1023-46-580   **Arlan Ramsay*** (`ramsay@euclid.colorado.edu`). *The Work of G. W. Mackey on Unitary Representations of Group Extensions.*

In his paper in Acta Mathematica, 1958, Mackey analyzed the unitary representations of a second countable locally compact group G in terms of the action of G on the dual, $\hat{N}$, of a type I normal subgroup, N, provided that every measure on $\hat{N}$ that is ergodic for the action of G is concentrated on a single orbit. The method uses representations of the stabilizer of some point in the orbit. In the contrary case, Mackey proposed replacing the stabilizer subgroups by virtual subgroups.

It turns out that the general machinery does carry over. This talk will be about applications as well as difficulties that remain after the general machinery has done its part. (Received September 18, 2006)