

Comprehensive Analysis of the ELEMENTARY Oscillator

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Abstract

The model of the ELEMENTARY Harmonic Oscillator is laid down both in the BASIS of any dynamic Classical Theories, and in the BASIS of the “quantum” Schrödinger equation. But as HER strict mathematical analysis showed, some terms were lost in the description of the oscillations of this Oscillator. Moreover, both the main real resonant term, which describes both the flutter and the photoelectric effect, and the main imaginary term, which describes the contribution of the magnetic field to electrical oscillations, are lost. And Descartes’s gimlets, which entered into the Concept of the Magnetic Field in violation of Curie’s theorem, led to the fallacy of Maxwell’s equations. Taking into account the lost terms in the solutions of the Harmonic Oscillator equation makes it possible to eliminate many “singularities”, in particular the discrepancy between the plasma model and the skin layer model. While the elimination of the contradiction between the optical and electromagnetic description begun by Planck was replaced by a formal, meaningless introduction of an imaginary unit into the equations of “Quantum Mechanics” and “The Theory of Relativity”, which leads to their supposed “EXCLUSIVENESS” from Classical Physics.

Keywords: Ideal Harmonic oscillator; Real and imaginary damping

Introduction

People have learned to use the Harmonic Oscillator since ancient times, both when creating the first musical instruments, and when constructing a filter plug at the base of an ancient temple in a seismic area. And thanks to the light hand of Newton, who resolved some of Zeno’s Aporia [1] with the help of differential calculus and used the separation of variables to approximately solve the differential equation of the Harmonic Oscillator, in Classical Physics they began to use the imaginary unit, which theorists began to insert into the description of any physical processes, simply to find solving equations on the complex plane. At the same time, unlike Newton, who attributed it to the phase meaningfully, the “developers” (pseudo-continuator) did not bother to think about the MEANING of its use in any equations, while declaring the resulting Solutions with pride, as the ultimate truth: “This is how it turns out” [2].

And with the light hand of Richard Feynman, theorists began to attribute only the Theory of Elementary Particles to modern Fundamental Physics [3], and the combing of the Classical Description was transferred to the shoulders of art critics [4]. And, thus, having canonized the often-dense BASIS, they left all modern Physics and the Sciences associated with it without a Foundation. Indeed, many of the Basic Physical Models used are very outdated and the Solutions found within them are quite primitive and do not correspond to modern conditions of their use [5,6]. So, these Models are simply of a purely declarative nature, both in monographs and dissertations. And the Solutions found within their framework do not describe, to a first approximation, modern experiments even in order of magnitude. So, these “Basic Models” are supplemented with a bunch of meaningless adjustment parameters and, thus, simply an inflated set of eclectic knowledge is passed off as Science. Therefore, in practice, experimental physicists, and especially industrial workers, prefer to use not Fundamental Laws, but purely empirical Local Regularities, which leads to “catastrophes” between artisans. Planck eliminated one of these “catastrophes,” but the Problem he raised was entirely pushed aside and left unresolved to this day.

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Thus, the analysis of the FOUNDATIONS of Quantization revealed in modern "Quantum Mechanics" lack of rigor, which led to the loss of MEANING in it and, moving away from the Planck-Einstein Quantization, it, strictly speaking, became neither Quantum nor Mechanics. These are purely mathematical inconsistencies in the solutions of the equations used, and purely physical inconsistencies in the models used. In particular, one of these "fundamental" laxities that emerged when I began to analyze them, both in modern "Quantum Mechanics" and in the Theory of Relativity, is the formal, meaningless use of an imaginary unit [7]. And historically, this loose use of the imaginary unit began with Maxwell's equations, which formally used Heaviside tensors, which was extended by Schrödinger into Quantum Mechanics, and Einstein into the Theory of Relativity.

And the Harmonic Oscillator, which lies in the Foundations of many Basic Physical Models, allows us to demonstrate a number of such ELEMENTARY logical Errors that lie in the Foundations of the Basic Models, in particular, the incorrect use of the imaginary unit, which only led to the Ultraviolet and Infrared "catastrophe" similar to that eliminated by Planck [8]. There are no catastrophes in Nature - catastrophes happen in its Description and in the production of something according to a catastrophic description. And Planck showed how to eliminate this catastrophicity, and his "successors," on the contrary, looked for "catastrophes" in the Description and, instead of eliminating them, attributed them to Nature [9,10].

References

1. Stanislav Ordin (2020) Aporia of Zeno-Munchausen, website of the Nanotechnological Society of Russia, pp. 1-5.
2. Ordin SV (2019) Chaos-Imaginary Ostensibility-Orthogonality. Global Journal of Science Frontier Research: A Physics & Space Science GJSFR-A 19(3): 49-58.
3. Feynman RP (1961) The Theory of Fundamental Processes, California Institute of Technology, W A BTNJAMIN INC., New York, USA, p. 199.
4. Daniel CM (1965) The Theory of Magnetism (An Introduction to the Study of Cooperative Phenomena), Harper @ Row Publisher, Evanston, London, New York, USA, p. 407.
5. Stanislav Ordin (2017) Book: "Refinement of basic physical models", Project No 163273, p. 82.
6. Stanislav V Ordi (2023) Introduction to Thermo-Photo-Electronics. International Journal of Physics and Mathematics 5(1): 33-44.
7. Stanislav Ordin (2022) Gaps and Errors of the Schrödinger Equation. Global Journal of Science Frontier Research GJSFR 22(3): 1-5.
8. Ordin S V (2020) Impedance of Skin-Plasma Effect. International Journal of Research Studies in Electrical and Electronics Engineering (IJRSEEE) 6(3): 25-39.
8. Stanislav Vladimirovich Ordin (2021) Book: FOUNDATIONS OF Planck-Einstein Quantization (Thematic collection of recent studies reviewed in scientific journals). LAP LAMBERT Academic Publishing p. 110.
9. Stanislav Ordin (2021) Non-elementary elementary harmonic oscillator. American Journal of Materials & Applied Science (AJMAS) 3(1): 003-008.
10. Ordin SV (2019) Parametrically excited Anharmonic Oscillator. Global Journal of Science Frontier Research - Physics & Space Science GJSFR-A 19(3): 133-144.