

Abstract Submitted  
for the NWS09 Meeting of  
The American Physical Society

**Photonuclear effects in a NaI(Tl) calorimeter** LUCA DORIA, TRIUMF, PIENU COLLABORATION — The branching ratio  $R = \Gamma(\pi \rightarrow e\nu + e\nu\gamma)/\Gamma(\pi \rightarrow \mu\nu + \mu\nu\gamma)$  has provided the best test of the hypothesis of electron-muon universality in weak interactions. The new TRIUMF PIENU experiment aims at improving the precision of this measurement by a factor of  $> 5$ . A key component of the experiment is a NaI(Tl) calorimeter for positron energy measurements. During test measurements, additional peak structures were observed in the positron spectra. Using Monte Carlo simulation, we show that these structures are due to photonuclear reactions.

Luca Doria  
TRIUMF

Date submitted: 08 Apr 2009

Electronic form version 1.4