

# Electron-Impact Ionization of Be-like C, N, and O

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## Abstract

Previous experimental studies of the electron-impact ionization of Be-like C, N, and O have not explicitly accounted for the contribution of metastable  $2s2p\ ^3P$  ions in ion beam preparation, which has suggested some uncertainty in previously published cross sections and rate coefficients. In an effort to ascertain the accuracy of previously suggested cross sections and rate coefficients, the total electron-impact ionization cross sections of Be-like C, N, and O ions have been studied using the crossed beams apparatus at Oak Ridge National Laboratory with ions prepared by an electron cyclotron resonance ion source. The metastable fractions of the ion beams were measured using a He gas attenuation technique. Recommended cross sections and temperature dependent rate coefficients will be presented along with a comparison to various theoretical results.

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