

# The PIENU experiment at TRIUMF: a sensitive probe of new physics

*Friday, 16 August 2013 11:30 (20 minutes)*

The PIENU experiment at TRIUMF aims to perform a precision measurement of the branching ratio of the helicity-suppressed pion decay,  $R = \Gamma(\pi^+ \rightarrow e\nu + \pi^+ \rightarrow e\nu\gamma) / \Gamma(\pi^+ \rightarrow \mu\nu + \pi^+ \rightarrow \mu\nu\gamma)$ . This ratio provides the most stringent test of the lepton-muon universality within the Standard Model and is currently predicted by the Standard Model to a precision of 0.01%. PIENU aims to reach an experimental precision of 0.1% (more than a factor of 5 improvement over the previous experimental result) and would either confirm the Standard Model or herald the presence of new physics beyond it. The experiment finished taking data and the status of the data analysis will be presented.

## APS member ID

99999999

**Primary author:** Dr SHER, Aleksey (TRIUMF)

**Presenter:** Dr SHER, Aleksey (TRIUMF)

**Session Classification:** Physics Beyond the Standard Model

**Track Classification:** Physics Beyond the Standard Model