Title: Derivations into various duals of Lau product of Banach algebras

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For two Banach algebras $A$ and $B$, an interesting product $A \times_\theta B$, called the $\theta$-Lau product, was recently introduced and studied for some non-zero multiplicative linear functional $\theta$ on $B$. In this paper, by discussing general necessary and sufficient conditions for $n$-weak amenability of $A \times_\theta B$, we extend some results on the $n$-weak amenability of the unitization $A^\sharp$ of $A$, to the $\theta$-Lau product $A \times_\theta B$. In particular, we improve several known results on $n$-weak amenability of $A \times_\theta B$ and answer some questions on this topic.

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