

X-ray Spectroscopy of Neon-like Ions at the NIST EBIT Facility

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Abstract

X-ray spectra of highly charged ions (HCIs) can be useful diagnostics for hot plasmas found in astrophysical objects. To provide benchmark data for the development of models and computational codes, HCIs are produced and confined within the controlled conditions of an electron beam ion trap (EBIT). Experiments at the NIST EBIT facility include the investigation of HCI excitations from closed-shell configurations, such as neon-like Fe XVII, Ni XIX, Cu XX, and Kr XXVII. Advances in X-ray quantum calorimetry have made it feasible to measure spectral features over the broad energy range of interest. We will present results obtained using the recently commissioned SAO microcalorimeter with a 1x4-array of NTD-Ge detectors.

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