

Nuclear Theory

Proton Decay: Improving the sensitivity through nuclear dynamics?

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The kinematics of the decay of a bound proton is governed by the proton spectral function. We evaluate this quantity in ^{16}O using the information from nuclear physics experiments. It also includes a correlated part. The reliability of this evaluation is sufficient to open the possibility of correlated cuts in the missing mass and momentum variables in order to identify the decay events from the bound protons with a possible increase of the signal to noise ratio.

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