

# Revisiting constraints on warm dark matter from the UV luminosity functions

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The ultra-violet luminosity functions (UV LFs) of the galaxies allow constraining the dark matter particle properties. In the warm dark matter scenario, the formation of low-mass galaxies is suppressed, which may impact the UV LFs.

We have performed the Bayesian inference on warm and cold dark matter scenarios via UV LFs at  $z=6, 7, 8$ . We have found that there is no significant preference for the CDM over WDM by comparing the Bayesian evidences. Knowing the bayesian evidences allows us to build the combined bounds on the model parameters via different datasets. We have derived the robust combined bound on the warm dark matter particle mass  $m_x \geq 2.1$  keV with 95% confidence level.

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