

Abstract Submitted
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Gold Spectra Measurements from LLNL EBIT Plasmas M. MAY, G.V. BROWN, H. CHEN, H.K. CHUNG, M. GU, S.B. HANSEN, M.B. SCHNEIDER, K. WIDMANN, P. BEIERSDORFER, LLNL — Spectra have been recorded from gold that has been injected into the Lawrence Livermore Electron Beam Ion Trap (EBIT-II). Both mono-energetic and experimentally simulated Maxwell-Boltzmann (MB) plasmas were created for these measurements. The beam plasmas had energies of 2.75, 3.0, 3.6, 4.6, 5.5, 6.0, 6.5 keV. The MB plasmas had electron temperatures of 2.0, 2.5 and 3.0 keV. M-band gold spectra ($n = 4-3, 5-3, 6-3$ and $7-3$ transitions) were recorded between 1 - 8 keV from K-like to Kr-like ions in the x-ray. The emission of gold was recorded by crystal spectrometers and a micro-calorimeter from the Goddard Space Flight Center. A full survey of the recorded spectra will be presented along with line emission and charge state modeling from the flexible atomic code (FAC). Some comparisons with laser produced plasmas will be made. *This work performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344.

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