

Abstract Submitted
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Momentum transfer cross sections for the heavy noble gases A.D. STAUFFER, York University, Toronto, Canada, R.P. MCEACHRAN, ANU, 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 channels 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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