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On attaining eV energy resolution in an ionization energy shift at $\sim$ 60 keV[1] NINO PEREIRA, Ecopulse Inc., BRUCE WEBER, Naval Research Laboratory, JEFF VANHOY, US Naval Academy, JEFF CARROLL, Army Research Laboratory — The K-line energy of high atomic number atoms depends to some degree on the atom's ionization stage, hence a high-resolution measurement of the K-line energy could, under the right circumstances, become a way to diagnose the plasma's ionization. Recently, we could measure a blue-shift close to $\sim$10 eV in the Kα_2 line of iridium ionized in the Plasma-Filled Rod Pinch. with a technique based on the line's transmission through a filter with a near-coincident K-edge. The presentation disxusses the measurements and analyses done to improve the systematic energy resolution to below 3 eV, with additional measurements and analysis of the K-ege filter with radiation from cold iridium excited with a PIXE source.

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