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Entanglement of Atoms with Vacuum in Jaynes Cummings Model SAMINA MASOOD, Univ. of Houston Clear Lake, ALLEN MILLER, Syracuse University — We investigate the conditions for entanglement in a system of two atoms and two photon modes with a vacuum, using the Jaynes-Cummings model in the rotating-wave approximation. The results of previous studies are generalized to the case of non-resonant conditions. It is found that the strength of entanglement in atoms is a periodic function of time, in general. We explicitly show that our results are in agreement with existing results and reproduce the existing entanglement conditions under appropriate limits.

> Samina Masood Univ. of Houston Clear Lake

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