

ON EFFECTIVE DIMENSIONAL REDUCTION IN HYPERBOLIC SPACES

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S u m m a r y

It is shown that the classical motion of massive particles in hyperbolic spaces H^D has a bounded character in $D - 1$ coordinates. Studying the Dirac equation, it is found that a bounded character of the classical motion corresponds to the effective dimensional reduction $D + 1 \rightarrow 1 + 1$ for fermions in the infrared region in the quantum problem. This effective dimensional reduction leads to the zero critical value of coupling constant for the dynamical symmetry breaking in hyperbolic spaces.