Contribution ID: 8 Type: not specified

## Light Sterile Neutrinos: A Modern Picture and a Model to Evade Cosmology

Tuesday, July 4, 2023 10:00 AM (45 minutes)

I will review existing hints and constraints on light sterile neutrinos. I will then explain the primary reasons why these anomalous data sets cannot be simply interpreted as a 1 eV sterile neutrino due to constraints from other experimental probes, notably solar neutrinos and cosmological data sets. I will present a novel, simple model that evades many of these constraints by adding in one new particle, which is the dark matter, beyond a sterile neutrino leading to shape-shifting sterile neutrinos.

Primary authors: DENTON, Peter (Brookhaven National Laboratory); DAVOUDIASL, Hooman (Brookhaven

National Laboratory)

**Presenter:** DENTON, Peter (Brookhaven National Laboratory)