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Jim Coykendall* (jim.coykendall@ndsu.edu), Department of Mathematics, North Dakota State University, Fargo, ND 58108. *Factorization stability in polynomial and power series rings*. Preliminary report.

It is well known that if R is a UFD, then the corresponding polynomial ring over R (in any family of indeterminates) is also a UFD. There is a similar, but slightly weaker, result for power series rings that states that if R is a PID, then for all $n > 0$, $R[[x_1, x_2, \dots, x_n]]$ is a UFD.

In this talk we will discuss a variety of questions of a stability flavor (e.g. if $R[x]$ is an HFD is $R[x, y]$ an HFD?), and some basic results and directions will be explored. (Received September 08, 2009)