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Jen-Chieh Hsiao* (jhsiao@math.purdue.edu), 223 Arnold Dr Apt 03, West Lafayette, IN 47906. *Finiteness of Local Cohomology over D on a toric algebra*. Preliminary report.

Let S be a toric algebra over \mathbb{C} , and I be a monomial ideal of S . Denote D to be the ring of \mathbb{C} -linear differential operators of S . We show that each local cohomology module $H_I^i(S)$ is of finite length over D , generalizing the classical case of a polynomial algebra S . (Received February 06, 2009)