Abstract Submitted
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2D Rad-MHD Model Assessment of Designs for Multiple-Shell Gas Nozzles for Z[1] J. THORNHILL, J. GIULIANI, A. VELIKOVICH, J. APRUZESE, Y. CHONG, J. DAVIS, A. DASGUPTA, Plasma Physics Division, Naval Research Laboraory, R. CLARK, Berkeley Scholars, Inc., B. JONES, C. COVERDALE, D. AMPLEFORD, C. JENNINGS, M. CUNEO, E. WAISMAN, Sandia National Laboratory, M. KRISHNAN, Alameda Applied Sciences Corp., P. COLEMAN, consultant — AASC is designing multiple-shell gas puff loads for Z. Here we assess the influence of the loads initial gas distribution on its K-shell yield performance. Emphasis is placed on designing an optimal central jet initial gas distribution, since it is believed to have a controlling effect on pinch stability, pinch conditions, and radiation physics [1]. We are looking at distributions that optimize total Ar K-shell emission and high energy (>10 KeV) continuum radiation. This investigation is performed with the Mach2 MHD code with non-LTE kinetics and ray trace based radiation transport.

[1] H. Sze, *et al.*, PRL, **95**, 105001 (2005).

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Joseph Thornhill
Plasma Physics Division, Naval Research Laboratory

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