



Contribution ID: 91

Type: Oral

Studies on the Impact of a Non-Ideal ILC Helical Undulator on the Photon Beam Parameters and Protection of the Undulator Wall Against Synchrotron Radiation

Detailed simulations of the helical undulator with both ideal and realistic parameters have been performed in detail. The power deposited in walls due to secondary particles, which are produced when a photon passes through the mask material, are included. A possible mask design with a high photon absorption efficiency has been studied for three different materials.

The photon masks must be placed along the undulator line to keep the heat load in the undulator wall below the acceptable limit, which is 1 W/m.

Primary authors: ALHARBI, Khaled (DESY); RIEMANN, Sabine (DESY); MOORTGAT-PICK, Gudrid; USHAKOV, Andriy (IJCLAB); ALRASHDI, Ayash (KACST)

Presenter: ALHARBI, Khaled (DESY)

Session Classification: Accelerator: Particle Sources

Track Classification: Accelerator: Particle Sources