Abstract Submitted
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Investigation of X-Ray Thomson Scattering Using A Statistical Approach[1] LAURA JOHNSON, Cornell University — We present a statistical method of computing x-ray Thomson scattering signals. This model uses average atom wave functions for both bound and continuum electrons, which are computed in a spherically symmetric, self-consistent potential. The wave functions are used to obtain electron distributions for a statistical approach to computing the scattering signals. We compare the differences between using distorted-wave continuum electrons and free-wave electrons in both the statistical approach and the impulse approximation. The results are compared to various experiments including experimental data taken at Cornell's Laboratory of Plasma Studies.

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