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Jiaping Wang* (jiaping@math.umn.edu), School of Mathematics, University of Minnesota, Minneapolis, MN 55455, and **Peter Li**. *Weighted Poincare inequality and Ricci curvature lower bound.*

We will describe an optimal upper bound estimate for the weight function in the weighted Poincare inequality on a complete manifold in terms of its Ricci curvature lower bound. The result provides an extension of Cheng's result concerning the upper bound of the bottom spectrum on a complete manifold. Some rigidity results for the equality case will also be mentioned. (Received February 02, 2009)