It can be seen from Table I that there is a satisfactory agreement within the range of errors between the theory and experiment.

IV. EXTENSION AND CONCLUSION

There is one more partial process in the low energy region, namely, coherent scattering, even though of negligible contribution. However, in any of the previous investigations[1-3] no mention is made about this. Also since insufficient experimental data are available, the effective atomic numbers for this process were determined in two typical alloys, solder and bell metal making use of the theoretical values and the procedure already mentioned. These results along with those for other partial processes are given in Table II. It can be seen from Table II that the effective atomic number for incoherent scattering is the smallest, whereas that for the photoelectric process is the highest. At any energy, the net effect due to all these numbers is the number for the total gamma-ray interaction. Consequently, the net effect depends on the relative contributions of the partial processes. Hence, the gamma-ray interaction varies with energy. But this total effect will be nearest to that for the partial process which dominates over the others at a particular energy.

TABLE II

Effective Atomic Numbers

Partial Process	Solder	Bell Metal
Coherent	69	33
Incoherent	67	32
Photoelectric	72	36
Pair production	70	33

It may also be noted that the differences in the effective atomic numbers for partial processes is large if the alloy contains very high Z elements and a wide range of elements. Naturally the variation of the value for total effect will be large in these cases.

Thus, it may be concluded that as far as the partial processes are concerned, elements of equivalent atomic numbers of the corresponding alloys can be used. However, for total interaction, the element to be used in place of an alloy varies with energy. It is hoped that these findings will be useful for technological and engineering applications.

Corrigendum

K. NISHINA and A. Z. AKCASU, "Neutron Wave Analysis in Finite Media," *Nucl. Sci. Eng.*, **39**, 170 (1970).

On page 171, in the second term on the right-hand side of Eq. (5) a factor of v' is missing. Accordingly, Eq. (5) should read:

$$v'\Sigma_s(v' \to v) = \beta_0 v'\Sigma_i(v')M(v)v\Sigma_i(v) + \Sigma_e(v)v'\delta(v - v') \quad .$$

On page 172, the sentence below Eq. (17a) should read:

Note that $Q_n(v_s, i\omega)$ can be written in terms of the expansion coefficient of the distributed source as

$$Q_n(v_s, i\omega) = S_n(v, i\omega)\Sigma_i(v_s)/\Sigma_s(v_s \to v) \quad ,$$

where

$$S_n(v, i\omega) = \int_0^c S(x,v,i\omega)\phi_n(x)\,dx \quad .$$

On page 173, the first term on the right-hand side of Eq. (26) should be multiplied by (-1), giving

$$-\frac{1}{2\pi i}\int_\Gamma dz\ \Phi(x,z,i\omega) \quad .$$

On page 174, in Eq. (37a) the argument of the exponential should be $\mp s_0 c$, and the equation should read:

$$R_0(\pm s_0) - \exp(\mp s_0 c)R_c(\pm s_0) = 0 \quad .$$