

Corrigendum

Y. A. CHAO, M. B. YARBROUGH, and A. S. MARTINEZ, "Approximations to Neutron Escape Probability and Dancoff Correction," *Nucl. Sci. Eng.*, **78**, 89 (1981).

We have found an error in the computing code used for this work. As a result, the parameterization for Dancoff corrections of hexagonal lattices, Eq. (13), and the corresponding accuracy of the approximation, Table III, should be revised. Due to the error, the expression used in the code for the Dancoff correction of hexagonal lattices is not Eq. (7), but some other erroneous expression. This error is reflected in the apparent inconsistency that, to the same accuracy, two parameters were needed for the hexagonal case [Eq. (13)], while only one was needed for the square case [Eq. (11)]. The correction for the error removes this inconsistency. Equation (13) should now be replaced by

$$A_2 = -0.65 \quad (13)$$

and Table III should be revised as shown.

It should be emphasized that the fit is a rough eyeball fit with no attempt of optimization. It is also found that a fit with two parameters in A_2 substantially reduces the errors for both cases of square and hexagonal lattices. However, we think the reported one-parameter approximation may be adequate for most applications.

TABLE III
Accuracy of the Approximation for Hexagonal Lattice*

$$(D_{approx} - D_{Carlvik}) \times 10^4$$

| Σd | r/d | | | | | | | |
|------------|------------|------------|-----------|------------|----------|----------|----------|----------|
| | 0.10 | 0.14 | 0.20 | 0.30 | 0.40 | 0.48 | 0.49 | 0.50 |
| 0.1 | -33(+24) | -85(+64) | -80(+61) | -36(+28) | -7(+5) | -1(0) | -1(+1) | -1(0) |
| 0.2 | +118(-96) | -45(+37) | -122(+94) | -85(+64) | -21(+13) | -2(+1) | -3(+2) | -1(+1) |
| 0.4 | +257(-282) | +79(-81) | -93(+73) | -145(+108) | -51(+32) | -8(+4) | -8(+5) | -4(+2) |
| 0.6 | +233(-360) | +120(-165) | -44(+21) | -159(+119) | -76(+46) | -13(+6) | -13(+8) | -7(+4) |
| 1.0 | +113(-389) | +81(-236) | -5(-65) | -135(+92) | -99(+57) | -25(+11) | -23(+12) | -15(+9) |
| 1.5 | +25(-396) | +16(-249) | -16(-120) | -95(+34) | -95(+49) | -34(+13) | -32(+17) | -25(+16) |
| 2.0 | -8(-334) | -15(-236) | -29(-143) | -69(-17) | -77(+28) | -34(+11) | -34(+17) | -34(+24) |
| 3.0 | -17(-261) | -24(-190) | -34(-143) | -45(-82) | -35(-27) | -16(-4) | -25(+12) | -45(+40) |
| 4.0 | -11(-198) | -16(-142) | -25(-120) | -31(-107) | -5(-79) | +18(-3) | -2(-1) | -48(+55) |
| 5.0 | -6(-148) | -9(-101) | -15(-93) | -21(-108) | +15(-12) | +55(-6) | +26(-17) | -48(+71) |
| 6.0 | -2(-111) | -5(-71) | -9(-69) | -14(-99) | +25(-14) | +90(-9) | +53(-35) | -46(+85) |

*For comparison, $(D_{Sauer} - D_{Carlvik}) \times 10^4$ is given in parenthesis.