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Lecture 1: Spontaneous wave function collapse models: an introduction

Monday, 19 December 2016 11:30 (1 hour)

I will present the basic features of the GRW model of spontaneous wave function collapse: the collapse of the wave function, the amplification mechanism, which states are affected by it. Eventually, the picture which emerges is that of a unified description of microscopic (quantum) and macroscopic (classical) systems, in terms of a wave function evolving according to a modified Schrödinger equation. I will give present a short introduction to the different ontologies, which can be attached to a spontaneously collapsing wave function. I will explain how these models can be tested experimentally, and will give an overview of the state of the art from the experimental point of view.

Presenter: Dr BASSI, Angelo (University of Trieste and INFN)