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LCSR application to $p \rightarrow e^+ \gamma$ decay

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The proton decay is forbidden in the standard model of particle physics. Hence, any signature of proton decay will be a clear signal of new physics beyond the standard model. In this talk, we discuss the $p \rightarrow e^+ \gamma$ decay. It is mediated by the baryon number violating operators of dimension 6 and includes two form factors. We discuss these form factors in the framework of light cone sum rules and present the numerical estimates of the branching ratio for the decay.

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