

Abstract Submitted  
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**Differences between the Measurement Process and Schrödinger Evolution** STEINER MICHAEL, NRL — An overview of the Measurement Problem is given and an argument is presented that reduces the measurement problem to a 2-qubit problem of entanglement. In current experiments, the measurement problem has not been a limitation on what can be predicted. If the problem were to continue to not be a limitation for all future experiments of interest, then the problem may be interesting from a philosophical perspective, but is not limiting in terms of physical predictions. However, the author will show examples to illustrate why this is not the case. Certain experiments would be incorrectly predicted if the measurement process were replaced by Schrödinger evolution. Hence understanding the reason for measurement is of primary interest. A new direction toward developing a comprehensive theory will be proposed.

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