

Sub-fs electrons bunches diagnostics trough coherent optical transition radiation

Tuesday, 23 October 2018 09:15 (15)

The report deals with measurements of electron bunch length using coherent backward transition radiation generated by a bunch in a gold target. Such bunches are used in novel compact laser- based acceleration. The aim is to compare efficiently non-polarized and polarized photons backward transition radiation for use in measurement of longitudinal size electron bunch. By calculation, it was shown that radiation with perpendicular polarization more effective than non-polarized radiation for sub-fs longitudinal size measuring. Calculation referred to in the report can be used for bunch diagnostics at SINBAD facility (DESY, Germany).

Primary author(s) : Mr. POTYLITSYN , Alexander; ALEKSEEV, Boris

Presenter(s) : ALEKSEEV, Boris

Session Classification : Facilities and Advanced Detector Technologies

Track Classification : Facilities and advanced detector technologies