

Title: A note on the diagonal mapping in spaces of analytic functions in the unit polydisc

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We define two spaces $K^{p,q,\alpha,\beta}$ and $M^{p,\alpha}$ of analytic functions in the unit polydisc U^n of C^n , closely related to the mixed norm and the Bergman spaces on U^n , and for any holomorphic function F in $K^{p,q,\alpha,\beta}$ or in $M^{p,\alpha}$ we consider its restriction to the diagonal, i.e., the function in the unit disc U of C defined by $DF(z) = F(z, \dots, z)$, and prove that the diagonal mapping D maps $K^{p,q,\alpha,\beta}$ onto the mixed-norm space $H^{p,q,\beta+\frac{q}{p}(|\alpha|+2n-1)}(U)$ and the space $M^{p,\alpha}$ onto the Bergman space $A^{p,|\alpha|+2n-1}(U)$.

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