Abstract Submitted
for the SES06 Meeting of
The American Physical Society

SUSY Relics in Ordinary QCD[1] PATRICK KEITH-HYNES, HARRY THACKER, University of Virginia — Recent work by Armoni, Shifman and Veneziano suggests that in the large N-color limit, N=1 Supersymmetric Yang-Mills Theory (SYM) is equivalent to 1-flavor QCD. In this proposed equivalence the massless gluino sparticle in the adjoint representation of SYM becomes a quark in the antisymmetric representation of 1-flavor QCD, while the gauge field and gauge couplings remain unchanged. One consequence of such an equivalence is that the scalar and pseudoscalar mesons of 1-flavor QCD should have degenerate mass, since they originate within the same Wess-Zumino supermultiplet of SYM. We use previously published lattice results to compare the masses of scalar and pseudoscalar mesons in 1-flavor QCD. We also perform a similar flavor singlet meson mass comparison in the CP(3) model.

[1]This work was supported in part by the U.S. Department of Energy under grant DE-FG02-97ER41027.

Patrick Keith-Hynes
University of Virginia

Date submitted: 18 Aug 2006 Electronic form version 1.4