1077-22-2027   **Daniel Juteau**, **Carl Mautner*** (`cmautner@math.harvard.edu`) and **Geordie Williamson**.
Parity Sheaves and Tilting Modules.

The geometric Satake theorem, as proved by Mirkovic-Vilonen, states that the category of rational representations of a reductive group G over a field k is equivalent to a category of perverse sheaves on the affine Grassmannian for the Langlands dual group. We prove that under mild restrictions on the characteristic of k, the tilting modules for G correspond to perverse sheaves characterized by a simple geometric property - a parity vanishing condition on stalks and costalks. (Received September 21, 2011)