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Yi ZHANG* (zhang397@umn.edu), 1409 W Green St, Department of Mathematics, Urbana, IL 61801. *Toward an efficient algorithm for deciding the vanishing of local cohomology modules in prime characteristic.* Preliminary report.

Let $R = k[x_1, \dots, x_n]$ be a polynomial ring over a field k of characteristic $p > 0$. If I is an ideal of R , we denote $H_I^i(R)$ the i -th local cohomology module of R with support in I . We describe an algorithms to determine the vanishing of $H_I^i(R)$. The method we use is the F -module theory. (Received August 04, 2013)