

MPS/CCI

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From :

Please send me copy(ies) of the note MPS/CCI/Note 74-42 by C. Bovet and C.D. Johnson.

NUMERICAL ANALYSIS OF ELECTRON COLLECTION IN THE IBS

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Abstract

Space charge effects in the IBS are computed by various simulation methods. Laplace equation is solved for the current electrode geometry by relaxation. Poisson equation is solved with actual beam density by fast Fourier transforms. Then a simulation of electron collection (in two-dimensional geometry) puts in light the IBS signal information which is related to space charge effect of both coasting and bunched proton beams. A clear description is given of four existing programmes.