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William Heinzer, Christel Rotthaus and Sylvia Wiegand* (swiegand@math.unl.edu),
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rings.*

In this article we study the nested mixed polynomial/power series rings $k[x, y] \hookrightarrow k[[y]][x] \hookrightarrow k[x][[y]] \hookrightarrow k[x, 1/x][[y]]$, where k is a field and x and y are indeterminates over k . We discuss the spectra of these rings and consider the maps induced on the spectra by the inclusion maps on the rings. For example, we determine whether there exist nonzero primes in the larger rings that intersect a smaller ring in zero. We also describe $\text{Spec}(R[[y]])$, for R a one-dimensional domain, and give some results concerning spectra of analogous three-dimensional mixed polynomial/power series rings. (Received September 12, 2005)