1119-11-247 **Dorian Goldfeld** and **Michael Woodbury*** (woodbury@math.uni-koeln.de), Weyertal 86-90, 50931 Cologne, Germany. *A useful integral representation of the $GL(n)$ Whittaker function.* Preliminary report.

We give an integral representation for the $GL(n, \mathbb{R})$ Whittaker function W_n which is particularly suitable to applications in analytic number theory. Two theorems of Stade are used. First, one which gives a formula for the Mellin transform of W_n is combined with Mellin inversion to give a preliminary integral representation. Unfortunately, for applications, this representation in often not sufficient. However, our formula can be obtained from this by shifting the lines of integration and applying a second theorem of Stade on the poles of said Mellin transform. An application is given to the Kuznetsov trace formula for $GL(n)$. (Received February 16, 2016)