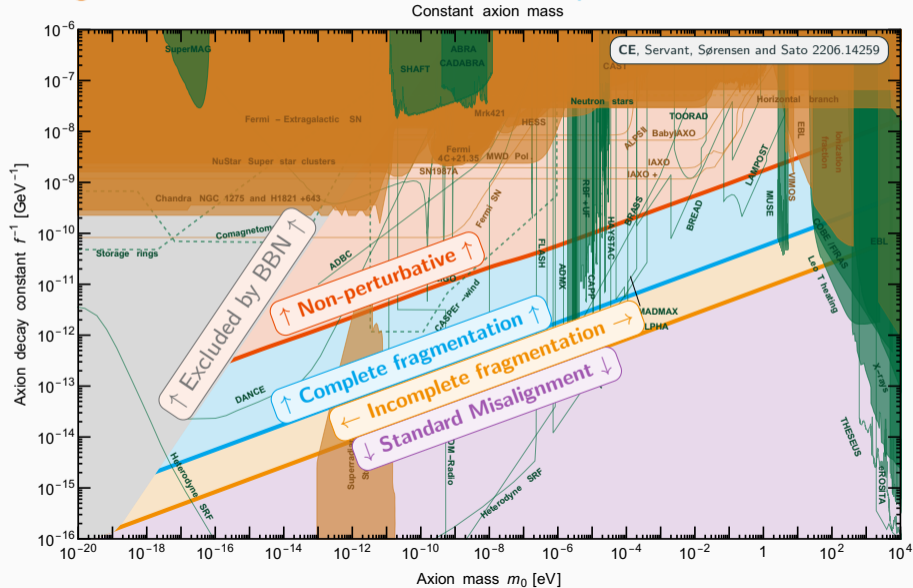
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In collaboration with Géraldine Servant, Philip Sørensen and Ryosuke Sato

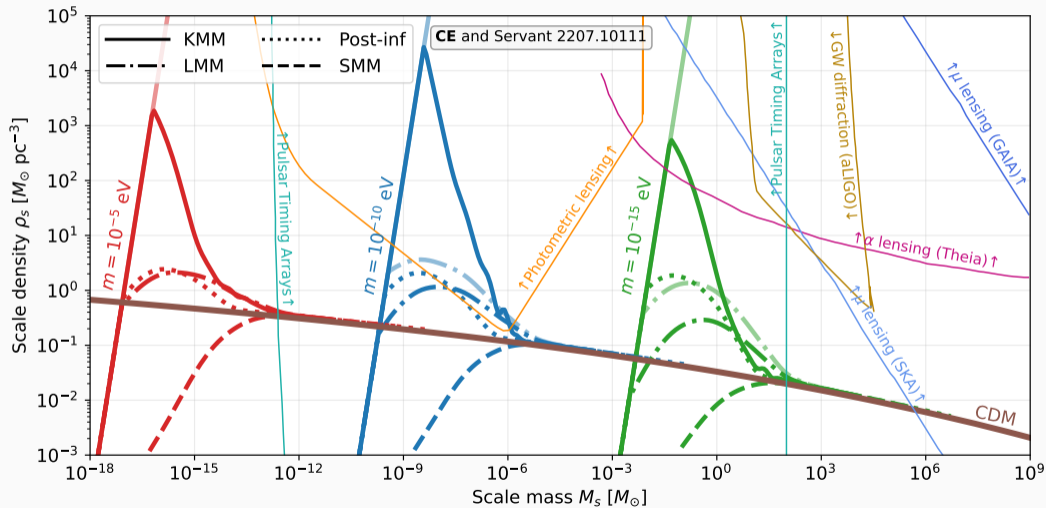
Based on [2206.14259](#) and [2207.10111](#)



In most of the KMM DM parameter space, the parametric resonance is very efficient yielding to complete fragmentation of the ALP field! DM is composed of ALP fluctuations.



After the fragmentation, the power spectrum becomes $\mathcal{O}(1)$ which leads to much denser dark matter halos which can be tested by the experiments that probe the small-scale structure.




Visit my poster (#8) for more details and discussion. Thank you for listening!

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