Expression d’un facteur epsilon de paire par une formule intégrale
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Abstract. Let $E/F$ be a quadratic extension of $p$-adic fields and let $d, m$ be nonnegative integers of distinct parities. Fix admissible irreducible tempered representations $\pi$ and $\sigma$ of $GL_d(E)$ and $GL_m(E)$ respectively. We assume that $\pi$ and $\sigma$ are conjugate-dual. That is to say $\pi \simeq \pi^{\vee, c}$ and $\sigma \simeq \sigma^{\vee, c}$ where $c$ is the non trivial $F$-automorphism of $E$. This implies, we can extend $\pi$ to an unitary representation $\tilde{\pi}$ of a nonconnected group $GL_d(E) \rtimes \{1, \theta\}$. Define $\tilde{\sigma}$ the same way. We state and prove an integral formula for $\epsilon(1/2, \pi \times \sigma, \psi_E)$ involving the characters of $\tilde{\pi}$ and $\tilde{\sigma}$. This formula is related to the local Gan-Gross-Prasad conjecture for unitary groups.