The experimental work described in the article was performed at Brookhaven National Laboratory (BNL) in the Summer of 1961, shortly after the ^{164}Dy thermal-neutron activation cross section had been measured at the same laboratory[2], which made evident the advantage in the use of ^{164}Dy as the thermal-neutron flux detector for normalization of the ^{176}Lu activation. This was very likely the first use of the detector-pair Lu-Dy for thermal-neutron spectrum investigations. Due to various reasons, the experimental part of the article was written in early 1964, while the THERMOS calculation was not performed by H. Honeck until 1965.

At the time when the article was revised, the publication of the Technical Note by J. Smit and R. J. J. Stamm'ler[3] was known to me and, obviously, to the Editor of *Nuclear Science and Engineering*. I did not feel obliged to modify the text of my article to include a reference to such interesting work, since the two experiments had been carried out independently, and were in fact different applications of a rather obvious choice; i.e. the use of a detector with a low value for the ratio "resonance integral/thermal cross section" to normalize the Lu activation rate. In particular, my article[1] was concerned with the study of thermal-neutron spectrum variations in the fuel and in the moderator in a light-water-moderated lattice, as a function of the moderator-to-fuel volume ratio in the range from 1:1 to 4:1, while Smit and Stamm'ler[3] considered essentially moderator composition and temperature effects in a lattice with a moderator-to-fuel volume ratio of about 4:1.

The differential technique reported by Smit and Stamm'ler yields indeed more detailed information than the integral technique described by Tassan[1]. I do not believe, however, that this represents any basic improvement of the method, since both integral and differential techniques have been used for similar types of measurements over quite a number of years. In this respect, therefore, several well-known techniques may be chosen in association with the use of the Lu-Dy detector-pair, depending on the utilization of the data, the equipment actually available, etc.

Incidentally, S. Guardini and S. Tassan have recently tested satisfactorily the use of 2-mm-diam low-density Lu-Dy detector pairs for the determination of the fine structure of the thermal-neutron spectrum index variation across clustered fuel elements ("Ispra Internal Report," 1966); clearly this procedure presents some advantage over the technique described by Smit and Stamm'ler, since, for instance, it makes practically negligible the perturbation effects caused by the detectors themselves, but again the idea is obvious; the point is just to test the fact that one obtains, by careful work, experimental accuracies adequate for the further use of the data. Actually, it might well be that this procedure had been already adopted by others: I am not informed of it, but believe that the matter is of little importance.

As far as the discrepancy between measured and calculated values is concerned, it seems to me that the discrepancy in the data of Ref. 1, although being larger than that in the data of Ref. 3, has essentially a comparable order of magnitude.

It is certainly possible to ascribe the discrepancy observed in the data of Ref. 1 to experimental errors (as may be done in general for any experiment), but the arguments brought by R. J. J. Stamm'ler are in my opinion not quite pertinent, in the sense that they also apply to the work in Ref. 3; in particular, the neutron-streaming effect through the 0.001 + 0.001-in.-thick aluminum catchers covering the 0.005-in.-thick Lu-Al foil is less important than the same effect through the Lu-Al foil itself (and this effect is probably the same for the setup used in Ref. 3).

Also, the lutetium content of the Lu-Al foils used in Ref. 1 was nominally 4% (and not 10% as erroneously indicated in the text of the article), that is, the same as that of the detectors used in Ref. 3. The flux-hardening effect in the moderator was then comparable in the two cases.

Evidently there is still room for appreciable refinement both in the experimental techniques and in the methods for the analysis of the data of thermal spectrum index measurements (and not only using Lu-Dy detector-pairs), and a considerable amount of work in this line is being carried out at several laboratories, besides that quoted in Refs. 6 and 7 of Ref. 3.

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[2] R. SHER, S. TASSAN, E. WEINSTOCK, and A. HELLSTEN, *Nucl. Sci. Eng.*, **11**, 369 (1961).
[3] J. SMIT and R. J. J. STAMM'LER, *Nucl. Sci. Eng.*, **24**, 90 (1966).

Corrigenda

S. PEARLSTEIN and R. F. MILLIGAN, "Thermal Cross Section and Resonance Integrals of Cadmium-114," *Nucl. Sci. Eng.*, **26**, 281 (1966).

The authors request correction of the first entry of the first column of Table I of their manuscript. The uncertainty is ± 0.015 so the entry should read 0.300 ± 0.015 (barns).

M. M. R. WILLIAMS, "The Thermal-Neutron Milne Problem with a Two-Term Degenerate Kernel," *Nucl. Sci. Eng.*, **27**, 511 (1967).

The definition of η_{ij} in Appendix I, p. 518, should read

$$\eta_{ij} = \int_0^\infty M(E)\, \Sigma_i(E)\, \Sigma_j(E)\, \chi[u - \Sigma_0(E)]dE ,$$

where $\chi(u) = 1$ for $u > 0$, and zero for $u < 0$.

The η_{ij} are now functions of u and thus the value of the square bracket is

$$[\,] = \frac{1}{2} \int_0^{t_{max}} \frac{[a_{01}\, \eta_{01}(t) + a_{11}\, \eta_{11}(t)]\, t\, \tau - (1/t)\, dt}{(1 + St)\,[\mu + t\, \Sigma_0(E)]} .$$

In the text, this correction implies that all η_{ij} are to be included in the integrands of the kernels K, K^*, K^{**}, R^*, and R^{**} as the case may be.

The author is indebted to Dr. Jacek Arkuszewski, whose recent paper, *Nucl. Sci. Eng.*, **27**, 104 (1967) illustrates this point.