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Memo CP-D/693

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To: Distribution
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Subject: Dictionary 236 (Quantity codes) - ,INT,,RES

The quantity code ,INT, ,RES (cross section integral over incident energy at resonance) has been used in only one entry (13642.003), which gives $^{236}\text{U}(n,f)$ integrated cross section defined as follows [1]:

$$\int \sigma_f dE = \pi \sigma_0 \Gamma_f / 2,$$

where σ_f , σ_0 and Γ_f are the fission cross section, total cross section and fission width. This is the definition of the fission area. REACTION of 13642.003 must be

(92-U-236 (N , F) , , ARE).

To avoid misuse of this quantity code, I propose to make this quantity code obsolete.

Dictionary 236 (Quantities)

,INT, ,RES *Obsolete*

This article gives the property of 4 resonances (1.280, 2.959, 6.300 and 10.400 keV), which are near the upper boundaries of major evaluated libraries (1.5 keV for ENDF/B-VII, JEFF-3.1, ROSFOND-2010 and CENDL-3.1; 4.0 keV for JENDL-4.0.)

Reference

[1] W.E. Parker et al., Phys. Rev. C49(1994)672.

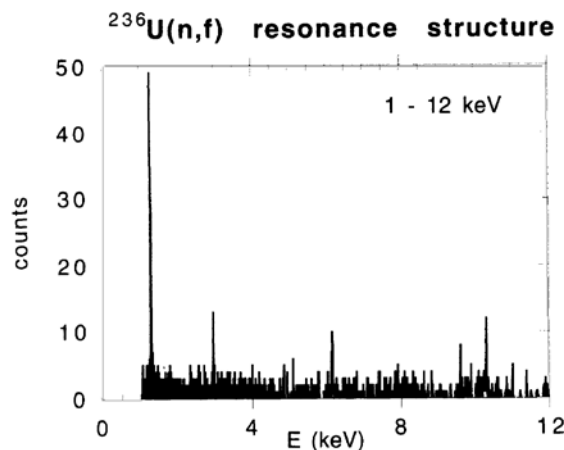


FIG. 3. The $^{236}\text{U}(n, f)$ cross section from 1 to 12 keV. Data indicate four resonances at 1.280, 1.2688, 6.300, and 10.400 keV. A possible fifth resonance is seen at 9.6 keV.

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