



Contribution ID: 220

Type: Poster

Uniform Magnetic Fields Effects on Secondary Electron Emission of Polycrystalline Copper

Tuesday 19 June 2018 18:00 (20 minutes)

The quest for high intensity proton circular accelerators calls for efficient electron cloud mitigation. Of particular interest is the electron cloud build-up in the steering dipole magnets necessary for the bending of particle trajectories in circular colliders. The electron cloud formation relates directly to the secondary electron yield of the accelerator's vacuum chambers surrounding the proton beams. Even though data on secondary electron yield in presence of a magnetic field are scarce, simulations show that magnetic field can influence the secondary electron yield. To better understand the dynamic of the electron cloud build-up, we designed a new experimental setup for measuring the secondary electron yield in presence of a DC weak magnetic field (few tens of Gauss). We report on preliminary results on the effect of a magnetic field –perpendicular to the surface –on the secondary electron yield of a polycrystalline copper surface.

Primary author: PETIT, Valentine (Ecole Doctorale Genie Electrique Electronique, Telecommunicatio)

Co-authors: ZANIN, Danilo Andrea (CERN); NEUPERT, Holger (CERN); Dr TABORELLI, Mauro (CERN)

Presenter: NEUPERT, Holger (CERN)

Session Classification: Poster Session Tuesday

Track Classification: Vacuum in Accelerators