

International workshop on non-invasive beam profile monitors for hadron machines and its related techniques: 3rd IPM workshop

Contribution ID: 9

Type: **not specified**

Space Charge Effects Studies for the ESS Cold Linac Beam Profiler

Tuesday, 18 September 2018 16:00 (30 minutes)

Five Ionization Profile Monitors are being built by CEA in the framework of the in-kind contribution agreement signed with ESS. The IPMs will be installed in the Cold Linac where the proton energy range they need to cover extends from 90 MeV to 2 GeV. trajectories of the ionized molecules and electrons created by the passage of the beam through the residual gas. In order to quantify and to develop a correction algorithm for these space charge effects, a code was initiated at ESS and completed at CEA Saclay with the possibility to include real case electric fields calculated with Comsol Multiphysics. A general overview of the code and its preliminary results are presented here.

Presenter: Dr BELLONI, Francesca (CEA Saclay)

Session Classification: Simulation codes