

Abstract Submitted  
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**Wigner Function for a Quantum Wire with an Impurity** YI TANG,  
TOMAS MATERDEY, University of Massachusetts Boston — We present the  
Wigner function for a Gallium Arsenide (GaAS) quantum wire subjected to a mag-  
netic field with an off-center donor impurity. The Wigner function is more sensitive  
to detecting changes than the variational wavefunction for smaller scale differences  
in a quantum wire with an impurity.

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