HAUSDORFF OPERATORS ON THE WEIGHTED HERZ–TYPE HARDY SPACES

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Abstract. In this paper, we study the high-dimensional Hausdorff operators on the weighted Herz-type Hardy spaces and obtain some substantial extensions from the previous results in [3]. Particularly, for the Hausdorff operators, we establish their sharp boundedness on the power weighted Herz-type Hardy spaces. Our results reveal that the Hausdorff operators have better performance in the Herz-type Hardy spaces \( H^{\tilde{q},p} K_{\alpha} \) than their performance in the Hardy spaces \( H^{p} w \) when \( 0 < p < 1 \).


Keywords and phrases: Hausdorff operator, Herz-type Hardy space, local Herz-type Hardy space, weight.

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