ERRATA

OBSERVATION OF THE SIGN OF THE NUCLEAR QUADRUPOLE INTERACTION BY $\beta - \gamma$ DIRECTION-AL CORRELATIONS. R. S. Raghavan, P. Raghavan, and E. N. Kaufmann [Phys. Rev. Lett. <u>31</u>, 111 (1973)].

The theoretical expression Eq. (1), used to interpret the experimental results in our paper, is taken from Frauenfelder and Steffen (Ref. 9). The form of this equation is inconsistent with the definitions of the parameters $A_{k_1}(\beta)$, $A_{k_2}(\gamma)$, and $G_{k_1k_2}^{N_1N_2}(t)$ given in Ref. 9. Consistency is achieved only if the parameter $(-1)^{k_1}A_{k_1}(\beta)$ is used. In general, an additional phase factor $(-1)^{k_2}$ should be present in Eq. (1). The accurate version of this equation is therefore

$$W(k_1, k_2, t) = \sum_{k_1, k_2} \sum_{N_1, N_2} (-1)^{k_2} \frac{(-1)^{k_1} A_{k_1}(\beta) A_{k_2}(\gamma)}{[(2k_1 + 1)(2k_2 + 1)]^{1/2}} G_{k_1 k_2}^{N_1 N_2}(t) Y_{k_1}^{N_1^*}(\theta_1 \varphi_1) Y_{k_2}^{N_2}(\theta_2 \varphi_2).$$
(1)

These phases are unimportant in all angular correlation experiments performed so far using this general equation since $k_1 + k_2$ was always even, and their omission in Ref. 9 did not affect the experimental results. Our experiment appears to be the first one where careful attention to these factors is crucial since $k_1 + k_2$ is odd. Equations (3) and (5) should therefore read

$$W(t) = 1 + \frac{1}{4}(v/c)\sin(\theta_1)\sin(2\theta_2)\sin(\varphi_2 - \varphi_1)\sin(\omega_0 t),$$
(3)

$$A(t) = \frac{2\left[W(-\frac{1}{2}\pi) - W(\frac{1}{2}\pi)\right]}{W(-\frac{1}{2}\pi) + W(\frac{1}{2}\pi)} = \frac{-v}{2c} \sin\omega_0 t.$$
(5)

These formulas now agree with Eq. (36) of Harris (Ref. 4). This reference has a number of misprints which had misled us. The comments of Ref. 12 should be deleted. In view of the revised Eq. (5), the experimental result should read $e^2qQ/h = -146(5)$ MHz.

We thank O. Klepper (Freiburg) and S. Harris (Purdue) for many discussions which led to these clarifications.

The acknowledgment, "Supported in part by the National Science Foundation" should be added to the footnote under the asterisk.

THEORY OF THE PION-NUCLEUS OPTICAL PO-TENTIAL WITH CROSSING. J. Barry Cammarata and M. K. Banerjee [Phys. Rev. Lett. <u>31</u>, 610 (1973)].

Equation (10) should have an additional factor $\frac{1}{3}$ on the right-hand side.

The first sentence below Eq. (10) should read " $\tilde{\rho}(q)$ is the j_0 Bessel transform $\int j_0(qr)\rho(r)r^2 dr$ of the nuclear density $\rho(r)$; $\rho(\mathbf{\tilde{r}})$ is normalized to...." Equation (11) should read

 $\widetilde{\omega} = \left\{ -\frac{1}{2}M_N + \frac{1}{2} \left[M_N^2 + 4(M_N \omega + 1) \right]^{1/2} \right\} - \Delta.$