

Abstract Submitted
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Momentum transfer cross sections for the heavy noble gases AL-
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neering, Australian National University, Canberra, Australia — We have used our
relativistic optical potential method [1] to calculate the momentum transfer cross
sections for Ar, Kr and Xe from threshold to 1000 eV. The target ground state as
well as the open excited and ionization channels used in the optical potential have
been calculated using the MCDF program [2]. We have included 17 excitation chan-
nels for Ar, 26 for Kr and 15 for Xe. In the ionization channels, ionization of the
outer p, s and d shells were included for Kr and Xe while for Ar all electrons were
allowed to be ionized. Comparisons with previous calculations and experimental
measurements will be included. We also include analytic fits to our cross sections
to aid in plasma modelling studies.

[1] S. Chen, R. P. McEachran and A. D. Stauffer, *J. Phys. B* 41 025201 (2008)

[2] I. P. Grant, B. J. McKenzie, P. H. Norrington, D. F. Mayers and N. C. Pyper,
Comput. Phys. Commun. 21 207 (1980)

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