Contribution ID: **125** Type: **Talk**

Status of the neutron decay facility PERC

Tuesday 7 December 2021 16:15 (25 minutes)

For the PERC Collaboration.

The Proton Electron Radiation Channel (PERC) instrument aims to measure several observables in neutron decay with unprecedented precision. It will serve to determine parameters within the Standard Model of particle physics and to search for novel scalar and tensor interaction beyond it. Together with precision measurements of the neutron lifetime, results will be used to determine the first element of the quark-mixing CKM matrix V_{ud} free from nuclear effects with competitive precision.

With the delivery of the main component, a twelve meter long superconducting magnet system, to the new beam site Mephisto in the guide hall east, a major milestone of the project has been achieved. We present the status of the project and the road to first science.

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Session Classification: Nuclear, Particle, and Astrophysics

Track Classification: Nuclear, Particle, and Astrophysics