

# X-ray Spectroscopy of Neon-like Xenon at the Dresden EBIT

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## Abstract

X-ray spectroscopic measurements of highly charged xenon ions produced in the Dresden electron beam ion trap (DEBIT) are presented and compared to simulation results. The measurements are done using both a Si(Li) solid state detector and a crystal diffraction spectrometer being equipped with a SiO<sub>2</sub> (10 $\bar{1}$ 0) crystal and an energy sensitive CCD camera. The simulation is performed by a code that calculates the charge state evolution in an EBIT by solving the particle and energy rate equations. In addition the energies of the most intensive lines of the wavelength dispersive spectrum are compared to calculations using the GRASP atomic structure code. The calculated charge states and energies are in good agreement with the experimental results.

