Abstract

Bremsstrahlung spectral photon distributions produced by continuous beta particles of beta emitter 147Pm and 45Ca in thick targets studied in a photon energy region 10-30 keV. The bremsstrahlung spectral photon distribution measured with X-PIPS Si (Li) detector. The experimental results were compared with the theoretical bremsstrahlung distribution obtained from ordinary bremsstrahlung (OB) theories and the theoretical model which describes total bremsstrahlung which includes the polarization Bremsstrahlung (PB) into OB given by Avdonia and Pratt (1999). The contribution of PB into OB has been calculated in the studied region and it has been found that it is decreases with increase of photon energy. Hence the contribution of polarization bremsstrahlung into total bremsstrahlung plays a vital role into the formation of a spectral shape of total bremsstrahlung spectra.
Polarization Bremsstrahlung in Thick Targets Produced by Continuous Beta Particles

References

Index Terms

Computer Science
Information Sciences

Keywords
Total Bremsstrahlung  Ordinary Bremsstrahlung  Polarization Bremsstrahlung