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The influence of Iteration Number in PSO application for Research reactor TRIGA PUSPATI

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Abstract. Global best position is one of the components in Particle Swarm Optimization to determine the ultimate result among the best solutions with the smallest error. This paper describes how the iteration affected the global best value and performs different output of the research reactor TRIGA PUSPATI. The swarm number is the same for both cases, but the number of iterations are 20 and 10 were studied. Generally, different iteration number gives a different value of global best value which yields different proportional gain value. The studies found that, when these different proportional gain values were applied into the system, the power output showed that the differences between them are small.

Keywords: Global best position, iteration number, proportional gain