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Leanne Elizabeth Merrill* (leannem@uoregon.edu), Department of Mathematics, Fenton Hall,
University of Oregon, Eugene, OR 97403. *Algebraic v_n self maps of spectra at the prime 2.*

A central question of algebraic topology is to understand homotopy classes of maps between finite cell complexes. The Nilpotence Theorem of Hopkins-Devnatz-Smith together with the Periodicity Theorem of Hopkins-Smith describes non-nilpotent self maps of finite spectra. The Morava K-theories $K(n)_*$ are extraordinary cohomology theories which detect whether a finite spectrum X supports a v_n self map. Such maps are known to exist for each finite spectrum X for an appropriate n but few explicit examples are known. Working at the prime 2, we use a technique of Palmieri-Sadofsky to produce algebraic analogs of v_n maps that are easier to detect and compute. We reproduce the existence proof of Adams's v_1^4 map on the Mod 2 Moore spectrum, and work towards a v_2^i map for a small value of i . (Received September 20, 2016)