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ROSENTHAL TYPE INEQUALITIES FOR RANDOM VARIABLES

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Abstract. It is shown that if the higher order upper Rosenthal inequality holds for the sum of random variables, then the lower order upper Rosenthal inequality also holds. The same result is also established for the maximum of partial sums of random variables. No additional assumptions are made on the random variables. As a corollary, we obtain that the upper Rosenthal inequality implies the Marcinkiewicz-Zygmund type inequality.

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