

Easing the σ_8 -tension with neutrino-dark matter interactions

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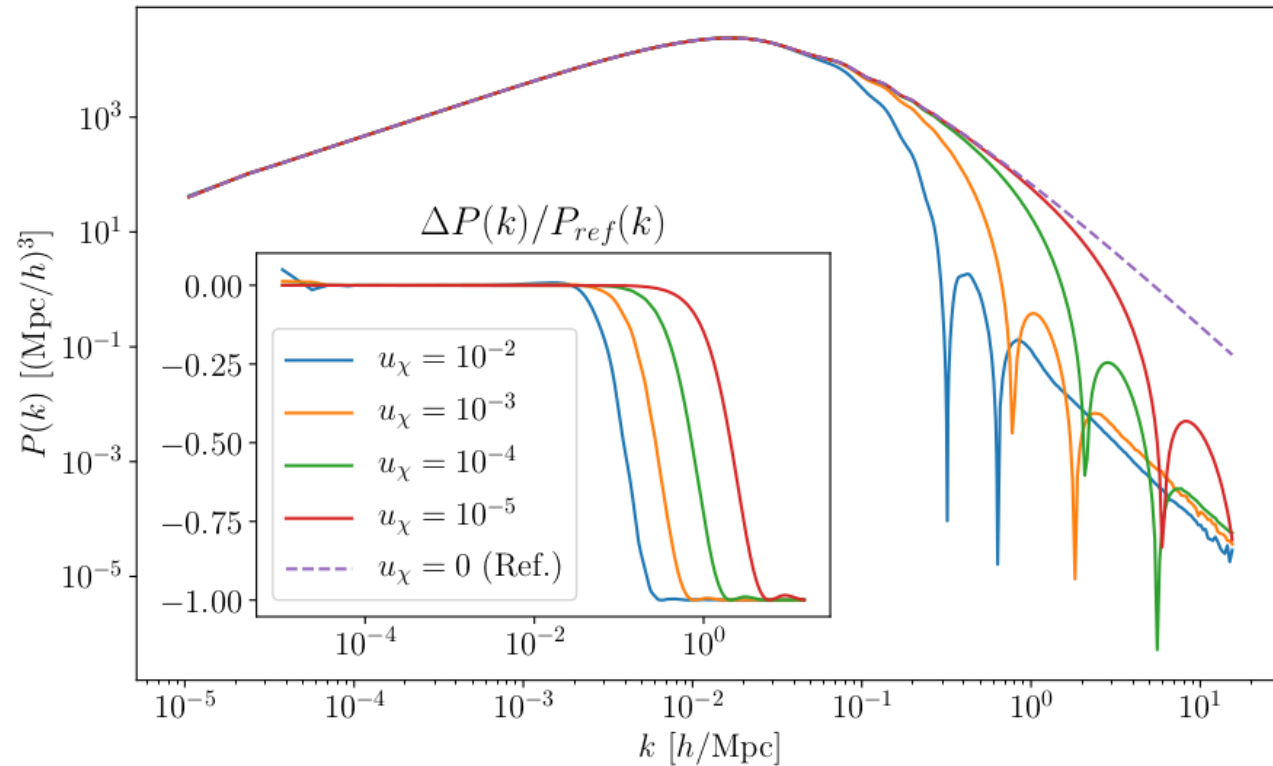
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Based on the work by

Markus R. Mosbech, Celine Boehm, Steen Hannestad,
Olga Mena, Julia Stadler and Yvonne Y. Y. Wong

ArXiv:2011.04206

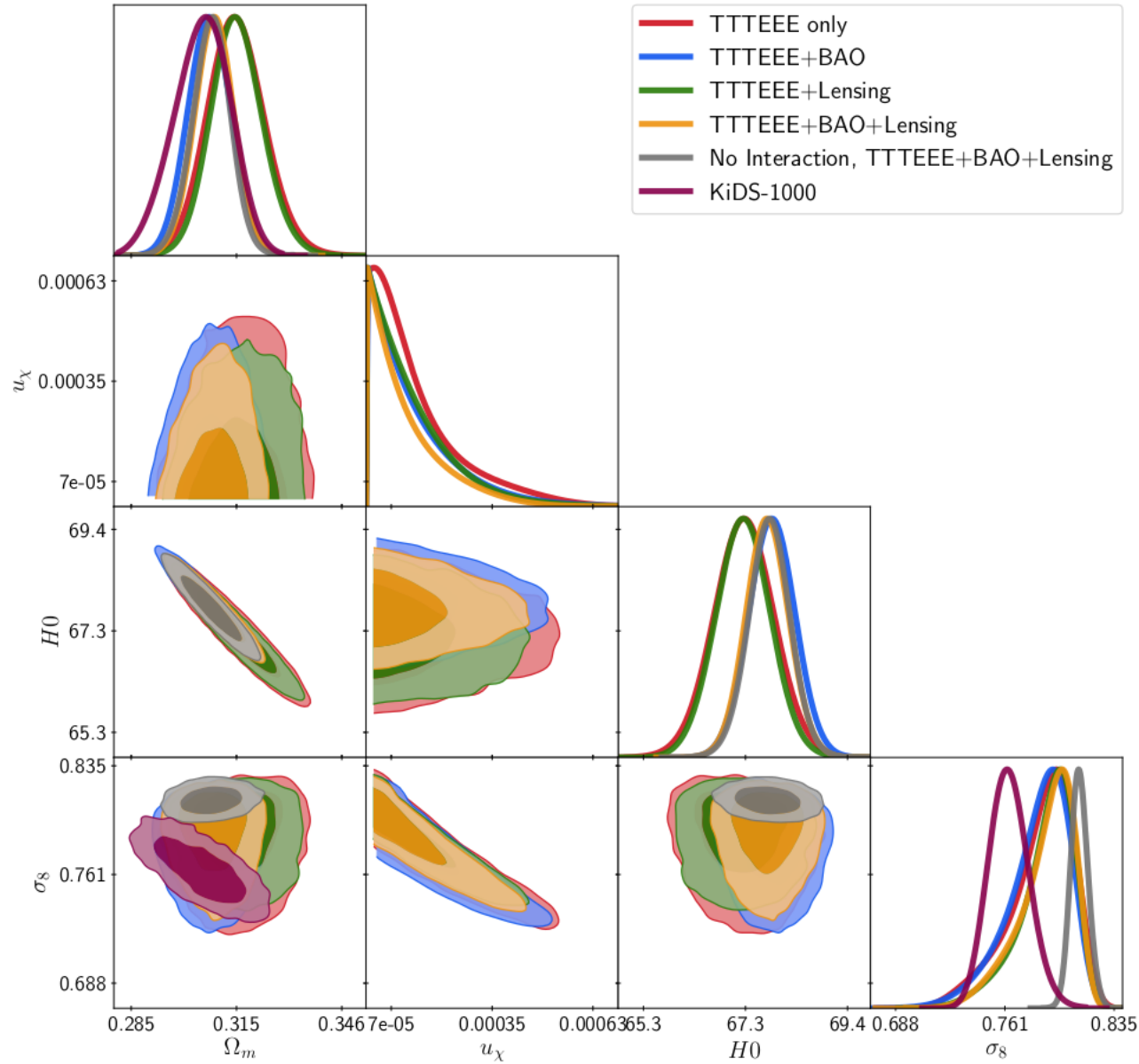
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$$u_{\nu\chi} = \frac{\sigma_0}{\sigma_{\text{Th}}} \left(\frac{m_\chi}{100 \text{ GeV}} \right)^{-1}$$

$$C_\chi = a u_{\nu\chi} \frac{\sigma_{\text{Th}} \rho_\chi}{100 \text{ GeV}} \left(\frac{p^2}{E_\nu^2} \right)$$

- Suppression similar to WDM
- 'Peaks' shifted to slightly higher k compared to massless neutrino case (Same u yields smaller effect)
For comparison see arXiv:1903.00540
- Matches expectation from new p^2/E^2 dependence



- No significant impact on H_0
- Stronger interaction \rightarrow lower σ_8