

Abstract Submitted
for the DAMOP11 Meeting of
The American Physical Society

Microscopic Treatment of Lower Dimensional Systems and Weyl Quantization KARLA GALDAMEZ¹, Tufts — A microscopic treatment of nucleation for a three dimensional system was previously presented in which we showed an equivalence between the resulting quantum Hamiltonian and that which is obtained from Weyl quantization, [1]. We now utilize the same procedure on one and two dimensional systems with the goal to again show an identification between Weyl quantization and a microscopic approach to quantization. We hypothesize that there are system characteristics such as density and size that make these similarities possible. Our aim is to attain a greater understanding of the particular traits of systems that lead to an equivalence between Weyl's procedure and that of our microscopic approach. We expect that our results will also be applicable to lower dimensional fluids where the ordering of operators in momentum and position may be at question.

[1] K. Galdamez. Division of Atomic, Molecular and Optical Physics, Microscopic Treatment of Nucleation, 2010, Poster Presentation.

¹I recently graduated from Tufts University and I am currently in transition to research position.

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Date submitted: 06 Apr 2011

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