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Lie algebraic analysis and simulation of high-current pulsed beam transport in a solenoidal lens

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**摘要** Recent calculations of the transport of a high-current beam in a solenoidal lens have made progress to the second order with the Lie algebraic method. A review of the theory and our simulation to realize it will be described. Then we will present the results of simulation. A brief discussion on the space charge effect's contribution to the transportation will also be made.

**关键词** [solenoidal lens](#), [Lie algebraic](#), [space charge effect](#), [nonlinearity](#)

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