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Title: Higher-order Image Conjecture for differential operators of polynomial algebras

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The interest in images of differential operators of polynomial algebras arose from the research of the Jacobian conjecture. In this paper, we show that the Higher-order $Image\ Conjecture\ (HIC(n))$ holds for all dimensions $n\geq 1$ in the case of positive characteristic. We also show that HIC(1) holds for a class of differential operators in the case of characteristic zero.

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