1023-55-1076 **G K Lyo*** (gracelyo@math.berkeley.edu), 970 Evans Hall, Department of Mathematics, University of California, Berkeley, Berkeley, CA 94720. *Semilinear Actions of Galois Groups and Descent in Algebraic K-Theory.*

My poster will discuss a conjectural model for the completed K-theory spectrum of a field in terms of the K-theory of the category of continuous semilinear representations of its absolute Galois group. More specifically G. Carlsson has conjectured that if F is a field with with an absolute Galois group G_F and a separable closure $\overline{F}$, and k is an algebraically closed subfield of $\overline{F}$, then there is a weak equivalence of completed K-theory spectra,

$$KF_{\hat{p}} \to Kk\langle G_F \rangle_{\hat{p}} \qquad p \neq \mathrm{char} F.$$

Here, p is a prime, the functor $(-)_{\hat{p}}$ is the Bousfield completion, and $k\langle G_F \rangle$ is the twisted group ring, which is a k-vector space on the set G_F with multiplication determined by the relation $(\alpha g)(\beta h) = \alpha\, {}^g\beta\, gh$, for α and $\beta \in k$, g and $h \in G_F$, and where ${}^g\beta$ is the image of β under g. We will show that Carlsson's conjecture holds when F is the unique extension of $\mathbb{F}_l((x))$ whose tame Galois group is $G_F = \mathbb{Z}_p \rtimes \mathbb{Z}_p$ and $k = \overline{\mathbb{F}_l}$. (Received September 25, 2006)