

Nuclear Lunch Feb 9 Questions

Andrius Burnelis

February 6, 2022

Questions

1. How do muons interact with the matter they assess? How does muon tomography work? (**Brad McClung**)
2. Which nuclear waste nuclei is being investigated? How does dry cask storage compare to other forms of nuclear waste storage? (**Justin Warren**)
3. Why do they want a gas with a low number of scintillation photons? What other gasses could provide equal or better results? (**Robert Radloff**)
4. What are the origins of the Lorentz-Lorent equation? $n \approx \sqrt{1 + \frac{3Ap}{RT}}$ (**Justin Bryan**)
5. What is geotomography? How would muon momentum measuring help with monitoring this (if it does at all)? (**Pramita Tiwari**)
6. Is there any more information from these authors on how they implemented Monte Carlo techniques for the simulations of their detector? (**Ibrahim Alnamlah**)
7. What experiments do we usually see Cherenkov radiators used? What is their purpose in these experiments? What is the typical gas used as a medium? (**Alexandra Semposki**)