Photon Reactions and Transport

Summary of Data Needs and Interests

• Photonuclear
  • Assess accuracy of current libraries
  • Improve cross section and emission data in energy ranges of interest
    • ~ MeV range photons
    • High energy photons for secondary effects on electronics protection

• Photoatomic
  • X-ray mass attenuation coefficients, atomic cross sections
    • Improving performance of X-ray and gamma ray analysis methods for safeguards

• Improve Simulation and Modelling Capabilities
  • Support advanced accelerator development
    • Isotope replacement, or new capabilities
  • Accurate and efficient methods for high-flux, high-attenuation, and/or complex environments
  • Evaluation of photonuclear simulation performance compared to operationally-relevant measurements