Correction to paper "Integral representation for even positive definite functions"

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Professor A. Edward Nussbaum has kindly drawn our attention to a mistake in our paper with the above title, which appeared in Ann. Polon. Math. 16 (1965), pp. 267-283. On page 278, line 11 from the top and on page 279 line 8 from the bottom, it is falsely stated that

\[ K(x, y)|_{y_2=\pm x_1 \pm x_2^2} = 2f(x_1+y_1, 0) + 2f(x_1-y_1, 0). \]

The correct form should be:

\[ K(x, y)|_{y_2=\pm x_1 \pm x_2^2} = f(x_1+y_1, 2x_2^2) + f(x_1-y_1, 2x_2^2) + f(x_1+y_1, 0) + f(x_1-y_1, 0). \]

This change affects the statement of Theorem 1. In the case of two variables, the new statement is:

Let \( f(x_1, x_2) \) be a continuous even positive definite (e. p. d.) function and assume that the e. p. d. functions \( f(x_1, x_2^0) + f(x_1, 0), f(x_2^0, x_2) + f(0, x_2) \) (of one variable) have a unique integral representation for every fixed \( x_2^0, x_1^0 \). Then \( f(x_1, x_2) \) has a unique integral representation of the form (2'), where \( d_s(t) \) is even and \( \int_{-\infty}^{\infty} |e^{itx}| d_s(t) < \infty \) for all \( x \).

The corollary to Theorem 1 now becomes:

If \( f(x_1, x_2) \) is an e. p. d. function satisfying

\[ f(x_1, x_2^0) = O(\exp(ax_1^0)), \quad f(x_1^0, x_2) = O(\exp(ax_2^0)) \]

for any \( x_2^0, x_1^0 \) where \( a \) is a constant (depending on \( x_2^0, x_1^0 \), then \( f(x_1, x_2) \) satisfies (3) (with another \( a \)).

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