



Contribution ID: **109**

Type: **not specified**

Observation of Excess Electronic-Recoil Events in XENON1T

Wednesday, 16 June 2021 16:40 (25 minutes)

We present evidence for excess low-energy interactions in the XENON1T detector and discuss possible interpretations. Using a 0.65 t yr exposure, we perform one of the most sensitive searches for solar axions, an enhanced neutrino magnetic moment using solar neutrinos, and bosonic dark matter. We observe an excess of low-energy (1–7 keV) events. A solar axion signal is favoured at 3.4σ over background, and the signal can also be explained by the beta-decay of tritium within the detector or by an enhanced neutrino magnetic moment.

Speaker

Adam Brown

Presenter: BROWN, Adam (University of Freiburg)

Session Classification: Session 11