

Abstract Submitted  
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**Analysis of X-ray Spectra of High-Z Elements obtained on Nike with high spectral and spatial resolution**<sup>1</sup> YEFIM AGLITSKIY, Leidos, Reston, VA, J.L. WEAVER, M. KARASIK, V. SERLIN, S.P. OBENSCHAIN, Plasma Physics Division, Naval Research Laboratory, Washington, DC, YU. RALCHENKO, NIST, Gaithersburg, MD — The spectra of multi-charged ions of Hf, Ta, W, Pt, Au and Bi have been studied on Nike krypton-fluoride laser facility with the help of two kinds of X-ray spectrometers. First, survey instrument covering a spectral range from 0.5 to 19.5 angstroms which allows simultaneous observation of both M- and N- spectra of above mentioned elements with high spectral resolution. Second, an imaging spectrometer with interchangeable spherically bent Quartz crystals that added higher efficiency, higher spectral resolution and high spatial resolution to the qualities of the former one. Multiple spectral lines with X-ray energies as high as 4 keV that belong to the isoelectronic sequences of Fe, Co, Ni, Cu and Zn were identified with the help of NOMAD package developed by Dr. Yu. Ralchenko and colleagues. In our continuous effort to support DOE-NNSA's inertial fusion program, this campaign covered a wide range of plasma conditions that result in production of relatively energetic X-rays.

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