1063-19-156   **D. Benjamin Antieau*** (`antieau@math.ucla.edu`), UCLA, Department of Mathematics, 520 Portola Plaza, Los Angeles, CA 90095-1555. *The étale index of division algebras.*

We introduce the étale index of a division algebra. If D is a central division algebra over k, then the étale index is defined as the (positive) generator of the image of the rank map on $K_0^{etale}(D)$, the étale K-theory of D. When k is of finite étale cohomological dimension d, an upper bound is given on the étale index of D which depends on d and on the period of D (the order of the class of D in the Brauer group of k). This bound is expressed with the exponents of the stable homotopy groups of spheres and classifying spaces of finite abelian groups. The upper bound shows that the étale index differs from the index in general. (Received August 14, 2010)