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Maximally entangled states in a Bose-Hubbard trimer¹ SEBASTIAN REYES, LUIS MORALES-MOLINA, MIGUEL ORSZAG, Pontificia Universidad Catolica de Chile — We study the generation of entanglement for interacting cold atoms in a three-site Bose-Hubbard ring. We propose a scheme by which maximally entangled states (MES) between two distinct atomic species can be prepared. Depending on the choice of experimental parameters, we demonstrate that it is possible to obtain different types of MES. Furthermore, we show that these MES are highly protected against experimental noise, making them good candidates for potential applications.

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