

Review of: "Emergent Quantum Mechanics – How the Classical Laws Can Replicate the Quantum Harmonic Oscillator"

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Potential competing interests: No potential competing interests to declare.

Review of **"Emergent Quantum Mechanics – How the Classical Laws Can Replicate the Quantum Harmonic Oscillator"** authored by **Theo van Holten**.

Summary: The author shows how the Classical Laws Can Replicate the Quantum Harmonic Oscillator in Emergent Quantum Mechanics. This work is new and not reported previously (to the best of my knowledge). The author defines Emergent Quantum Mechanics (Em.QM) as the attempt to bridge the gap between quantum and classical mechanics, and to restore causality to the atomic world. Em.QM is concerned with possible interpretations of quantum phenomena. He uses it to show how the classical laws can replicate the quantum harmonic oscillator.

Evaluation: Overall, the results obtained by the Author are very interesting, new and were not reported in the literature. However the paper suffers of the following obvious problems.

1. Some Equations are written with the dot and it not normal. The dot is used to represent the scalar product. Examples Eqs: (6), (7), (11), (17), (18) etc.
2. The paper is not well presented (please see the right hand of each page.)
3. References are not well used in the manuscript for instance, refs. 5, 6, and 7 come before references 1, 2, 3 etc.
4. What are the limits of this work?

Conclusion: The work is very interesting and cannot be published in the present form.