

Niels Bohr's Interpretation and the Copenhagen Interpretation

Are the two incompatible?

by

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Abstract:

The Copenhagen interpretation, which informs the textbook presentation of quantum mechanics, depends fundamentally on the notion of ontological wave-particle duality and a viewpoint called “complementarity”. In this paper, Bohr’s own interpretation is traced in detail and is shown to be fundamentally different from and even opposed to the Copenhagen interpretation in virtually all its particulars. In particular, Bohr’s interpretation avoids the ad hoc postulate of wave function ‘collapse’ that is central to the Copenhagen interpretation. The strengths and weakness of both interpretations are summarized.