

TABLE II. Predicted relative coupling constants, branching ratios, and angular parameters.

Decay	Relative coupling constants			Branching ratio	Angular parameters		
	$V_{ch}(0)$	$V_{magn}(0)$	$A(0)$		$\alpha_{AB}$	$\alpha_{AI}$	$\alpha_{A\nu}$
$n \rightarrow pe^- \nu$	0.978	0.978	$1.138 \pm 0.026$	1	-0.50	-0.06	0.99
$\Lambda \rightarrow pe^- \nu$	-0.258 $\pm 0.005$	-0.125	-0.213	$(0.87 \pm 0.03) \times 10^{-3}$	-0.54	0.06	0.99
$\Lambda \rightarrow p\mu^- \nu$		$\pm 0.003$	$\pm 0.007$	$(1.48 \pm 0.05) \times 10^{-4}$	-0.41	-0.08	0.99
$\Sigma^- \rightarrow ne^- \nu$	-0.211 $\pm 0.004$	+0.116	+0.103	$(1.29 \pm 0.13) \times 10^{-3}$	0.77	-0.81	-0.29
$\Sigma^- \rightarrow n\mu^- \nu$		$\pm 0.002$	$\pm 0.022$	$(0.62 \pm 0.06) \times 10^{-3}$	0.70	-0.63	-0.31
$\Sigma^- \rightarrow \Lambda e^- \nu$	0	+0.618	+0.618	$(0.70 \pm 0.04) \times 10^{-4}$	0.09	-0.71	+0.64
$\Sigma^+ \rightarrow \Lambda e^+ \nu$		$\pm 0.001$	$\pm 0.022$	$(0.21 \pm 0.01) \times 10^{-4}$	-0.08	0.70	-0.64
$\Xi^- \rightarrow \Lambda e^- \nu$	+0.258 $\pm 0.005$	-0.0084	+0.043	$(0.43 \pm 0.03) \times 10^{-3}$	-0.37	0.19	0.40
$\Xi^- \rightarrow \Lambda\mu^- \nu$		$\pm 0.0003$	$\pm 0.005$	$(0.12 \pm 0.01) \times 10^{-3}$	-0.31	0.12	0.39
$\Xi^0 \rightarrow \Sigma^+ e^- \nu$	+0.211 $\pm 0.004$	+0.211	+0.312	$(0.31 \pm 0.04) \times 10^{-3}$	-0.38	-0.28	0.96
$\Xi^0 \rightarrow \Sigma^+ \mu^- \nu$		$\pm 0.004$	$\pm 0.007$	$(0.24 \pm 0.04) \times 10^{-5}$	-0.18	-0.13	0.97

Using the values (10) and (11), this relation gives us the value

$$\sin^2 \theta_A^{(B)} = 0.108 \pm 0.005,$$

which is several standard deviations outside the region allowed by the experimental results.

The induced pseudoscalar term contributes 2-3% to the axial-vector part of the rate for decays involving the emission of a muon. However, with the data used here, the influence of the pseudoscalar term on the values (12) is negligible (a fraction of 1%). Hence, a possible break-down of the Goldberger-Treiman relation involving strangeness-changing currents<sup>35</sup> will not

<sup>35</sup> C. Kacser, P. Singer, and T. N. Truong, Phys. Rev. **137**, B1605 (1965); **139**, AB5(E) (1965).

affect the values (12), although some of the results given in Table II and in Figs. 2-4 might be changed by a few percent.

#### ACKNOWLEDGMENTS

It is a pleasure to thank Professor A. Bohr, Niels Bohr Institutet, Professor L. van Hove and Professor J. Prentki, CERN, and Professor C. Møller, NORDITA, for their hospitality. We have profited from illuminating discussions with Professor N. Cabibbo, CERN. This work has been supported in part by grants to one of us (M.R.) from Fondet for Dansk-Finsk Samarbejde, Copenhagen, and from the Finnish State Committee for Technical Research, Helsingfors.

## Errata

**Sum Rules for the Axial-Vector Coupling Constant Renormalization in  $\mathfrak{g}$  Decay**, STEPHEN L. ADLER [Phys. Rev. **140**, B736 (1965)]. In Eqs. (73) and (77), the coefficient of the isospin-2 cross section  $\sigma_{\pi^2,2}$  should be  $\frac{5}{8}$  rather than  $\frac{3}{8}$ . None of the conclusions of Sec. IV is changed. I wish to thank Dr. A. N. Kamal for pointing out this error.

**General SU(3) Crossing Matrices and the Projection Operators of  $3 \times 8$** , M. M. NIETO [Phys. Rev. **140**, B434 (1965)]. The following misprints should be corrected:

The second of the equations labeled (3.12) is (3.13).

The first  $\frac{5}{8}$  in Eq. (4.9) should be  $\frac{5}{2}$ .

The first  $\frac{5}{16}$  in Eq. (4.11) should be changed to  $\frac{5}{8}$  so that it reads

$$(P_{15})_{\alpha\beta;ij} = \frac{5}{8} \delta_{\alpha\beta\gamma} \delta_j^i + \frac{3}{16} d_{\alpha\beta\gamma} \lambda^{(\gamma)ij} - \frac{5}{16} i f_{\alpha\beta\gamma} \lambda^{(\gamma)ij}. \quad (4.11)$$

In (4.12) the subscript  $m$  should be  $j$  and the  $-\frac{1}{8}$  should be  $+\frac{1}{8}$  so that it reads

$$(P_{6^*})_{\alpha\beta;ij} = \frac{1}{4} \delta_{\alpha\beta\gamma} \delta_j^i - \frac{3}{8} d_{\alpha\beta\gamma} \lambda^{(\gamma)ij} + \frac{1}{8} i f_{\alpha\beta\gamma} \lambda^{(\gamma)ij}. \quad (4.12)$$

Note that with these corrections the projection operators satisfy the relation

$$(P_3)_{\alpha\beta;ij} + (P_{6^*})_{\alpha\beta;ij} + (P_{15})_{\alpha\beta;ij} = \delta_{\alpha\beta} \delta_j^i,$$

as they should.