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Reese Johnston* (rwjohnston@math.wisc.edu). *Computability in uncountable binary trees.*

Π_1^0 -classes in Cantor space - sets of paths through binary trees of height ω - have been a topic of interest in computability for a considerable time. We present an extension of the topic into the realm of admissible recursion theory, restricting our attention specifically to the case of ω_1 -recursion, in which we consider computation over the collection of hereditarily countable constructible sets. While in many ways computability in this setting mirrors the standard setting, we demonstrate that the analogues of some essential results about Π_1^0 -classes in Cantor space do not hold in the uncountable setting. (Received February 05, 2017)