

TIME: 3/06/2023, 10:00am--10:30am

SPEAKER: Jessie Shelton (UIUC)

TITLE: New constraints on  $N_{\text{eff}}$  from BBN and the CMB

ABSTRACT: I'll discuss early universe constraints on the energy density in relic dark radiation,  $N_{\text{eff}}$ , and its consequences for models of dark sectors. In particular I will discuss updated and more stringent BBN constraints, new limits on the variation of  $N_{\text{eff}}$  between BBN and CMB epochs, and applications of  $N_{\text{eff}}$  constraints to dark sectors with millicharged particles.