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A Surplus of Sparse Bounds

Abstract: The sparse bound is the domination of a bilinear form in terms of a simple sum of local averages of the functions in the form. This bound represents a particular quantification of the weak-type bounds. Once established, immediately gives a wide range of weighted inequalities, for weights in the intersection of Muckenhoupt and Reverse Holder classes. These bounds are fully quantitative. The sparse bound applies to lots of different operators. We will survey these results.