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Holly E Attenborough*, attenborough@uwplatt.edu. *Classification of Weakly Azumaya Algebras Using Weak Galois Cohomology*. Preliminary report.

Weak Galois cohomology can be used to classify all F -algebras A containing B such that A is weakly Azumaya with respect to B , where K/F is a finite Galois extension and B a central simple K -algebra. There is a one-to-one correspondence between weakly Azumaya algebras with respect to B and weakly Azumaya algebras with respect to \tilde{B} for any \tilde{B} equivalent to B in the Brauer Group of K . Moreover, it will be shown that if there exists a weakly Azumaya algebra with respect to B then there exists a Frobenius algebra A which is weakly Azumaya with respect to B .

This paper is an extension of the work on weakly Azumaya algebras by D. Haile and L. Rowen in *Weakly Azumaya Algebras* (J. Algebra, 250:134-177, 2002). (Received September 20, 2017)