

# Estimating Uncertainties of Theoretical Data for Electron Collisions with Atoms and Ions\*

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The recommendations of how to go about estimating the uncertainties in theoretical predictions of electron collision data for atomic and ionic targets, as outlined in a recent Topical Review [1], will be discussed. In order to do so, the basic ideas behind various methods used in such calculations will be summarized, as well as their (perceived) strengths and weaknesses. Examples, however, show that some of the statements made in standard textbooks on atomic collisions are not necessarily valid when it comes to electron collisions with complex, open-shell targets.

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[1] *TOPICAL REVIEW: Uncertainty Estimates for Theoretical Atomic and Molecular Data* H. K. Chung, B. J. Braams, K. Bartschat, A. G. Császár, G. W. F. Drake, T. Kirchner, V. Kokoouline, and J. Tennyson, *J. Phys. D* **49** (2016) 363002.