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Type: **Parallel-Goldstone Boson**

π^0 - η - η' mixing from $V \rightarrow P\gamma$ and $P \rightarrow V\gamma$ decays

An enhanced phenomenological model that includes isospin-symmetry breaking is presented in this letter. The model is then used in a number of statistical fits to the most recent experimental data for the radiative transitions

$VP\gamma$ ($V = \rho, K^*, \omega, \phi$ and $P = \pi, K, \eta, \eta'$)

and estimations for the mixing angles amongst the three pseudoscalar states with vanishing third-component of isospin are obtained.

The quality of the performed fits is good, e.g. $\chi^2_{\min}/\text{d.o.f} = 1.9$.

The current experimental uncertainties allow for isospin-symmetry violations with a confidence level of approximately 2.5σ .

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