

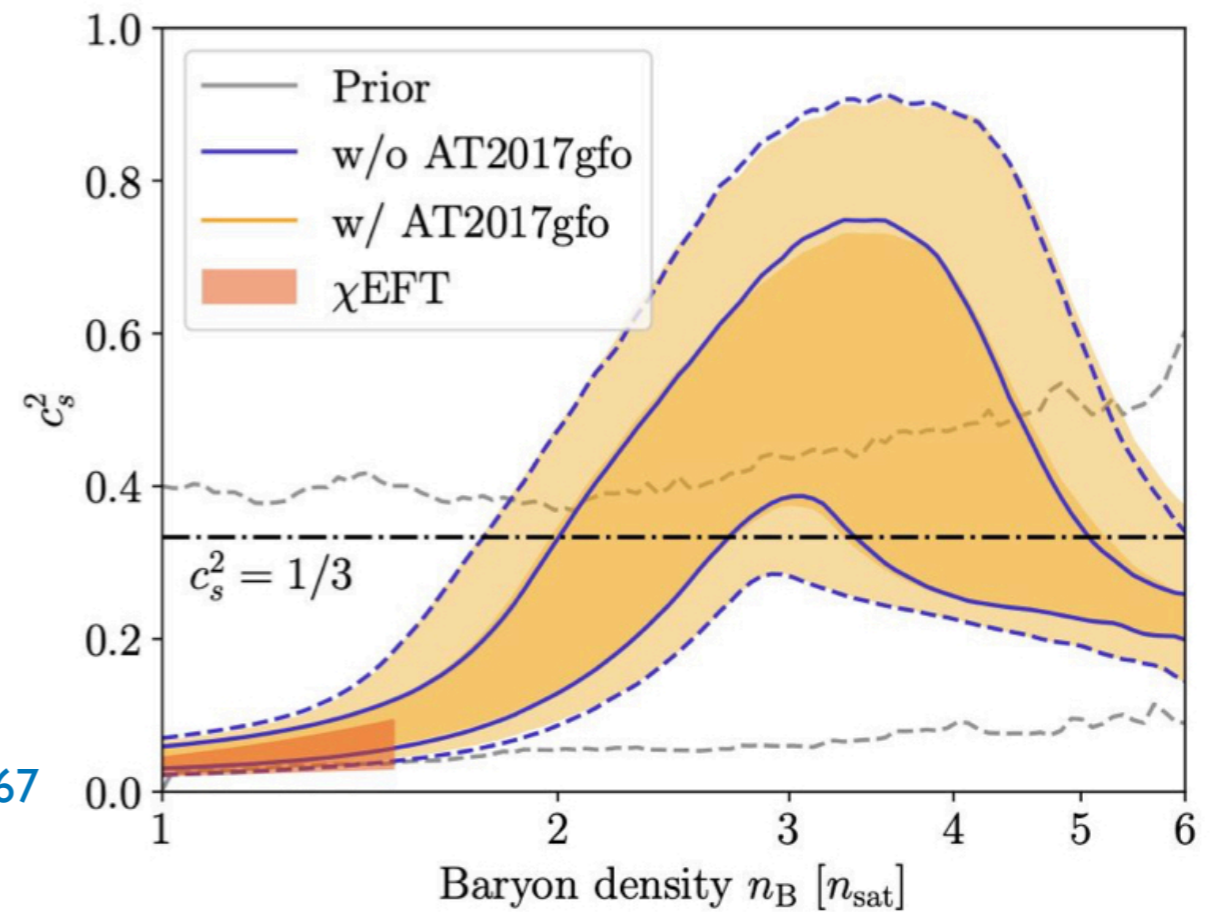
## Connecting ab initio results with astrophysical simulations/observations:

- Up to which densities can we trust calculations based on chiral EFT calculations (current analyses are quite conservative and allow quite extreme EOSs around  $2 n_0$ )
- How can we propagate EOS uncertainties within astrophysical simulations?
- What is the wishlist of simulation practitioners with respect to ab initio EOS input? Which thermodynamic quantities, ...?
- Can we gain direct/indirect insight in the nature and composition of matter at high densities from constraints on the EOS?
- What are the prospects to improve the constraints on neutron star properties and the high-density part of the EOS with future observations?

Astrophysical constraints seem to favour EOSs at the stiff end of the chiral EFT uncertainty bands

Can these indications be considered as robust given the uncertainties?

Pang et al, arXiv:2308.15067



Raaijmakers et al, APJL 918 (2021)

