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PS1-25: Enhancing Interference in the Spectrum of Bremsstrahlung on a Composite Target

Monday, 6 October 2014 17:00 (1h 30m)

Interference pattern in the spectrum of non-dipole bremsstrahlung on two amorphous foils is investigated. Apart from suppression at lowest photon energies, there is also an enhancement in the adjacent spectral region, and in classical electrodynamics, the net effect of suppression and enhancement must to be zero. We study the location and origin of the spectral features, comparing predictions of full Molière averaging and Gaussian averaging with Coulomb corrections to the r.m.s. multiple scattering angle. Comparison with experimental data [1], and with previous theoretical predictions is presented.

[1] K.K. Andersen et al., Phys. Lett. B 732 (2014) 309.

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