

# Miami Physics Conference 2022

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## Wei Xue - Abstract

Axion-like particles, including the QCD axion, are well-motivated dark matter candidates. Numerical simulations have revealed coherent soliton configurations, also known as boson stars, in the centers of axion halos. We study evolution of axion solitons immersed into a gas of axion waves with Maxwellian velocity distribution. Combining analytical approach with controlled numerical simulations we find that heavy solitons grow by condensation of axions from the gas, while light solitons evaporate.