1025-16-244   **Susan J. Sierra*** (`ssierra@umich.edu`), Department of Mathematics, 2074 East Hall, University of Michigan, 530 Church Street, Ann Arbor, MI 48109-1043. *Geometric idealizers and critical transversality.*

We investigate the properties of graded idealizer subrings of twisted homogeneous coordinate rings, generalizing work of Rogalski. These idealizers are determined by geometric data, and we characterize many of their properties in terms of a geometric property of the underlying data known as *critical transversality*. We give the first known example of a right noetherian ring that has infinite right cohomological dimension. In contrast, we show that, under natural conditions, if one if these idealizers is noetherian, then it has finite left and right cohomological dimension. (Received January 23, 2007)