1014-13-1175   **William Heinzer**, Department of Mathematics, Purdue University, West Lafayette, IN 47907-1395, **Christel Rotthaus**, Department of Mathematics, Michigan State University, East Lansing, MI 48824-1027, and **Sylvia M Wiegand*** (`swiegand@math.unl.edu`), Department of Mathematics, University of Nebraska-Lincoln, Lincoln, NE 68588-0130. *Extensions of local domains with trivial generic fibers.* Preliminary report.

We consider injective local maps of a local domain R to a local domain S such that $P \cap R \neq (0)$, for every nonzero prime ideal P of S, that is, the generic fiber of the inclusion map $R \hookrightarrow S$ is trivial. Our motivation for studying trivial generic fiber extensions is a question of Melvin Hochster: "Can one describe or classify such extensions if R and S are both complete local domains?" As Hochster remarks, for R equal characteristic zero, such an extension arises from an embedding $R := K[[X]] \hookrightarrow T := L[[X, Y]]$ followed by $T \to S := T/P$, where K is a subfield of L, the X and Y are finite sets of formal indeterminates, and P is a prime ideal of T maximal with respect to being disjoint from the image of $R \setminus \{0\}$. We give a partial answer to Hochster's question: In this set-up, if L is a finite extension of K, then the Krull dimension of S is 2 or the number of variables in Y. We discuss other related results and examples concerning trivial generic fiber extensions. (Received September 27, 2005)

1