ERRATA

K_2^0 DECAYS AND INTERACTIONS. D. Luers, I. S. Mittra, W. J. Willis, and S. S. Yamamoto [Phys. Rev. Letters 7, 255 (1961)].

On page 257, the first line at the top of the page reads: "Using the $\Delta I = \frac{1}{2}$ rule, he predicts $a = -0.0109 \pm 0.022$. We find $a = 0.0171 \pm 0.0065$." It should read: "We find $a = -0.0171 \pm 0.0065$."

FIRST-ORDER TERRESTRIAL ETHER DRIFT USING THE MÖSSBAUER RADIATION. Martin Ruderfer [Phys. Rev. Letters 5, 191 (1960)].

The theory of the proposed experiment is incomplete because the first-order variation of frequency with motion is not considered. In the Fitzgerald-Lorentz contraction theory, the frequency of a moving clock is $f_0(1 - w^2/c^2)^{1/2}$, where f_0 is the frequency when the clock is at rest in the ether and w is its velocity through the ether. For the radiator at the center of the turntable, $w = v$ and the frequency, f, of the radiator is

$$f = f_0(1 - v^2/c^2)^{1/2}.$$

For the absorber, $w = |\vec{v} + \vec{\omega}_S|$ and the frequency, f_a, of the absorber is

$$f_a = f_0[1 - (\omega^2 s^2 + v^2 - 2\omega s v \sin\theta)/c^2]^{1/2}.$$

The relative frequency shift due to clock motion is, to first order,

$$|\Delta f/f|_{\text{cl}} = (f_a - f)/f = \omega s v \sin\theta/c^2.$$

It is readily verified that this is also obtained when the radiator is not at the center of the turntable. This frequency shift is equal to the frequency shift found due to phase shift in rotation. The contraction theory therefore predicts a null effect as does relativity theory for a one-way rotating terrestrial ether drift experiment. The proposed experiment is not a crucial experiment for deciding between the two theories. To conform to both theories, the proper interpretation of the predicted null result is that detection of an ether is precluded as required by the special theory of relativity and that existence of an ether is permitted as required by the contraction theory.