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COMMUTATORS OF TWO COMPRESSED SHIFTS AND THE HARDY SPACE ON THE BIDISC

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Dedicated to Professor Tsuyoshi Ando on his eightieth birthday

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ABSTRACT. For a subset E of the bidisc D^2 , $M = \{f \in H^2(D^2) : f = 0 \text{ on } E\}$ and N is the orthogonal complement of M in $H^2(D^2)$ where $H^2(D^2)$ is the two variable Hardy space on D^2 . We describe the finite rank commutants of the restricted shifts S_z and S_w on N when E satisfies some natural condition. Moreover we give a sufficient condition for that the Pick interpolation is possible.

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