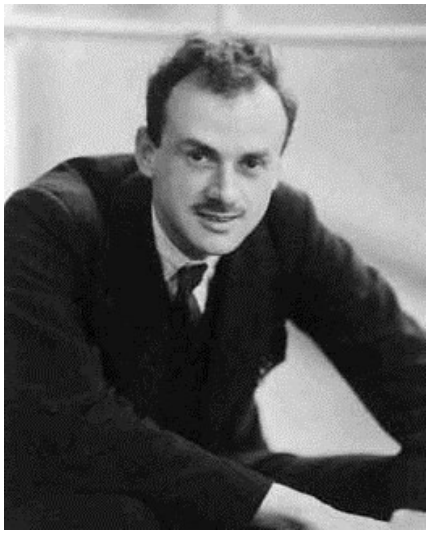
Paul Dirac (1902 – 1984)



Nobelova nagrada za fiziko l. 1933 skupaj z E. Schrödinger „za odkritje nove produktivne oblike atomske teorije„.

The Quantum Theory of the Electron.

By P. A. M. Dirac, St. John's College, Cambridge.

(Communicated by R. H. Fowler, F.R.S.—Received January 2, 1928.)

The new quantum mechanics, when applied to the problem of the structure of the atom with point-charge electrons, does not give results in agreement

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the wave function ψ being a function of x_1, x_2, x_3, t. This gives rise to two difficulties.

The first is in connection with the physical interpretation of ψ. Gordon, and also independently Klein,† from considerations of the conservation theorems,

:

and p_3. Our wave equation is therefore of the form

$$(p_0 + \alpha_1 p_1 + \alpha_2 p_2 + \alpha_3 p_3 + \beta)\,\psi = 0, \qquad (4)$$

P.A.M. Dirac, Proceedings of the Royal Society A, 117, 610 (1928)