

1137-14-13

Daniel Chan (adam.nyman@wwu.edu), BELLINGHAM, WA 982258104, and **Adam Nyman*** (adam.nyman@wwu.edu), BELLINGHAM, WA 982258104. *A representation theoretic study of noncommutative symmetric algebras.*

We study Van den Bergh's noncommutative symmetric algebra $\mathbb{S}^{nc}(M)$ (over division rings) via Minamoto's theory of Fano algebras. In particular, we show $\mathbb{S}^{nc}(M)$ is coherent, and its proj category $\mathbb{P}^{nc}(M)$ is derived equivalent to the corresponding bimodule species. This generalizes a theorem of Minamoto, which in turn is a generalization of Beilinson's derived equivalence. As corollaries, we show that $\mathbb{P}^{nc}(M)$ is hereditary and there is a structure theorem for sheaves on $\mathbb{P}^{nc}(M)$ analogous to that for \mathbb{P}^1 . (Received December 15, 2017)