1165-11-288    **Tasho Kaletha\***, 530 Church Street Room 5836, Ann Arbor, MI 48109. *On double covers of tori.* If $T$ is a torus defined over a local field $F$ and $R$ is a finite Galois-invariant subset of its character module, we will introduce a topological double cover $T(F)_{\pm}$ of $T(F)$, as well as an $L$-group ${}^L T_{\pm}$ that is a usually non-split extension of the Galois group by the dual torus $\hat{T}$, so that genuine characters of $T(F)_{\pm}$ correspond canonically to Langlands parameters valued in ${}^L T_{\pm}$. The double cover $T(F)_{\pm}$ simplifies the Harish-Chandra character formula for regular supercuspidal representations and the formulation of the local Langlands correspondence for these representations. Time permitting we will discuss a generalization to twisted Levi subgroups. This generalizes the $\rho$-cover introduced by Adams and Vogan over the real numbers. (Received January 19, 2021)