Roger Plymen* (r.j.plymen@soton.ac.uk), Mathematical Sciences, Southampton, SO17 1BJ, United Kingdom. Extended affine Weyl groups, the Baum-Connes correspondence and Langlands duality.

Let $G$ be a compact connected semisimple Lie group. Let $W'_a(G)$ be the associated extended affine Weyl group. We investigate the $K$-theory of the reduced $C^*$-algebra of $W'_a(G)$. We show that rationally this $K$-theory does not change if we replace $G$ by its Langlands dual. Of special interest is the $A_{n-1}$ tower of groups $SU_n(\mathbb{C})/C_k$ where $k$ divides $n$. We investigate with many numerical examples how the $K$-theory groups change as we work our way through such a tower. Joint work with Graham Niblo and Nick Wright. (Received September 16, 2016)