Correction to "Mutual Coupling between Parallel Plate Waveguides"

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In the above paper,[1] due to an error in the computer program, Figs. 5, 7, and 9 show incorrect results. The correct results are given in the revised figures shown here. The vertical axis in Fig. 5 appears as $|F(\theta)|^2$, where $F(\theta)$ is related to (19) by

$$\phi^s(\rho,\theta) = \left(\frac{2}{\pi K\rho}\right)^{1/2} \exp\left[i(K\rho - \pi/4)\right]F(\theta).$$

The preceding corrected results are compared with the results of other methods, which will be published at a later date. Other necessary corrections are as follows.

In (49), the argument of the gamma function should be $(n+1)/2$. Fig. 4(b) and (c) must be interchanged. In (67), the argument of the exponential is $-ka \sin \theta$. In the second line, after (69), $x = d$ must be replaced by $x = a$. In the third line after (72), (63) must be replaced by (62). Equation (76) should appear as

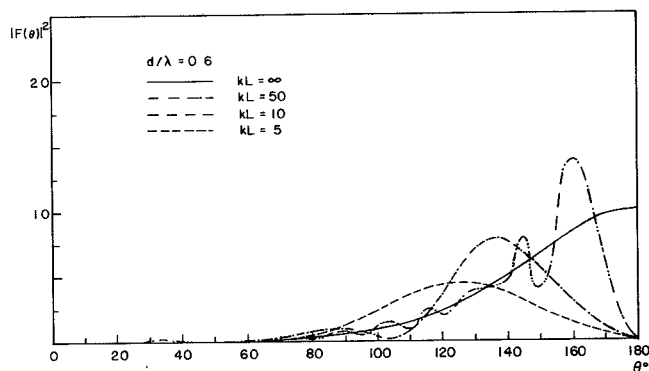$$\phi_{t,2,B}(x,z) = \sum_{m=1,3,5\cdots}^{\infty} T_{l,m}^{(B)} \cos\left(\frac{m\pi}{2a}x\right)\exp\left(-\gamma_m z\right). \quad (76)$$

Fig. 5. Radiation pattern of $TE_{0,1}$ mode.

[1] Y. E. Elmoazzen and L. Shafai, IEEE Trans. Microwave Theory Tech. (1973 Symposium Issue), vol. MTT-21, pp. 825–833, Dec. 1973.
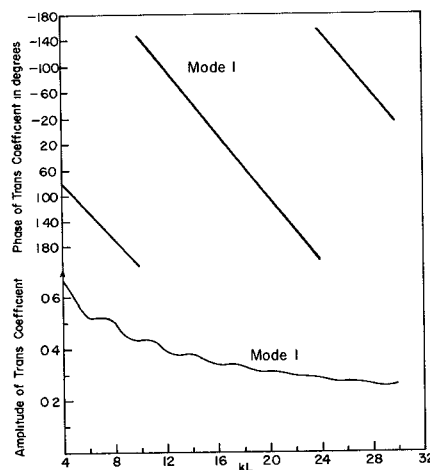

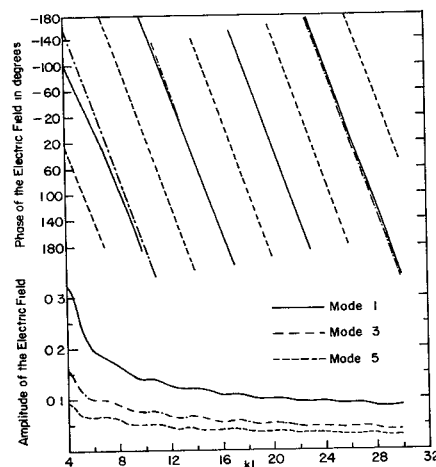Fig. 7. Transmission coefficient of the $TE_{0,1}$ mode for $d/\lambda = 0.6$.

Fig. 9. Electric field at the center of the open end of the coupled waveguide for an exciting $TE_{0,1}$ mode with $d/\lambda = 0.6$.