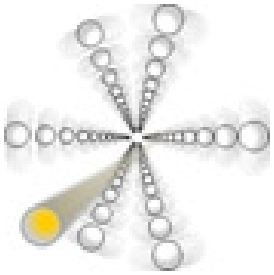

Contribution ID: **132** Type: **not specified**

# Channeling Radiation of Microbunched Beams

*Monday, 24 September 2012 19:46 (1 minute)*

Theoretical and numerical results on the spectral and angular distributions as well as on total number of the radiated photons of the coherent X-ray channeling radiation (CXChR) produced by microbunched beams channeled in single crystals are obtained. The results show that for certain conditions CXChR has spectral and angular distributions much narrower than the channeling radiation of single relativistic particles, while its narrow angular distribution has a maximum at angles much less than the channeling radiation for single particles. Due to the stimulated nature the intensity of CXChR is proportional to the square of the number of the channeled electrons and of the beam modulation. Possible applications of CXChR are discussed.

**Primary authors:** Prof. ISPIRIAN, K.A. (Yerevan Physics Institute); Dr AGINIAN, M.A. (Yerevan Physics Institute)

**Co-author:** Dr ISPIRIAN, M.K. (Yerevan Physics Institute)

**Presenter:** Dr AGINIAN, M.A. (Yerevan Physics Institute)

**Session Classification:** PS1 Poster Session

**Track Classification:** Poster Session