

SPECTRA AND DENSITY

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INTEGRABILITY

$$q_v(G) := \inf \left\{ q > 0 : \begin{array}{l} \forall U_v\text{-inv. } w \in L^2_{00}(G(\mathbb{A}_K)/G(K)) \\ \langle \pi_v(g)w, w \rangle \in L^q(G_v) \end{array} \right\}.$$

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ASYMPTOTICS

$$a_S(X) := \limsup_{h \rightarrow \infty} \frac{\log A_S(h)}{\log h}.$$

THEOREM

Let $G \subset GL_n$ be a connected almost simple algebraic K -group and X a quasi-affine variety on which G acts transitively. Assume that G is isotropic over $v \in V_K$ and that $X(O_{V_K \setminus \{v\}})$ is not empty. Then

$$q_v(G) \geq \frac{2a_{V_K \setminus \{v\}}(G)}{a_{V_K \setminus \{v\}}(X)}.$$

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EXAMPLE

$$q_v(SL_n) \geq 2(n-1).$$