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Knot solitons in an effective model of the $SU(3)$ Yang-Mills theory

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It has been conjectured that glueballs can be described by knot solitons in a low energy effective model of the Yang-Mills theory. In this talk, we consider knot solitons in the F_2 Skyrme-Faddeev-Niemi model, which can be interpreted as a low energy effective model of the $SU(3)$ Yang-Mills theory. It will be shown that the Euler-Lagrange equation reduces to that of the well-known CP^1 Skyrme-Faddeev-Niemi model. We also discuss some relation between the knot solitons and classical gauge vacua.

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