



# Potential Scattering in Atomic Physics

*P. G. Burke*

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## **Potential Scattering in Atomic Physics** P. G. Burke

This monograph was written while the author was a visitor at the Center for Theoretical Studies at the University of Miami, Coral Gables, Florida. The author wishes to thank Professor Behram Kursunoglu for the warm hospitality extended to him at the Center and to acknowledge the many interesting and fruitful discussions which he had with other visitors and with members of staff at the Center. Philip G. Burke v

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vii 1 Introduction In this monograph we study the scattering of a particle by a potential field with particular reference to elastic electron scattering by a neutral atom or by an ion. This subject is clearly of interest in its own right as a branch of quantum mechanical scattering theory. However, it also serves as an introduction to many of the basic theoretical concepts which are used in inelastic electron scattering and ionization. Consequently this monograph can be viewed as an introduction to texts where these subjects are treated.

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