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WEIGHTED COMPOSITION OPERATORS AND DYNAMICAL SYSTEMS ON WEIGHTED SPACES OF HOLOMORPHIC FUNCTIONS ON BANACH SPACES

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ABSTRACT. Let B_X and B_Y be the open unit balls of the Banach Spaces X and Y , respectively. Let V and W be two countable families of weights on B_X and B_Y , respectively. Let $HV(B_X)$ (or $HV_0(B_X)$) and $HW(B_Y)$ (or $HW_0(B_Y)$) be the weighted Fréchet spaces of holomorphic functions. In this paper, we investigate the holomorphic mappings $\phi : B_X \rightarrow B_Y$ and $\psi : B_X \rightarrow \mathbb{C}$ which characterize continuous weighted composition operators between the spaces $HV(B_X)$ (or $HV_0(B_X)$) and $HW(B_Y)$ (or $HW_0(B_Y)$). Also, we obtained a (linear) dynamical system induced by multiplication operators on these weighted spaces.

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