

Abstract Submitted  
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**Evaluation of a Novel Design for an Electrostatic Quadrupole Triplet Ion Beam Lens** L.R. BURNS, J.D. BOUAS, S. MATTESON, D.L. WEATHERS, Ion Beam Modification and Analysis Laboratory (IBMAL), University of North Texas — We describe the design and evaluation of an electrostatic quadrupole triplet lens constructed to focus ion beams of up to 200 keV in energy. The lens is very compact and incorporates a feature to induce octupole fields that can correct for spherical and other octupole-order aberrations. Two methods were used to evaluate the lens: observation of the focused beam spot on a specially fabricated target while systematically varying lens voltages, and the grid-shadow technique. The latter demonstrated that octupole-order aberrations were completely corrected in one direction when the lens quadrupoles were operated individually with appropriate octupole excitations.

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