

Boundary condition for the $SU(2)$ duality in the presence of $U(1)$ gauge fields

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Abstract

We consider $SU(2)$ dualities in the presence of $U(1)$ gauge fields. We introduce the concept of "boundary condition" in which initial conditions are taken as coordinates in the three-point function of the dualities. We show that in the presence of gauge fields we can obtain the ground state of the $SU(2)$ duality to any order in the gauge transformation. We also show that the boundary condition for the $SU(2)$ duality is an algebraic expression for the two-point function of the dualities. We conjecture that the ground state of the $SU(2)$ duality is a monodromy of the $SU(2)$ gauge fields.