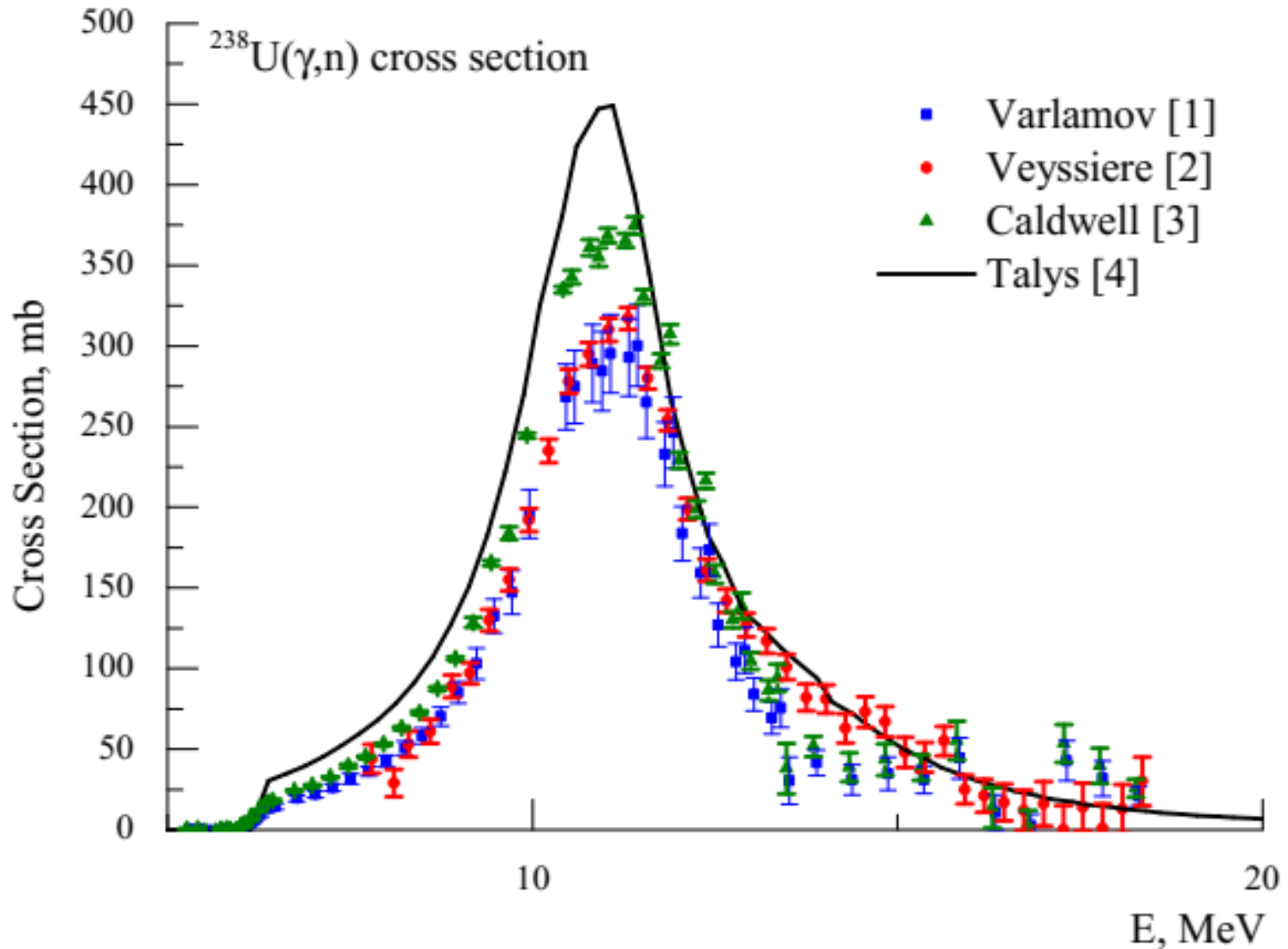
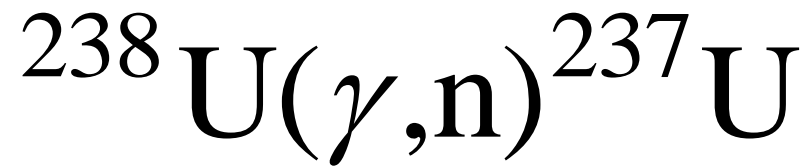


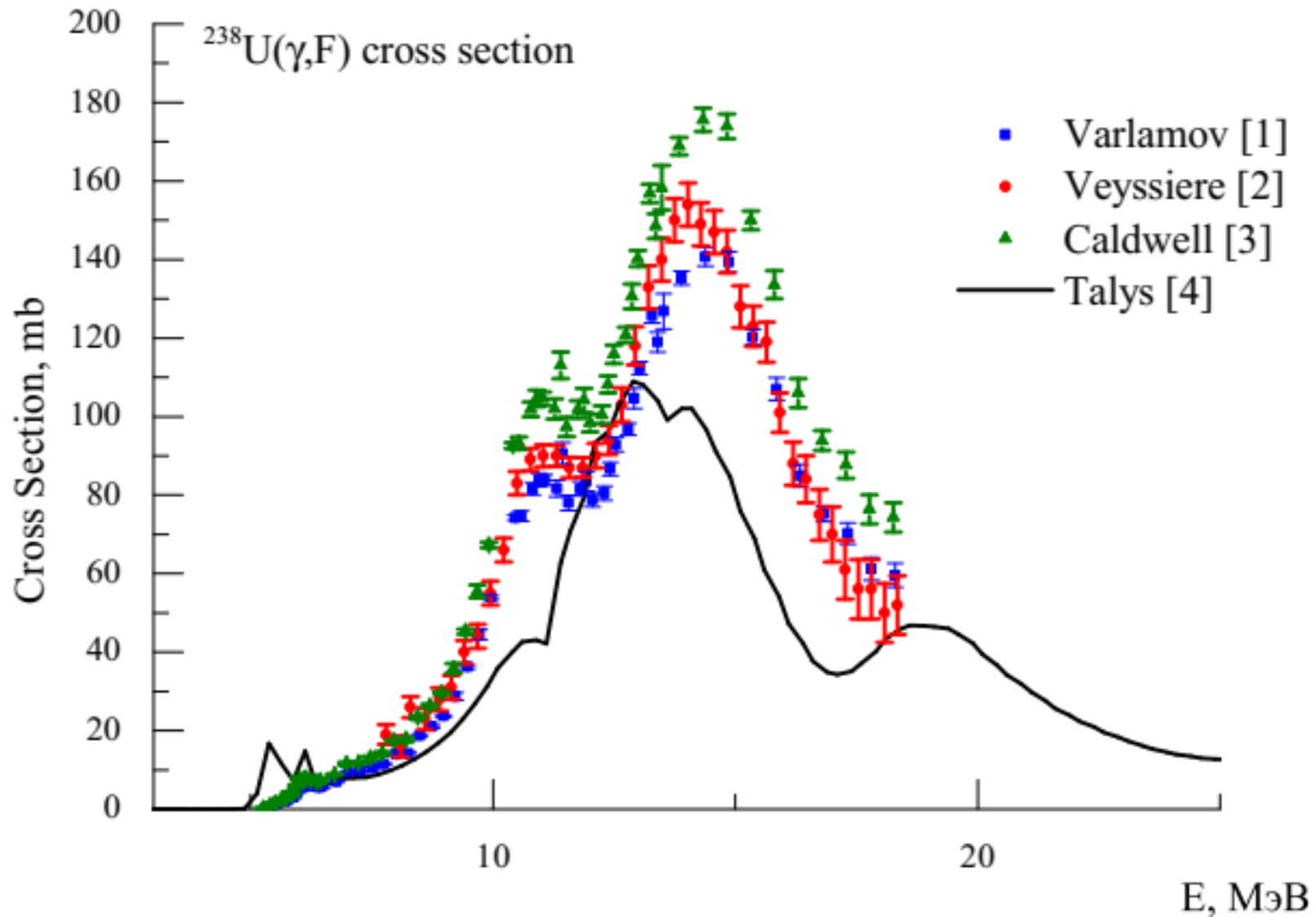
Фоторасщепление ^{238}U

Белышев С.С., Иванова Н.В., Ишханов Б.С.,
Кузнецов А.А., Попова М.М., Ханкин В.В.

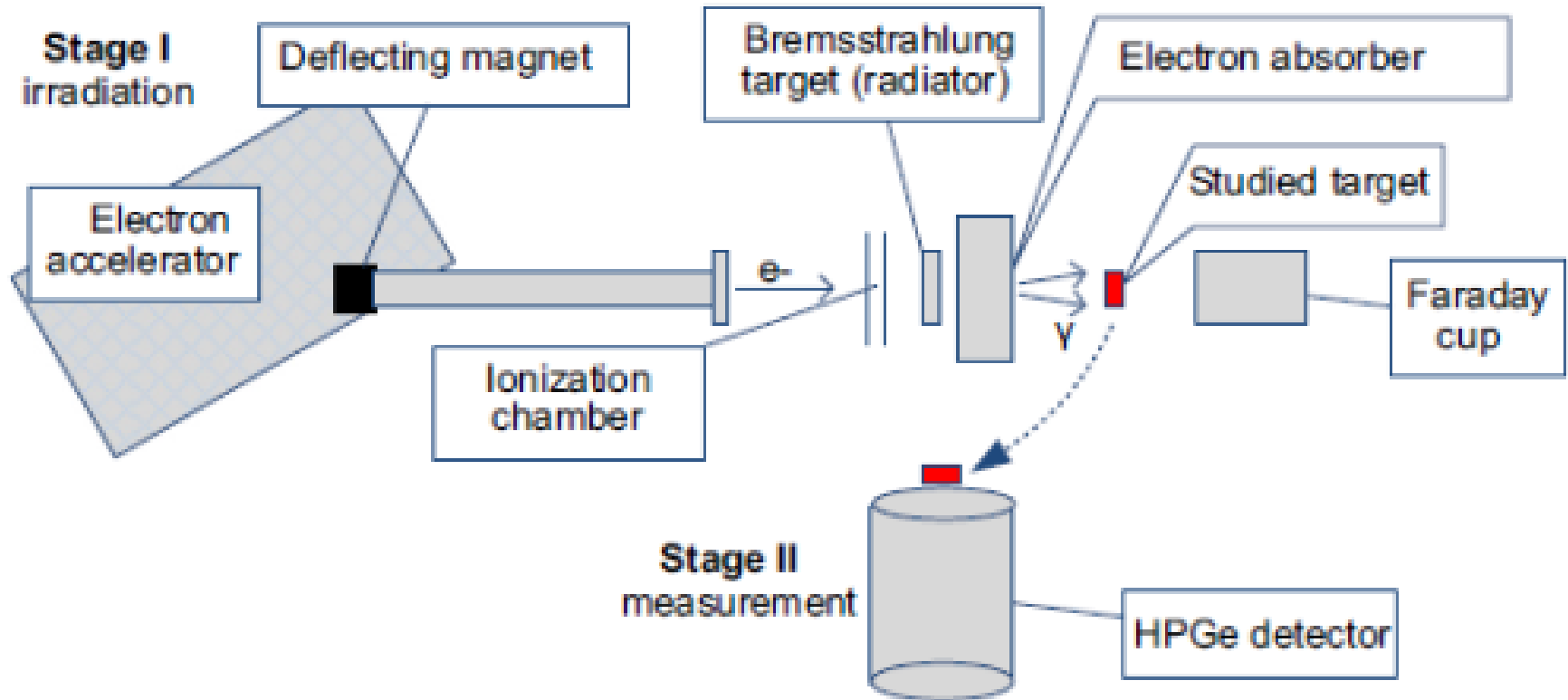
Ломоносовские чтения 2018



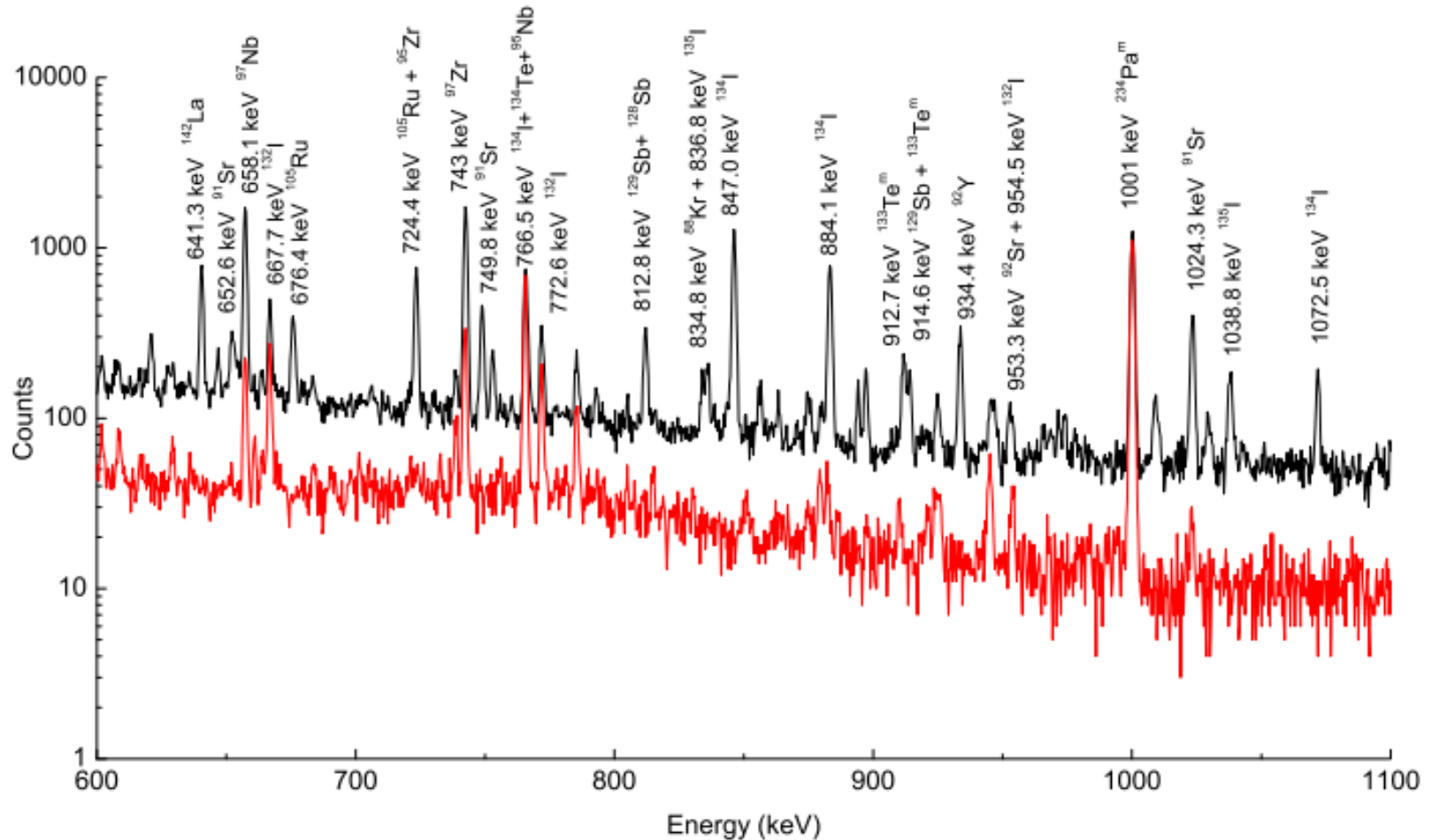
$^{238}\text{U}(\gamma, F)$



Методика эксперимента



Методика эксперимента



Результаты

	Эксперимент	Veysire	TALYS
	$\Upsilon, 1/e$	$\Upsilon, 1/e$	$\Upsilon, 1/e$
g,F	4.90E-06	8.81E-06	7.69E-06
g,n	8.17E-06	1.35E-05	1.81E-05
F/n	0.61	0.65	0.43
g,p	3.58E-08		9.08E-09

$$Y(E_e) = \int_{E_{\text{thr}}}^{E_e} \phi(E_\gamma, E_e) \sigma(E_\gamma) dE_\gamma$$

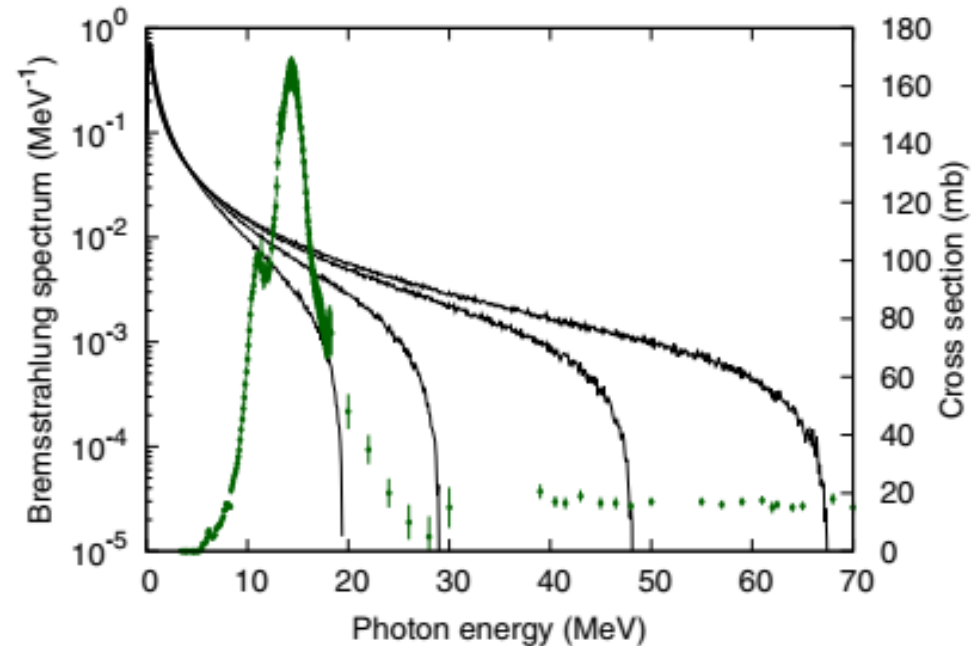
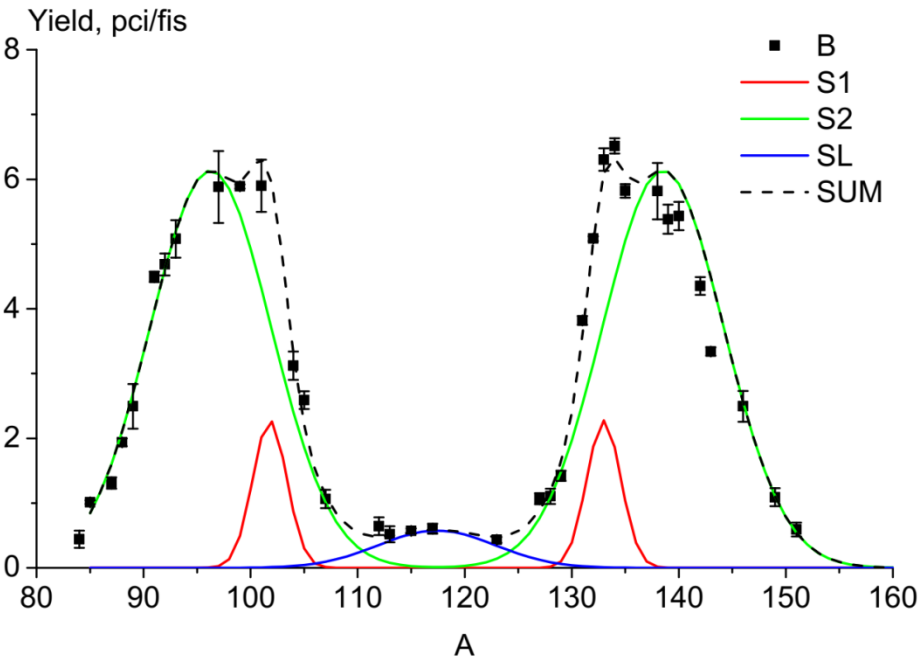


Table 3 Comparison of $^{238}\text{U}(\gamma, n)^{237}\text{U}$ reaction cross-section obtained from the bremsstrahlung spectrum of end-point energies of 8 and 10 MeV and flux-weighted average of mono-energetic photon

Bremsstrahlung energy (MeV)	Experimental cross-section (mb)	Cross-section using literature [Ref. 8] (mb)	Cross-section using TALYS (mb)
8	10.575–22.467	16.752	23.318
10	49.033–69.776	48.390	63.860

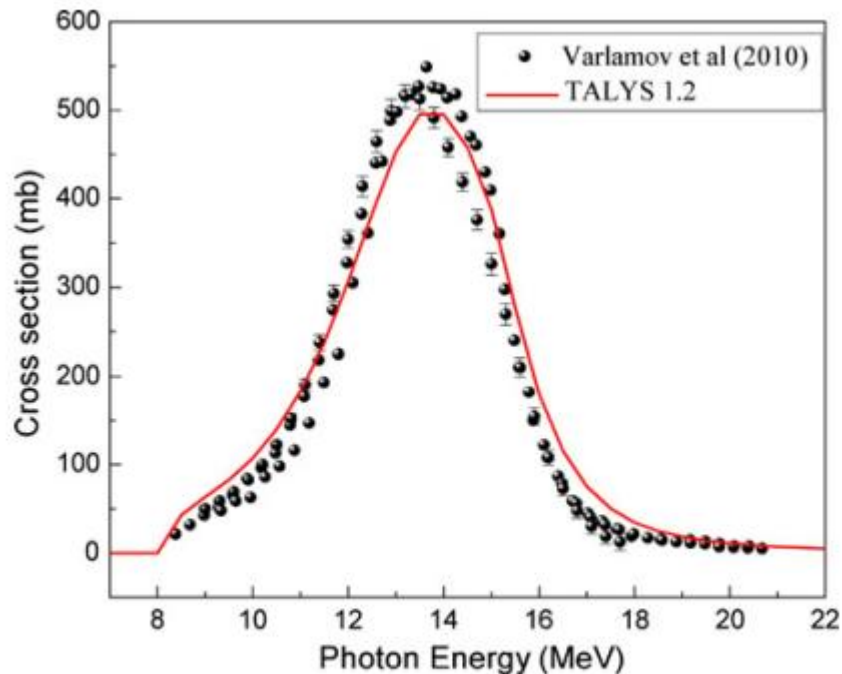


Fig. 6 Plot of experimental and theoretical $^{197}\text{Au}(\gamma, n)^{196}\text{Au}$ reaction cross-section as a function of photon energy

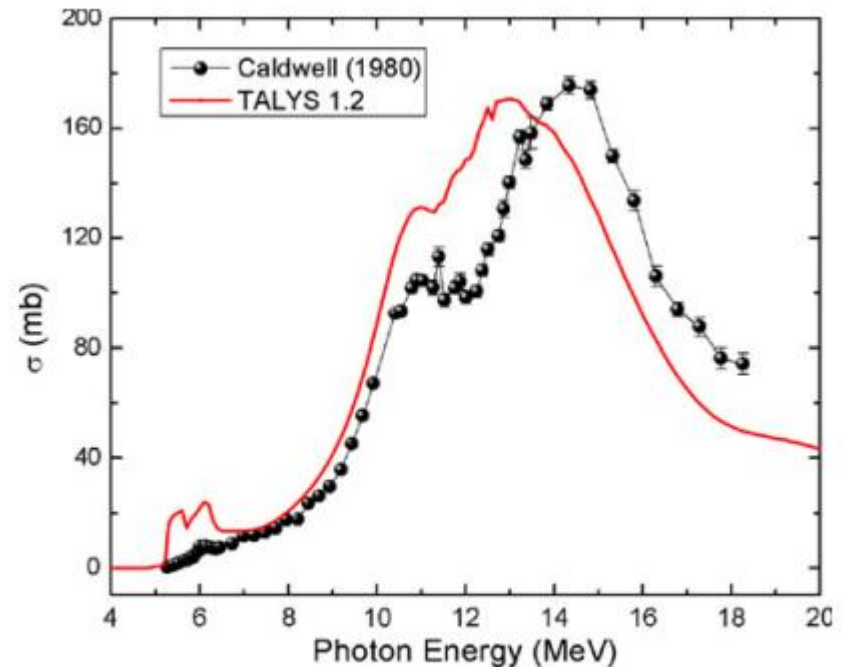


Fig. 5 Plot of experimental and theoretical $^{238}\text{U}(\gamma, f)$ reaction cross-section as a function of photon energy