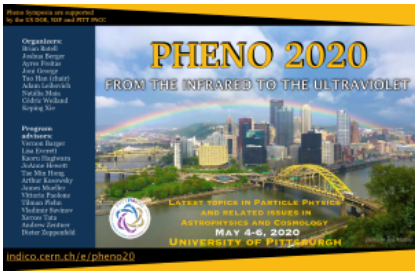

Contribution ID: **982** Type: **Parallel Talk**

Warm Self-Interacting Dark Matter Bounds from Lyman Alpha

Monday 4 May 2020 17:45 (15 minutes)

Lyman-alpha forest observations require the mass of warm dark matter (DM) particles to be greater than a few keV. We calculate how this bound is modified if the warm dark matter particles are also self-interacting. We use a linear perturbation evolution code, which we wrote ourselves, to determine the growth of the initial perturbations in the early universe for warm self-interacting dark matter. We compare our results to observation of the matter power spectrum at high wave number and determine what regions of the cross section-dark matter mass parameter space is ruled out by current observations. This is currently a work in progress, and I will present the current status and and outlook of the project.

Summary

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