

Let  $A$  be the mod 2 Steenrod algebra. Its cohomology,  $H(A : Z_2) = Ext_A(Z_2, Z_2)$ . Palmieri gives a complete general description of the cohomology of the Steenrod algebra modulo nilpotent elements in his Annals of Math. paper (149, pp.421-449) in 1999. He describes several families of such elements. We prove that the only elements in filtrations 2 and 3 are those in Palmieri's explicit families. We also have conjectures in filtrations 4, 5, 6 and 7. (By filtration we do not mean the filtration in Adams spectral sequence, it is the number of the generators multiplied.)