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Morgan Veljko Brown* (morganvb@umich.edu). *t-structures for the Derived McKay Correspondence.*

Let $G \subset SL_n(\mathbb{C})$ be a finite group. When $n = 2$, the McKay correspondence relates the representation theory of G with the geometry of the minimal resolution of \mathbb{C}^n/G . This minimal resolution is given by a certain moduli space of G -equivariant subschemes called $G - \text{Hilb}$. Bridgeland, King, and Reid realized this correspondence as an equivalence of derived categories between G equivariant sheaves on \mathbb{C}^n and sheaves on $G - \text{Hilb}$ and extended it to dimension 3. In general, one expects for two birational varieties X and X' that their derived categories are related according to the differences in the canonical divisors K_X and $K'_{X'}$.

We will explore the possibility of realizing the category of sheaves on $G - \text{Hilb}$ via combinatorial data. This is joint work with Ian Shipman. (Received February 18, 2013)