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Uli Walther* (walther@math.purdue.edu), 150 N University Street, Dept of Math, Purdue University, West Lafayette, IN 47906, and **Manoj Kummini**. *Remarks on a conjecture of G. Lyubeznik.*

We discuss a new vanishing theorem for étale cohomology groups on open sets U in projective space P over a separably closed field. Ingredients are (as expected) basic topological data about the complement X of U , as well as (unexpectedly) a property of X that has arithmetic flavor.

We then present a conjecture of Lyubeznik, relating étale cohomological dimension to quasi-coherent cohomological dimension.

Finally we show that the minimal triangulation of the real projective plane gives rise to a subspace arrangement whose complement violates Lyubeznik's conjecture. (Received February 03, 2011)