Numerical Simulation of a Gridded Inductive Output Amplifier, S. LUETGERT, S. KRUEGER, PHILIPS RHW, Hamburg; A. GRUDIEV, D. MYAKISHEV, V. YAKOVLEV, Budker INP, Novosibirsk -

A set of codes for the numerical simulation of a gridded Inductive Output Amplifier has been developed in close collaboration between BINP and Philips RHW. The following problems are investigated: non-stationary gridded gun simulation, self consistent solution for beam-cavity interaction and passband calculations. The Finite Element Method is used for the field calculation in the electron gun. Space charge forces are taken into account by the long-wave approach. A special method is used to obtain a self-consistent solution for the beam-cavity interaction with a reduced number of iterations.