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R. Douglas Chatham* (rdchat@mathcsc.wfu.edu), Department of Mathematics, Wake Forest University, PO Box 7388, Winston-Salem, NC 27109, and **David E Dobbs**, Department of Mathematics, University of Tennessee, Knoxville, TN 37996. *On pseudo-valuation domains whose overrings are going-down domains.*

It is proved that if $R \subset T$ are integral domains such that $\text{Spec}(R) = \text{Spec}(T)$ as sets (for instance, a proper field extension) and M denotes the common maximal ideal of R and T , then each ring between R and T is a going-down domain if and only if the transcendence degree of T/M over R/M is at most 1. As a consequence, transcendence degree is used to characterize the pseudo-valuation domains all of whose overrings are going-down domains. (Received October 01, 2000)