# Entanglement of spin 1/2 particles with PT symmetric Hamiltonian in a Schwarchild-De Sitter space-time

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Entanglement of Pauli spinors in a Schwarchild-De Sitter space-time with PT symmetric Hamiltonian is studied. It is shown that even if the initial state is non entangled, a non vanishing ebit of entanglement can be generated during a time evolution of the wave packet. The various spin configurations of the matrix density of singlet and triplet states are derived and some results are discussed.