OPTIMISATION OF THE PARTICLES CONFINEMENT IN STELLARATOR WITH HELICAL DIRECTION OF LINES *B*=CONST

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Collisionless particle confinement in stellarator configurations with helical direction of the lines *B*=const on the magnetic surfaces is investigated numerically for a six-period system. The optimisation is performed with different penalty functions that are connected with the pseudosymmetry condition and the condition that the second adiabatic invariant $J_{||}$ forms closed contours. In addition, the effect of β on the particle confinement is studied.