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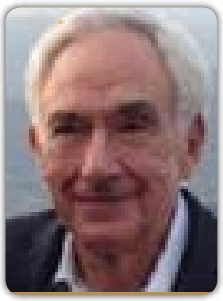

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Magnetic effects on chirality and energy of free electrons in quantum field theory and possible experimental tests

The effects of a magnetic field on energy and chirality of free electrons are computed in the quantum field theory framework. For weak constant classical magnetic fields, the effects are fixed by a special intrinsic property of the electron defined by us and called Chirality Index. We study these effects for a special electron state. The magnetic field changes both energy and chirality with a linear dependence on the Chirality Index. It changes also the Chirality index in a simple way. Two experimental measurements are proposed to verify the theoretical predictions. The first experiment that measures an energy shift on human muscles has already a number of results. The second experiment on EZ free electrons is proposed as a realistic future test. The relevance of a possible magnetic modification of the Chirality Index is finally considered.

Biography

Claudio Verzegnassi was a Professor Emeritus at Udine University in Trieste, Italy who works in theoretical physics.

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