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Laura R Lynch* (s-1lynch1@math.unl.edu). *Annihilators of Local Cohomology*. Preliminary report.

In many important theorems in the homological theory of commutative local rings, an essential ingredient in the proof is to consider $\text{Ann}_R H_I^i(R)$. We examine these annihilators when i is the cohomological dimension of I and give an explicit description when the cohomological dimension coincides with either the grade of I or the dimension of R . We also examine these annihilators over local noetherian domains and show the annihilator is zero under certain restrictions. (Received September 12, 2010)