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Pseudoscalar-meson-octet-baryon coupling constants in twoflavor lattice QCD M. OKA, Tokyo Tech, G. ERKOL, Ozyegin Univ., T.T. TAKAHASHI, YITP, Kyoto Univ. — We evaluate the πNN , $\pi \Sigma\Sigma$, $\pi \Lambda\Sigma$, $K\Lambda N$ and $K\Sigma N$ coupling constants and the corresponding monopole masses in lattice QCD with two flavors of dynamical quarks. The parameters representing the SU(3)-flavor symmetry are computed at the point where the three quark flavors are degenerate at the physical s-quark mass. In particular, we obtain $\alpha \equiv F/(F + D) = 0.395(6)$. The quark-mass dependences of the coupling constants are obtained by changing the u- and the d-quark masses. We find that the SU(3)-flavor parameters have weak quark-mass dependence and thus the SU(3)-flavor symmetry is broken by only a few percent at each quark-mass point we consider.

> Makoto Oka Tokyo Institute of Technology

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