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The mass of the adjoint pion in N=1 supersymmetric Yang-Mills theory

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In Monte Carlo simulations of $\mathcal{N} = 1$ supersymmetric Yang-Mills theory the mass of the unphysical adjoint pion, which is easily obtained numerically, is being used for the tuning to the limit of vanishing gluino mass. We show how to define the adjoint pion in the framework of partially quenched chiral perturbation theory and we derive a relation between its mass and the mass of the gluino analogous to the Gell-Mann-Oakes-Renner relation of QCD.

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