

Abstract Submitted
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Simulation of ion transport in the first vacuum stage of an Inductively Coupled Plasma Mass Spectrometer¹ STEVEN SCHMIDT, ROSS SPENCER, Brigham Young University — An Inductively Coupled Plasma Mass Spectrometer (ICP-MS) is an instrument used to detect trace elements in a sample and analyze its composition. In an effort to better understand this instrument the United States Department of Energy is funding research to investigate the details of its operation. A computer code called FENIX utilizing the Direct-Simulation Monte-Carlo (DSMC) algorithm has been developed and is being utilized to understand the operation of this machine. The transport of trace ions in the presence of an ambipolar electric field through the first expansion region will be presented.

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