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**Ralph Showalter\*** (show@math.oregonstate.edu) and **Dwight Holland.** *Visco-elastic Consolidation.*

We model a sedimentary basin as a saturated granular deforming porous medium of sand or silt consolidating due to its own weight and an overburden pressure. The porosity satisfies a degenerate PDE of pseudo-parabolic type for which we describe the existence and regularity of solutions. (Received February 23, 2017)