1079-16-293 **Brian Parshall** and **Leonard Scott*** (lls2l@virginia.edu). *Forced gradings in integral quasi-hereditary algebras.*

A forced grading for a finite dimensional algebra A over a field is the graded algebra gr A, the direct sum of the sections of the radical power filtration of A. If A has a positive grading, generated in grade 1, with grade 0 a semisimple algebra, then the graded algebra A is isomorphic to gr A . However, consideration of gr A potentially can potentially reap the rewards of a positive grading, even when no positive grading on A is available. The difficulty, of course, is that the formal nature of gr A makes it quite difficult to transport good properties of A, such as the quasi-hereditary property, to gr A. Nevertheless, the authors have achieved this in some natural cases arising in Lie theory. In this paper they take up similar questions when A is an algebra over a discrete valuation domain, and gr A is given a (new) appropriate definition. Applications will be discussed as time permits. (Received January 17, 2012)