

Development of the Nonstationary Model for Beam Dynamic Simulation in Multisectional Accelerators*, M.I. AYZATSKY, NSC KIPT, Kharkov, Ukraine - For simulation of nonstationary beam dynamics in the accelerating systems we can use a model that is based on simultaneous solution of a wave equation and particle motion equations. If the processes under consideration are slow, there is a great simplification in the procedure of calculating of current integral which describe the current loading. For applying this approach to multisectional accelerators it is necessary to develop the way of calculating of such current integrals for each accelerating section with consecutive injection of particles from the previous section into the following one. We developed such model that can be used for simulation of longitudinal nonstationary dynamics in the multisectional accelerators, especially for study the energy spread and its compensation.

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