

ON THE ASSOCIATED PRIME IDEALS OF LOCAL COHOMOLOGY MODULES DEFINED BY A PAIR OF IDEALS

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Abstract

Let I and J be two ideals of a commutative Noetherian ring R and M be an R -module. For a non-negative integer n it is shown that, if the sets $\text{Ass}_R(\text{Ext}_R^n(R/I, M))$ and $\text{Supp}_R(\text{Ext}_R^i(R/I, H_{I,J}^j(M)))$ are finite for all $i \leq n + 1$ and all $j < n$, then so is $\text{Ass}_R(\text{Hom}_R(R/I, H_{I,J}^n(M)))$. We also study the finiteness of $\text{Ass}_R(\text{Ext}_R^i(R/I, H_{I,J}^n(M)))$ for $i = 1, 2$.

Keywords: local cohomology modules defined by a pair of ideals, spectral sequences, associated prime ideals.

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