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Javid Validashti* (jvalidas@math.purdue.edu), 150 N. University Street, Department of Mathematics, Purdue University, W. Lafayette, IN 47907, and **Bernd Ulrich** (ulrich@math.purdue.edu), 150 N. University Street, Department of Mathematics, Purdue University, W. Lafayette, IN 47907. *A criterion for integral dependence of modules.*

Let R be a universally catenary locally equidimensional Noetherian ring. We give a multiplicity based criterion for an arbitrary finitely generated R -module to be integral over a submodule. Our proof is self-contained and implies the previously known numerical criteria for integral dependence of ideals and modules. (Received December 04, 2006)