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On Pure Derived Categories of Tensor Categories

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Let \mathcal{G} be a locally finitely presented tensor category. There are two different pure exact structure on the category $\mathbf{C}(\mathcal{G})$ of all complexes in \mathcal{G} , the categorical purity and the tensor purity. Recently, categorical pure derived categories of \mathcal{G} have been studied in more details. In this talk, we describe the difference between those purities and show that tensor pure derived categories of \mathcal{G} have suitable replacements. In addition, we talk about a problem which is posed by Krause and investigate a relation between tensor pure derived categories and Grothendieck Duality Theorem.