1015-26-124 **Parthena Avramidou*** (`avramidou@math.ohio-state.edu`), Department of Mathematics, The Ohio State University, 231 W. 18th Ave, Columbus, OH 43210. *Correct factors in L_p spaces for certain differentiation operators.*

The averaging operators $1/|I_n| \int_{I_n} f(x-t)dt$, where I_n are shrinking intervals tending to the origin, exhibit differentiation properties simultaneously in all L_p spaces, $1 \le p \le \infty$, or in none. In the latter case, we investigate the rate of divergence in comparison to the analogous setting in ergodic theory. (Received February 01, 2006)