

COREGULAR SEQUENCES AND TOP LOCAL HOMOLOGY MODULES

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ABSTRACT. In this paper, we show that if M is a non-zero Artinian R -module and $\underline{x} := x_1, \dots, x_n$ is an M -coregular sequence, then x_1, \dots, x_n is a $D(H_n^{\underline{x}}(M))$ -coregular sequence. Moreover, if R is complete with respect to I -adic topology and $d = \text{Ndim} M$, then $\dim H_d^I(M) \leq d$ and $\text{depth} H_I^d(M) \geq \min\{2, d\}$ whenever $H_d^I(M) \neq 0$.

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