ASYMPTOTIC STABILITY OF CERTAIN SETS OF ASSOCIATED PRIME IDEALS OF LOCAL COHOMOLOGY MODULES (SCI)

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TÓM TẮT:

Let R be a Noetherian local ring I, J two ideals of R and M a finitely generated R-module. Let $k \geq -1$ and r_k
= \depth_k(I,J^nM/J^{n+1}M) be the length of a maximal J^nM/J^{n+1}M-sequence in dimension > k in I defined by Brodmann and Nhan. It is first shown that r_k becomes independent of n for large n. Then we prove in
this article that the sets \Union_{j≤r_k}\Ass_R(H^j_I(J^nM/J^{n+1}M) with $k = -1$ or $k = 0$, and \Union_{j≤r_1}\Ass_R(H^j_I(J^nM/J^{n+1}M) \{m\} are stable for large n. We also obtain similar results for modules M/J^nM.