

## Neutron Lifetime Puzzle



Contribution ID: 8

Type: **oral**

# The path to first measurements with the superconducting magnetic storage "PNeLOPE"

*Saturday 13 September 2025 15:50 (20 minutes)*

Over the past decades we have designed and constructed a superconducting magnetic trap for ultra cold neutrons (PNeLOPE). With the large storage volume of about 550 liters as well as the design allowing for real time detection of decay protons, we aim at a high precision measurement with unprecedented systematic and statistical uncertainties. The system was constructed and set up at the Technical University of Munich in 2020. Following initial tests, PNeLOPE was transferred to TRIUMF in 2024 to perform first measurements at the new TUCAN UCN source.

I will outline our setup and present data from the cryostat tests performed earlier this year.

**Authors:** Mr SALAZAR, Dennis (TRIUMF); Mrs DELLITH, Jacqueline (TUM); GUNDEL, Moritz (TUM); STOEPPLER, Rainer (Technische Universität München); Mr PATNI, Rishi (TRIUMF); PICKER, Ruediger (TRIUMF); Prof. PAUL, Stephan (TUM); SCHREYER, Wolfgang (Oak Ridge National Laboratory)

**Presenter:** GUNDEL, Moritz (TUM)

**Session Classification:** Future Measurements and Experimental Strategies II