Evaluated Gamma-ray Activation File (EGAF)

Publications

1. *Thermal Neutron Capture Cross Sections of Tellurium Isotopes*, I. Tomandl, J. Honzatko, T. von Egidy, H.-F. Wirth, T. Belgya, M. Lakatos, L. Szentmiklosi, Zs. Revay, G.L. Molnar, R.B. Firestone, and V. Bondarenko, Phys. Rev. C68, 067602 (2003).
2. *Revisiting the U-238 Thermal Neutron Capture Cross Section and Gamma-emission Probabilities from Np-239 Decay*, A. Trkov, G.L. Molnar, Zs. revay, S.F. Mughabghab, R.B. Firestone, V.G. Pronyaev, A.L. Nichols, and M.C. Moxon, Nucl. Sci. Eng. 150,336 (2005).
3. *Thermal neutron capture cross sections of the Palladium isotopes*, M. Krticka,R.B. Firestone, D.P. McNabb, B. Sleaford, U. Agvaanluvsan, T. Belgya, and Z.S. Revay, Phys. Rev. C 77, 054615 (2008).
4. *Thermal neutron capture cross sections of the potassium isotopes*, RB Firestone, M Krticka, Z Révay, L Szentmiklosi, T Belgya, Physical Review C 87 (2), 024605 10 (2013).
5. *Thermal neutron capture cross sections and neutron separation energies for $^{23}Na(n,\gamma)$*, R. B. Firestone, Zs. Revay, and T. Belgya, Phys. Rev, C **89**, 014617 (2014).
6. *Determination of the ^{151}Eu (n, g)$^{152m1,\,g}Eu$ and ^{153}Eu (n, g)^{154} Eu, Reaction Cross Sections at Thermal Neutron Energy*, MS Basunia, RB Firestone, Z Révay, HD Choi, T Belgya, JE Escher, A.M. Hurst, M. Krtička, L. Szentmiklósi, B. Sleaford, N.C. Summers, Nuclear Data Sheets **119**, 88-90, (2014).

Publications continued

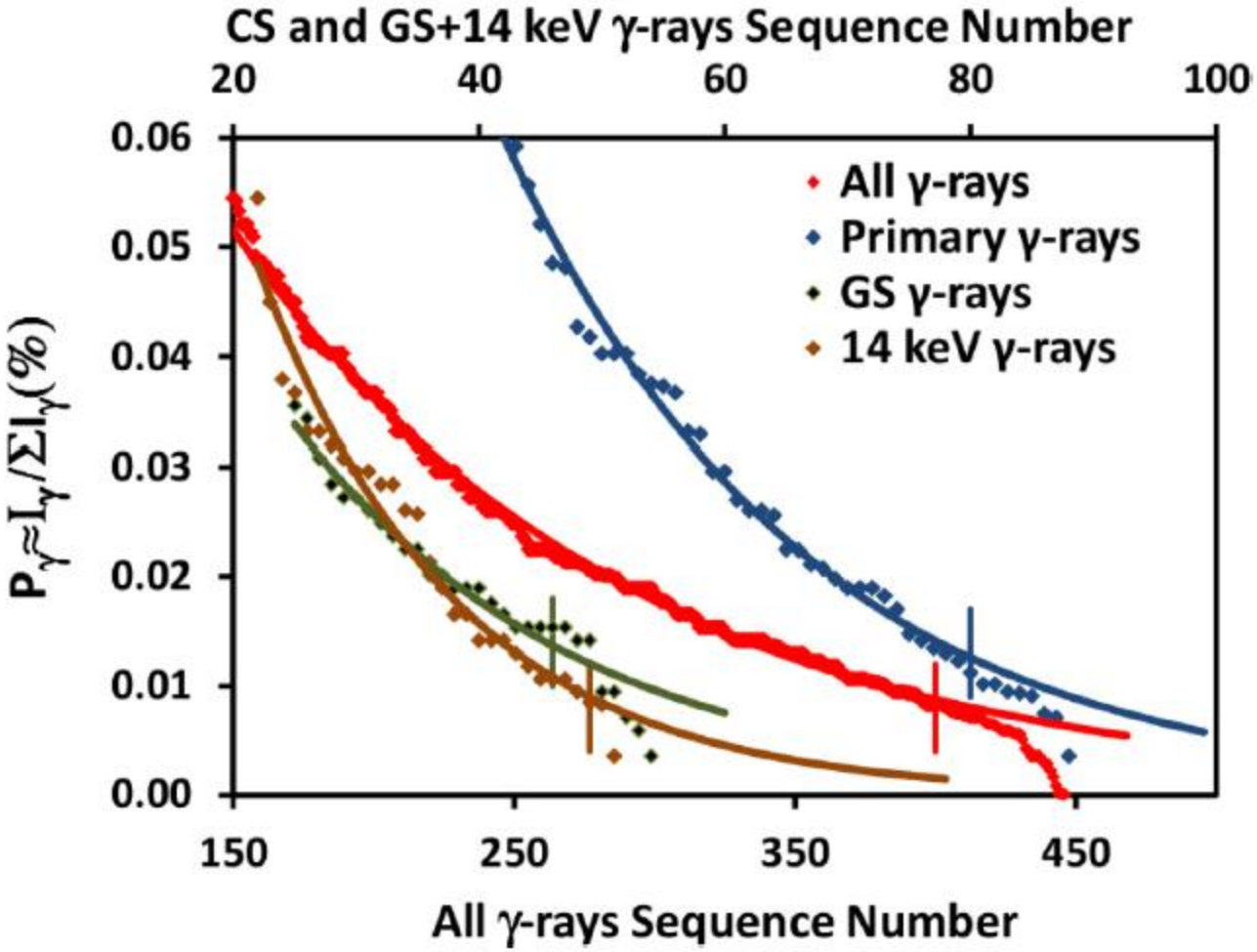
7. *Radiative capture cross sections of ^{155,157}Gd for thermal neutrons*, HD Choi, RB Firestone, MS Basunia, A Hurst, B Sleaford, N Summers, JE. Escher, Zs Révay, L Szentmiklósi, T Belgya, M Krtička, Nuclear Science and Engineering **177** (2), 219-232, 3 (2014).
8. *Investigation of the tungsten isotopes via thermal neutron capture,* A. M. Hurst, R. B. Firestone, B. W. Sleaford, N. C. Summers, Zs. Revay, L. Szentmiklosi, M. S. Basunia, T. Belgya, J. E. Escher, and M. Krticka, Phys. Rev. C **89**, 014606 (2014).
9. *Radiative thermal neutron-capture cross sections for the W 180 (n, g) reaction and determination of the neutron-separation energy*, AM Hurst, RB Firestone, L Szentmiklósi, BW Sleaford, MS Basunia, T. Belgya, J. E. Escher, M. Krtička, Zs. Révay, and N. C. Summers, Physical Review C **92** (3), 0 34615 (2015).
10. *Radiative thermal neutron-capture cross sections for the 180W(n,γ) reaction and determination of the neutron-separation energy,* A. M. Hurst, R. B. Firestone, L. Szentmiklosi, B. W. Sleaford, M. S. Basunia, T. Belgya, J. E. Escher, M. Krticka, Zs. Revay, and N. C. Summers, Phys. Rev. C **92**, 034615 (2015).
11. *Thermal Neutron Capture Cross Sections for ^{16,17,18}O and ^{2}H,* R.B. Firestone and Zs. Revay, Physical Review C **93**, 044311 (2016).
12. *Thermal neutron radiative cross sections for ^{6,7}Li, ^{9}Be, ^{10,11}B, ^{12,13}C, and ^{14,15}N,* R.B. Firestone, Phys. Rev. C **93**, 054306 (2016).

Publications continued

13. *Investigation of 186 Re via radiative thermal-neutron capture on 185Re*, D. A. Matters, A. G. Lerch, A. M. Hurst, L. Szentmikl***osi,*** J. J. Carroll, B. Detwiler, Zs. Revay, J. W. McClory, S. R. McHale, R. B. Firestone, B. W. Sleaford, M. Krticka, and T. Belgya, Phys. Rev. **C** 93 , 054319 (2016).
14. *Thermal neutron capture cross section for ^{56}Fe(n,g),* R. B. Firestone, T. Belgya, M. Krticka, F. Becvar, L. Szentmiklosi, and I. Tomandl, Phys. Rev. C **95**, 014328 (2017).

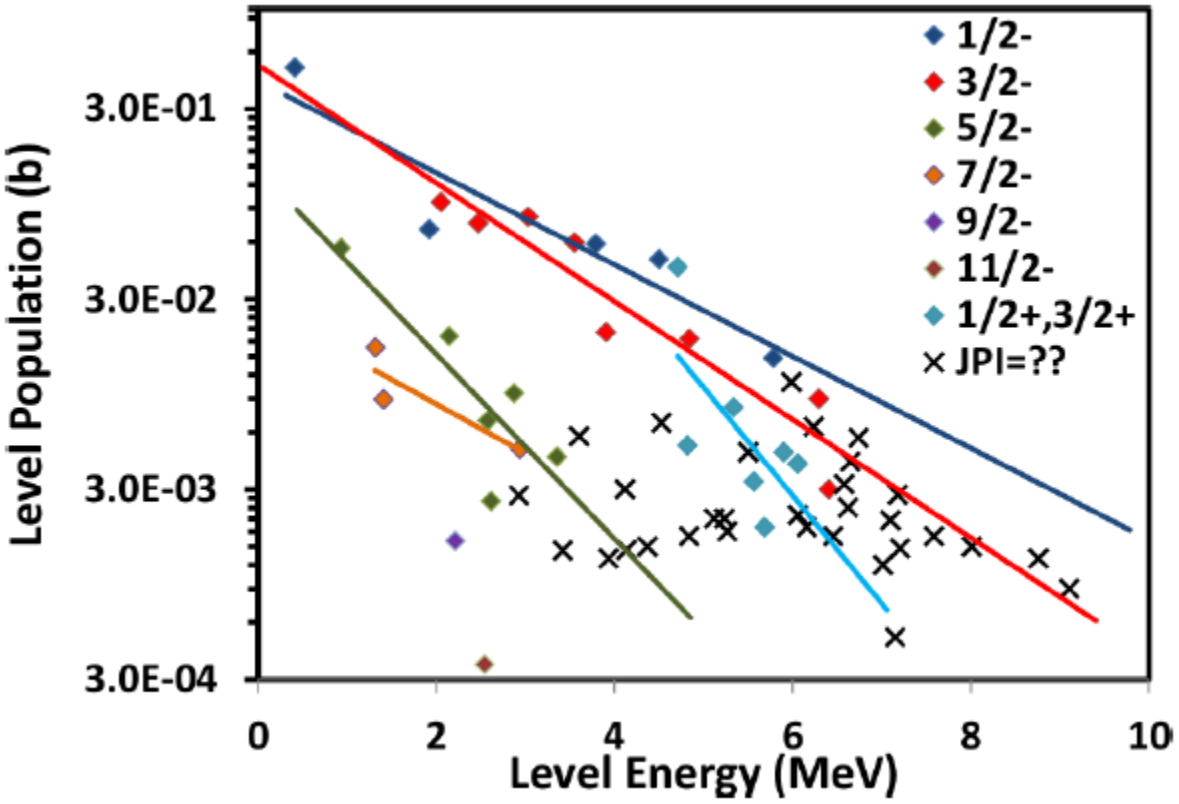
New measurements are underway for Ge and Zr isotopes at the Garching (Munich) Reactor

Analysis of missing (n,γ) intensity



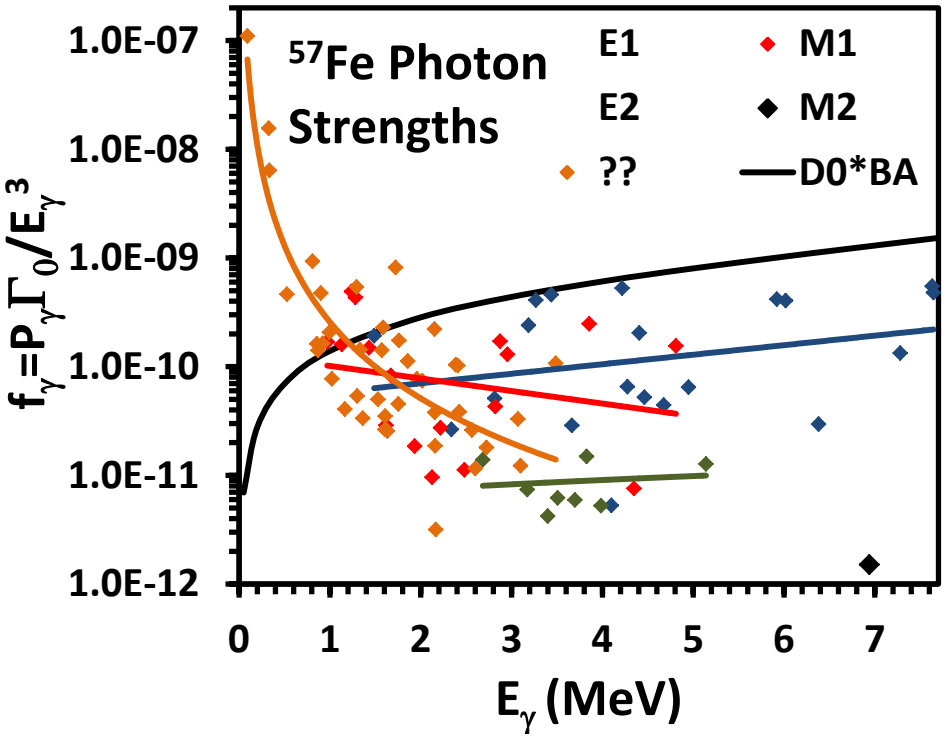
Intensities of weak transitions decrease exponentially. Missing intensity can be determined by integration.

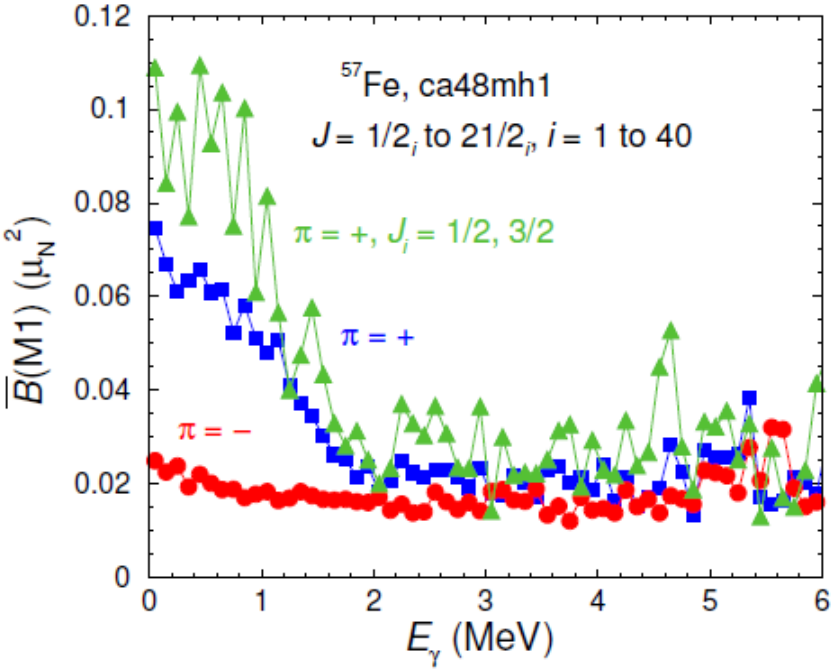
Spin dependence of (n,γ) intensity balance



Systematics of ^{55}Fe(n,γ) level feedings can help determine spin assignments.

Photon Strength





EGAF primary gamma ray photon strengths are being compiled for the IAEA Coordinated Research Project on Photonuclear Data and Photon Strength Functions.

M1 low energy upbend predicted by Shell model calculation.