

# Low Energy Precision Measurements

CPM Session 29, 2020-10-06

**Organizers:** Peter Winter, Nick Hutzler, Yannis Semertzidis, Jeorg Jaeckel, and Jason Newby

## **Topical Groups:**

Rare Process and Precision Measurements - Fundamental Physics in Small Experiments (RP03)  
Neutrino Frontier - Interactions Cross Sections (NF06)

**Charge:** Low energy precision experiments that are relevant for global fits of the SM and SMEFT (PVES, magnetic & electric moments, electroweak precision data and constraints on NSI)

**Initial Plan:** Theory talk that can give a broad overview to connect the research fields along the common themes (global SM, SMEFT fits, BSM) ... **too ambitious.**

**Final Agenda:** Open Discussion of LOIs, 3 Discussion Questions.

# Outcome Summary

- Electric and magnetic dipole moment measurements of hadron and leptons are complementary.
- Measurements from asymmetries (n,p,e,molecular EDM) and neutrino interactions (CEvNS, CC) are ultimately related but not yet theoretically connected such that different channels can be assessed as competitive or complementary.
- A dedicated workshop from multiple theoretical perspectives should be organized to develop input to the Snowmass process.
  - Theory input will help prioritize the various experiments that could be performed.
  - Essential to have “everyone in the room” for the workshop will help ensure that any conclusions are accurate.