



Contribution ID: 18

Type: Poster

## Multi-photon absorption in the channeling of electrons in an external field

*Monday 7 September 2015 16:30 (2 hours)*

Following the methods developed for atom ionization by alternating electric field the probability of multi-photon absorption of photons of the strong external laser field by channeled electron (ejection of electron from the channel, photo-ionization) have been calculated for different strengths of the external field and different levels of electrons in a planar channel. The emission spectra of 54 MeV electrons channeled in diamond crystal planes (110) are shown for different values of the resonant laser control field of a frequency close to the transition frequency in the channel with and without photo-ionization. It is shown that the ionization probability is less than the probability of electron scattering in the crystal and make a small contribution to the total level width.

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**Session Classification:** Poster Section

**Track Classification:** 5. Coherent Bremsstrahlung and Channeling Radiation