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## PS2-05: Channeling Radiation of Moderate Energy Electrons in the Presence of Laser Beams

*Tuesday, 7 October 2014 17:00 (1h 30m)*

Though the influence of the laser field on channeling radiation (ChR) of electrons with energies up to ~100 MeV has been studied quantum mechanically in many works [1-7], nevertheless, up to now there are no experimental results on such effect. With the purpose to accelerate the necessary experiments and developing the results of [8-10] carried out with the help of the methods [11] for nonlinear optics, in this work it is carried out numerical calculations of the spectral distributions of ChR under the influence of laser beams for various parameters of the electron beams (energy, emittance, orientation with respect to the crystallographic planes, etc) and of laser beams (laser photon wavelength, angle with respect to the electron beam, intensity, etc). In particular, the obtained results (on spectral distributions and their dependence on laser field intensity of ChR under the influence of laser beams) show that the intensity of ChR is increased or decreased in certain regions. It is of interest to study experimentally these variation of the characteristics of ChR for comparison of various theoretical models.

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