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Constraints on Fuzzy Dark Matter Models from Planck 2015 Data

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An ultralight scalar field is a viable candidate for dark matter (fuzzy dark matter), which could resolve the so-called small-scale problems accompanying the standard cold dark matter model.
The fuzzy dark matter has quantum pressure arising from the gradient energy of the field, and behaves differently from the cold dark matter on small scales.
The quantum pressure affects various observations, e.g., cosmic microwave background (CMB) and large scale structure of the universe.
In this talk, I will discuss constraints on the fuzzy dark matter models from CMB observation using the Planck 2015 data.

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