

Rare Pion Decay Workshop



Thursday 6 October 2022 - Saturday 8 October 2022

UC Santa Cruz

Scientific Programme

Rare pion decays and the PIONEER experiment

Theory and External Talks

Motivations and impact of Pioneer

Specialty Theory

- LFU tests across energy scales
- LFU and models of new physics
- Status and prospects of the first-row CKM unitarity test
- Meson decays as probes of light new physics

External experiments

- NA62 efforts / kaon review
- B decays (expt review)

Previous experiments

Systematics related to 'old' muons (both lingering and from the beam directly)

Systematics related to muon DIF (in target)

The best modeling of 'The Tail' that we have so far from pienu and pen experience

PSI Beamline

Active Target

ATAR Technology

Alternate target possibilities

Test beam results

R&D plan

Electronics

Invited experts

Calorimetry

MEG resolution and SiPM annealing update

LXe R&D plans (Chloe)

Simulations for open LXe and "segmented" LXe

Tests of LYSO xtals (UW)

Simulations of CsI (PEN) alone and CsI + LYSO hybrid (UW)

Tracker

Electronics

From digitizer ideas to DAQ

Simulations and Proto-Analysis Efforts

Plans going forward