

John Milnor's attempt at the higher algebraic K-groups of a field uses the field units as generators and the Steinberg relation as the only relation. The resulting Milnor K-groups map to the higher algebraic K-groups Daniel Quillen defined slightly later as homotopy groups of a certain topological space, and the map is an isomorphism in degrees 0, 1, and 2. A decade later Andrei Suslin constructed a Hurewicz-type homomorphism from Quillen's algebraic K-groups to the Milnor K-groups of a field and proved that the resulting endomorphism on the n -th Milnor K-group is multiplication by $(n-1)!$ if $n > 0$. He conjectured that the image of the Hurewicz-type homomorphism is the same as the image of this endomorphism (hence as small as possible) and proved the degree 3 case. Recently Aravind Asok, Jean Fasel, and Ben Williams ingeniously used A^1 -homotopy groups of algebraic spheres to settle the degree 5 case. Also using A^1 -homotopy groups, but now for the projective plane, I will explain how to treat the fourth degree.