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A(rthur)-Packets of Cohomological Representations

For classical real groups we can list three important constructions of $A(rthur)$ -packets. We can begin by mentioning the definition due to Arthur that appears in his work on the classification of the discrete automorphic spectrum of classical groups, and that relies on techniques from harmonic analysis. A second and radically different definition is due to Adams, Barbasch and Vogan. Their approach to A -packets is by means of sophisticated geometrical methods, using the theory of perverse sheaf, \mathcal{D} -modules and some others tools from microlocal geometry. A third construction in the context of unitary representations with cohomology, is due to Adams and Johnson. The aim of this talk is to explain why in this latter context the three constructions coincide.