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Poster „IS REALITY MYSTICAL AND WEIRD“, presented at the Spring Meeting of the Deutsche Physikalische Gesellschaft , Dresden, 23 March 2023:

IS *REALITY MYSTICAL*? IS *NATURE WEIRD*?

Said Prof. Thors Hans Hansson, member of the Nobel Prize Committee, 4 Oct 2022:

„This year's prize is about Quantum Mechanics. It usually is portrayed as something which is very weird, very mystical.“

Yes, Sir - but the well-known mystical and weird effects of applied Quantum Mechanics **DO NOT MIRROR A WEIRD REALITY! Rather they indicate a basic mathematical shortcoming of Quantum Mechanics (QM): Since its beginning in 1905 QM is erroneously treating classical energy $mv^2/2$ as an equivalent of quantum energy hv - in contradiction to their different mathematical formalisms.**

As a matter of fact

EINSTEIN & CO. MESSED THINGS UP!

Albert Einstein (photoelectric effect, 1905) was the first **to mess up classical kinetic energy $mv^2/2$ with quantum energy hv. Niels Bohr** (1913) made this mistake a „principle“ of quantum mechanics („Correspondence Principle“). **Erwin Schrödinger** (1926) accordingly fabricated his equation, putting not quantum energy hv but classical energy (the Hamiltonian H) at the centre. Since that time **classical energy instead of Planck's quantum energy hv predominates the mathematical appearance of QM.**

Proof that classical energy $mv^2/2$ (= $p^2/2m$) is NOT an equivalent of quantum energy hv:

„Physical entities which satisfy identical formalisms have to be regarded as identical themselves“ (Max Jammer, The Philosophy of Quantum Mechanics, 1974, p. 54).

Consequently, physical entities which satisfy *different* formalisms have to be regarded as *different.* Classical energy $E = mv^2/2$ and quantum energy $E = h\nu$ differ by a factor ($2mc/p = 2c/v$). Moreover, $mv^2/2$ is a scalar, hv is a vector. The truth then is: $mv^2/2 \neq hv$. Q. e. d.

CONCLUSION:

The current theory of QM suppresses Planck's concept of quantum energy (hv) in favour of the allegedly equivalent, but in truth incompatible „classical“ concept of energy (the Hamiltonian H). This shortcoming only is responsible for absurd effects of applied QM.

Replacing the concept of energy ($p^2/2m$) by the true QM equivalent of (hv) which is (pc) *renders the foundation of* QM *realistic and true.*

Dresden, March 2023, DPG Spring Meeting. Poster by Ed Dellian, Berlin ed.dellian@t-online.de.

General Information:

How exactly does current quantum mechanics lead into confusion by favouring the classical concept of kinetic energy as an alleged equivalent of quantum energy?

This question is answered in detail in a talk entitled „Three Steps Toward a Realistic Foundation of Quantum Mechanics“, which had been scheduled for the present Meeting, for Monday, March 20 (AGPhil 1.4). Unfortunately I had to withdraw the talk on personal grounds. The underlying paper is nevertheless available for download on my website www.neutonus-reformatus.com, No. 48. There are several other papers on that website referring to quantum mechanics. Some are in English, some in German; some already published in books and in periodicals, some only in the web. I here recommend the English written papers No. 2, 3, 5, 7, 10, 20, 40, 42, and 48.

Relevant questions are always welcome and will be answered as soon as possible.

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Ed Dellian, Berlin, March 2023.