

Sato-Tate groups of higher weight motives

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The Sato-Tate group of a motive over a number field conjecturally controls the distribution of Frobenius eigenvalues at various primes. In previous work with Fite-Rotger-Sutherland, we classified these groups for abelian surfaces. When one attempts a similar analysis for motives of higher weight, some new features emerge; we will illustrate this in an example in weight 3 (joint work with Fite-Sutherland), and comment on what to expect for K3 surfaces.