1096-13-981 **YI ZHANG***, 1409 W Green Street, Urbana, IL 61821. *Toward an efficient algorithm for deciding the vanishing of local cohomology modules in prime characteristic.*

Let $R = k[x_1, \cdots, x_n]$ 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 $H^i_{\mathfrak{m}}(H^j_I(R))$, where $\mathfrak{m} = (x_1, \cdots, x_n)$. The method we use is the F-module theory. (Received September 11, 2013)