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Signatures of dark-matter sub-structure in axion direct detection experiments

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ABRACADABRA10cm is a new experiment which seeks to detect
axion dark matter through its interactions with the electromagnetic field. The experiment, which is planned to start collecting data this year, will probe unstudied regions of axion parameter space and lay the groundwork for future, larger-scale efforts. I will discuss the results of numerical and analytical work towards understanding the signatures of axion dark matter substructure in the experiment. In particular, I will focus on the effects of dark matter streams, especially as informed by cosmological N-body simulation data.

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