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## Whispers from the collapse of the w.f: spontaneously emitted radiation

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The “measurement problem” in quantum mechanics continues to remain a problem which needs an explanation.

A possible solution to this problem is the modification of the Schrodinger equation within the so-called dynamical reduction models. The dynamical reduction models were put forward alternatively to the “standard” quantum mechanics’ Schrodinger equation, followed by a “alla von Neumann” collapse of the wave-function, implementing a (nonrelativistic) dynamical reduction/collapse models, by adding a non-linear and stochastic terms to the Schrodinger equation. Considering the relevance of this conceptually new model(s), it is of utmost importance to study its experimental consequences, where the predictions are diverging from the standard equations, and to perform dedicated experiments to check it.

We discuss various ideas to find experimental signatures for the collapse of the wave function within the dynamical reduction models, starting with the measurement of the spontaneously emitted X rays predicted in the framework the new theory –whispers of the collapse –which is the most promising method to put the strongest limits of the collapse model parameter  $\lambda$ .

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