Abstract Submitted for the MAR09 Meeting of The American Physical Society

On the Salecker-Wigner-Peres Clock and Quantum Tunneling LUIZ MANZONI, Concordia College - Moorhead, JOSE LUNARDI, MARCOS CALCADA, Universidade Estadual de Ponta Grossa — We consider the Salecker-Wigner-Peres clock formalism and show that in the approach introduced by Peres it can be directly applied to quantum tunneling. Then we apply this formalism to the determination of the tunneling time of a non relativistic particle through a double barrier potential. In special, we consider the case in which the clock runs only when the particle can be found inside the region *between* the barriers and analyze the limit of opaque barriers in order to discuss the generalized Hartmann effect.

Luiz Manzoni Concordia College - Moorhead

Date submitted: 29 Dec 2008

Electronic form version 1.4