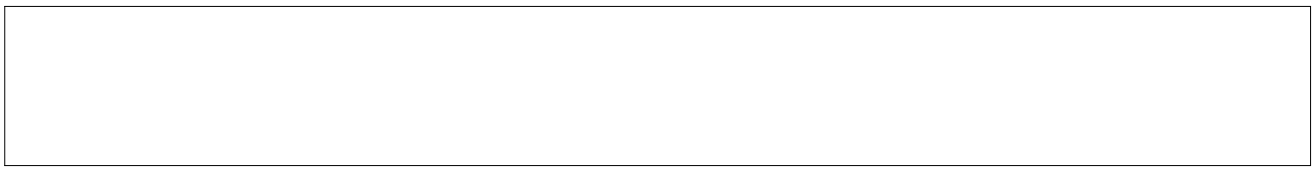

Near-coincident K-line and K-edge energies as ionization diagnostics

assumed to be dominated by a single transition, so that the edge shape can be found by integrating the filter material's life-time broadened K-shell emission line. The result is an arc-tangent, with characteristic width $2D$ indicated by the arrows. The dashed curve is a life-time broadened emission line of the radiating material. The energy at line center is within an edge width D, and the line's width is slightly larger than D

K-edge, $l/q_{\_K}$ $l/q_{\_K}$ $h\nu_{\backslash}$, is then found by integrating the Lorentzian of Eq. (1),

$$\left(\frac{l}{q}\right)_{K} \quad \int_{]}^{h\nu} f\ h\nu_{\backslash}\, d\ h\nu_{\backslash}$$

transmission through the Lu filter. The red lines correspond to the mass attenuation coefficients in Figure 5, and a nominal Lu filter with $T_{K\,,}$ 0.1. The lowest solid red line is for D_X

Where the selected ionization stages overlap the two codes give very similar results. The lower ionization stages show a blue-shift, as found in lower-Z atoms such as iron.[32] Surprising is the red shift found for ionization stages between Ir^{17} (Kr[4d^{10}4f^{14}]) and krypton-like Ir^{41} (Ar[3d^{10}4s^{2}4p^{6}]): this may come from a rearrangement of the shells as the ionization proceeds, perhaps reminiscent of the way the inner shells in the lanthanides are occupied. The more normal blue-shift returns for ionization stages higher than Ir^{41}

K

[34]J. F. Seely, U. Feldman, C. M. Brown, N. R. Pereira, L. T. Hudson, and E. Silver, Rev. Sci. Instrum. (to be published).
[35]J. F. Seely, B. V. Weber, D. G. Phipps, N. R. Pereira, U. Feldman, L. Hudson, and J. W. Schumer, presented at the 16th Conference on Radiation Processes in Hot Dense Matter [High Energy Density Phys. (to be published)].
[36]M. Polasik and M. Lewandowska-Robak, J. Phys. B **39**, 1169–1186 (2006).
[37]H.-K. Chung, M. H. Chen, W. L. Morgan, Y. Ralchenko, and R. W. Lee, High Energy Density Phys. **1**, 3 (2005), see nlte.nist.gov/FLY/.
[38]