

ON THE ASYMPTOTIC STABILITY OF CERTAIN SETS OF PRIME IDEALS

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TÓM TẮT:

Let (R, \mathfrak{m}) be a Noetherian local ring, I, J two ideals of R , and M a finitely generated R -module. It is shown that the set $\text{Ass}_R(H^{d-1}_I(N_n))_{\mathfrak{m}}$ is stable for large n , where we use N_n to denote R -module

$J^n M / J^{n+1} M$ or R -module $M / J^n M$ and d is the eventual value of $\dim(N_n)$. We also give a counter-example for stability of certain sets of associated prime ideals of Ext -modules and of attached prime ideals of local cohomology modules w.r.t. \mathfrak{m} .