1023-14-681   **Gennady Lyubeznik*** (`gennady@math.umn.edu`), Department of Mathematics, University of Minnesota, Minneapolis, MN 55455. *A counterexample to an open problem concerning a comparison between the quasicoherent and étale cohomological dimension of a scheme.*

Let U be an n-dimensional Noetherian scheme over a separably closed field and let cd$U$ (resp. écd$U$) be the quasicoherent (resp. étale) cohomological dimension of U. Is one of the integers cd$U$ and écd$U - n$ always at least as big as the other? We will explain why this question is interesting.

Counterexamples to the inequality cd$U \geq$ écd$U - n$ have long been known. Whether the inequality écd$U - n \geq$ cd$U$ always holds has been an open problem for a long time. We will describe a striking counterexample to this inequality. (Received September 20, 2006)