

estimate similar to the one in the text. However, $K^+ \rightarrow \pi^+ \pi^0$ is absolutely forbidden by current algebra in the (unphysical) limit when both pions are soft, forbidden by SU(3) and CP invariance, and finally according to the short-distance analysis of nonleptonic decays (see Sec. III) $\Delta I = 3/2$ transitions have an extra suppression factor. All these effects would tend to increase our estimate of the matrix element, so the estimate above might if anything be too small.

- ¹¹ Thus it is not clear that one may legitimately apply asymptotic freedom considerations to calculate the effect of strong interactions on $\mathcal{L}_{\text{eff}}^{\text{LL}}$. See however, D. V. Nanopoulos and G. G. Ross, Phys. Lett. 56B, 279 (1975).
- ¹² R. L. Kingsley, S. B. Treiman, F. Wilczek and A. Zee, "Weak Decays of Charmed Hadrons," Phys. Rev. D11, 1919 (1975).
- ¹³ In some models there may be difficulty in reconciling a charm-changing neutral current with the small rate for $K_L \rightarrow \mu^+ \mu^-$.
- ¹⁴ D. Cline, "Dimuon Final States . . .", Invited talk at Washington APS Meeting, Spring 1975.
- ¹⁵ K. Wilson, Phys. Rev. 179, 1499 (1969); P. Roy, Phys. Rev. D5, 1180 (1972); V. S. Mathur and H. C. Yen, Phys. Rev. D8, 3569 (1973).
- ¹⁶ M. K. Gaillard and B. W. Lee, Phys. Rev. Lett. 33, 108 (1974); G. Altarelli and L. Maiani, Phys. Lett. 52B, 351 (1974).
- ¹⁷ B. W. Lee and S. Treiman, Phys. Rev. D7, 1211 (1973).
- ¹⁸ See Appendix II.