

1145-11-426

Victor Rotger* (victor.rotger@upc.edu), Campus Nord, Edifici Omega Despatx 413, C/ Jordi Girona, 1-3, Barcelona, 08034. *On a conjecture of Harris and Venkatesh.*

A. Venkatesh has proposed a conjecture which explicates the simultaneous presence of a system of eigenvalues in several degrees of the cohomology of a symmetric domain in terms of derived Hecke operators and motivic cohomology. The simplest non-trivial case of this phenomenon arises for classical modular forms of weight 1, and the conjecture has been made explicit by Harris and Venkatesh. In this setting it predicts a relationship between mod p Rankin triple-products and Stark units. In this lecture I will describe recent progress towards proving this conjecture in joint work with Darmon, Harris and Venkatesh, and a p -adic version of the conjecture in joint work with my student Rivero. (Received September 06, 2018)