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Chloe I. Avery, Caitlyn Booms, Timothy M. Kostolansky and Susan Loepf*, 33 Stetson Ct., Williams College, Williamstown, MA 01267, and **Alex Semendinger**. *Completions of Noncatenary Local Domains*.

We first find necessary and sufficient conditions for a complete local ring to be the completion of a noncatenary local domain. This result can be used to find a large class of quasi-excellent local domains that are not excellent, as well as a large class of catenary domains that are not universally catenary. We then find necessary and sufficient conditions for a complete local ring to be the completion of a noncatenary local unique factorization domain. Finally, we use our second result to show that there is no bound on how noncatenary a unique factorization domain can be. (Received February 16, 2018)