

The NIST Electron Beam Ion Trap Project

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An overview of work being carried out by the EBIT team [1] at NIST will be given, and data will be presented from the following topics: (1) test of bound state QED by measurement of the helium-like resonance lines in vanadium ($Z=23$) to less than 30 ppm absolute accuracy, (2) high resolution, broad-bandwidth x-ray spectroscopy of complex ions of astrophysical significance using a cryogenic microcalorimeter, (3) uv-spectroscopy on the Ti-like ($Q=22$) isoelectronic sequence out to $Z=83$, and (4) atomic scale imaging of nanostructures induced on graphite surfaces after bombardment with neon-like and gallium-like xenon ($Q=23$ and 44, at $Z=54$).

[1] <http://physics.nist.gov/MajResFac/EBIT/people.html>