## 1035-28-1347 Adam Bowers\* (bowers@math.uconn.edu), University of Connecticut, Department of Mathematics, Storrs, CT 062693009. A continuous version of the Grothendieck inequality. In 1956 Alexandre Grothendieck published Résumé de la théorie métrique des produits tensoriels topologiques, in which his théorème fondamental de la théorie métrique des produits tensoriels first appeared. In 1968 Lindenstrauss and Pełczyński reformulated it as a matrix inequality. We generalize the inequality to a continuous version by means of bimeasures, and show how an integral of an inner product of functions against a bimeasure is related to integration of vector-valued functions against vector-valued measures. (Received September 19, 2007)