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Interfacial condensation induced by sub-cooled liquid jet ENRIQUE RAME, USRA, R. BALASUBRAMANIAM, Case Western Reserve University — When a sub-cooled liquid jet impinges on the free surface between a liquid and its vapor, vapor will condense at a rate dependent on the sub-cooling, the jet strength and fluid properties. In 1966 and during the examination of a different type of condensation flow, Shekrladze found an approximate result, valid at large condensation rates, that decouples the flow in the liquid phase from that of the vapor, without putting it in the context of a formal asymptotic approximation. In this talk we will develop an asymptotic approximation that contains Shekrladze's result, and extend the calculations to the case when a non-condensable gas is present in the vapor phase.

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