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Wayne M. Raskind* (raskind@usc.edu), ADM 304, 3550 Trousdale Pkwy., Los Angeles, CA 90089-4012. *Totally Degenerate Reduction and the Conjectures of Hodge and Tate.*

Let K be a complete discretely valued field with perfect residue field of positive characteristic $p > 0$. We review the notion of algebraic varieties with *totally degenerate reduction* over K and prove a theorem about the étale cohomology of such varieties. When K is a p -adic field, we formulate a conjecture for such varieties which is an analogue of the Tate conjecture for varieties over an absolutely finitely generated field. Finally, we speculate on an archimedean version of these results which could shed light on the Hodge conjecture. (Received February 24, 2007)