1046-13-603 **Bruce M Olberding*** (olberdin@nmsu.edu), Department of Mathematical Sciences, Las Cruces, NM 88003-8001. *Derivations, formal fibers and bad Noetherian rings.* Preliminary report.

If R is a commutative ring that is finitely generated as an algebra over a field or the ring of integers, then the integral closure of R is a finitely generated R-module, and this implies the the completions of the localizations of R at maximal ideals have no nilpotent elements; i.e., that such localizations are analytically unramified. However, local Noetherian rings in general need not be analytically unramified, a fact that often poses technical difficulties in dealing with Noetherian rings that are not integrally closed. In this talk we look at a circle of ideas involving derivations, analytically ramified Noetherian rings, and the generic formal fibers of Noetherian rings, and from these relationships we deduce the existence of large classes of analytically ramified Noetherian rings in (arguably) natural settings. Although the main application here is to Noetherian rings, the techniques are mostly non-Noetherian. (Received September 08, 2008)