5005-C1-47 **Kasso Okoudjou*** (kasso@math.umd.edu), Department of Mathematics, University of Maryland, College Park, MD 20742. *A Wiener lemma for the Gabor frame operator.*

We use a generalization of Wiener's $1/f$ theorem to prove that for a Gabor frame with the generator in the Wiener amalgam space $W(L^\infty, \ell_1)$, the corresponding frame operator is invertible on this space. Therefore, for such a Gabor frame, the generator of the canonical dual belongs also to $W(L^\infty, \ell_1)$. (Received June 07, 2007)