

# **Derived Categories of Toric Varieties**

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I will start by recalling standard facts about the bounded derived categories of coherent sheaves for smooth algebraic varieties. I will introduce the notion of the (strongly) exceptional collection and say how it describes the structure of the derived category.

I will present some of the known results on the existence of such collections and their properties in case of toric varieties. I will describe a few methods of finding such collections and present the state of the art for smooth, complete toric varieties. This relates to the work of Efimov, Hille, Kawamata, King, Miró-Roig, Perling and many others.