Fundamental Physics in Small Experiments (TG3)

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White paper plans

- We met last week and started planning on grouping LOIs into white papers:
  - WP1: Facilities (1-2 LOIs)
  - WP2: Gravity/Lorentz/CPT/T (5-6 LOIs)
  - WP3: EDM / CPV (6-8) LOIs
  - WP4: BSM (3 LOIs)
  - WP5: g-2 theory (5 LOIs)
  - WP6: clocks (2 LOIs), maybe in WP3
- Next:
  - Planning to contact LOI authors to suggest the WP grouping
  - Start planning our WP summary document

	Title
1	Upgraded Low-Energy Muon Facility at Fermilab
2	Muonium Gravity Experiment
3	Physics in the tau-charm region at BESIII
4	Neutron beta decay in the test of unitarity of the CKM matrix
5	Searches for Exotic Short-range Gravity and Weakly Coupled Spin-Dependent Interactions using Slow Neutrons
6	Lorentz and CPT Tests with Low-Energy Precision Experiments
7	The Proton Storage Ring EDM Experiment (srEDM)
8	Atomic/nuclear clocks and precision spectroscopy measurements for dark matter and dark sector searches
9	Optically levitated sensors for precision tests of fundamental physics
10	Probing fundamental physics with highly-coherent nuclear spins
11	
12	Th-229 Nuclear Clock
13	Using lattice QCD for the hadronic contributions to the muon g − 2
14	Mechanical tests of the gravity-quantum interface
15	Doped Cryocrystals for Ultrasensitive EDM Measurements
16	Searches for new sources of CP violation using molecules as quantum sensors
17	Calculations of nucleon electric dipole moments on a lattice with chiral fermions
18	Hadronic contributions to the anomalous magnetic moment of the muon
19	Strong CP and Neutrino Masses: A Common Origin of Two Small Scales
20	Dedicated Experiment Exploring Gravitational Effects on CP Violation
21	Test of the Standard Model and Search for Physics Beyond
22	NOPTREX: A Neutron OPtics Time Reversal EXperiment to search for Time Reversal Violation in Neutron-Nucleus Resonance Interactions
23	Direct measurement of short-lived particle dipole moments at the LHC
24	Opportunities and New Physics Implications for (g − 2)e,μ
25	Study of pion and eta decays