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Bruce Olberding* (olberdin@nmsu.edu), Department of Mathematical Sciences, New Mexico State University, Las Cruces, NM 88003-8001. *One-dimensional local stable rings*. Preliminary report.

A ring R is stable provided every regular ideal of R is projective as a module over its ring of endomorphisms. When R is local, R is stable if and only if every regular ideal has a principal reduction of reduction number at most 1. The class of stable rings includes the one-dimensional local Cohen-Macaulay rings of multiplicity at most 2, as well as rings of higher multiplicity, necessarily analytically ramified. The former are important in the study of modules over Gorenstein rings, while the latter arise in a natural way from generic formal fibers and derivations of higher dimensional local rings. We discuss applications and characterizations of this class of rings. (Received August 12, 2013)