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Craig Huneke* (huneke@math.ku.edu), Department of Mathematics, University of Kansas, Lawrence, KS 66045. *Applications of graded integral closures*. Preliminary report.

This talk will focus on two recent uses of an old construction, due to Hochster and myself, of a graded absolute integral closure which is Cohen-Macaulay in positive characteristic. In work with H. Ananthnarayan, we used this to prove some results on the 3-standardness of the maximal ideal, while in joint work with S. Takagi and K. Watanabe, we used the graded absolute integral closure to prove a conjecture of Mustata in some cases. (Received September 20, 2010)