

OPTIMIZATION OF THE TROUBLESHOOTING ROUTE IN LARGE ACCELERATORS

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Automation of the troubleshooting process is one of the main functions of the control system of large accelerators. Considering the linear accelerator functional structure as a consequence of linked blocks that compose a simple oriented chain two troubleshooting methods are compared: rather simple bisection method (which is not optimal in general case) and more complicated iterative method. Average troubleshooting expenditures are used as performance criteria of both methods. Results of efficiency estimation of using these methods for troubleshooting in a 50-sectional linear electron accelerator are presented.