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Hannah Robbins* (robbinshr@gmail.com), P.O. Box 7388, 127 Manchester Hall, Wake Forest University, Winston Salem, NC 27109. *Associated Primes of Local Cohomology After Adjoining Indeterminates to the Ring*. Preliminary report.

If a ring R has small dimension, it is known that the local cohomology modules, $H_I^i(R)$, have only finitely many associated primes for any i and ideal $I \subseteq R$. In this talk we will show that if our ring has an easily controlled resolution of singularities, we can adjoin a finite set of indeterminates, either as polynomials or power series, while preserving the finiteness of $\text{Ass}_R H_I^i(R)$. As a corollary we get that $\text{Ass}_R H_I^i(R)$ is finite for polynomial and power series rings over a normal domain of dimension two or three with an isolated singularity. (Received September 04, 2009)