Contribution ID: **25244** Type: **Student Competition**

Optimization of the ionization chamber structure for nuclear radiation measurement system

Tuesday, 4 November 2025 10:28 (7 minutes)

The modeled detector has been used to examine the versatility of the MCNP package in modeling the response of high pressure ion chambers to photon radiation. The results show that the response characteristics of a gas ion chamber filled with xenon are similar to the measured results from other studies of similar ion chambers. The model results indicate that while the use of a compressed xenon gas ion chamber detector improves the low energy response of the detector. Other detection gases like krypton, argon, neon, or helium can be easily modeled using the MCNP model created for this work, as was done for one part of this investigation.

Technical Track

Student Competition

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Session Classification: Student Competition