

Abstract Submitted
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Pentaquark Mass and Structure TERRY GOLDMAN, Los Alamos National Laboratory, JIALUN PING, FAN WANG, Nanjing Normal University — The Extended Quark Delocalization, Color Screening Model reproduces ground state baryons and the deuteron with good accuracy. The model includes all meson exchange contributions to hadronic interactions using explicit pions and quark wavefunctions distorted from their configurations in isolated baryons. We apply the model to calculate the masses of pentaquark states for various structures. A tetrahedral configuration of light quarks centered on the strange antiquark is found to have a lower mass than the configurations proposed by both Jaffe-Wilczek and Lipkin-Karliner for the Θ^+ .

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