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**Krishnaswami Alladi\*** (alladik@ufl.edu), Department of Mathematics, 358 Little Hall,  
University of Florida, Gainesville, FL 32606. *Analysis of a generalized Lebesgue identity in  
Ramanujan's Lost Notebook.*

We analyze a two parameter  $q$ -series identity in Ramanujan's Lost Notebook that generalizes the product part of the fundamental one parameter Lebesgue identity. From reformulations of this two parameter identity, we deduce new partition theorems including variants of the Gauss triangular numbers identity and Euler's pentagonal numbers theorem. We discuss connections with a partial theta identity of Ramanujan (also in the Lost Notebook) and with several classical results such as those of Sylvester and Göllnitz-Gordon. (Received September 07, 2012)