

Hyponormal block Toeplitz operators on the Hardy space

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In this paper we are concerned with the hyponormality of block Toeplitz operators. In particular, we give a necessary and sufficient condition for block Toeplitz operators with partially circulant matrix-valued symbols to be hyponormal. We also give a rank formula for the self-commutator of hyponormal block Toeplitz operators with matrix-valued circulant polynomial symbols. In addition, we consider the extreme case for matrix-valued polynomial symbols and a block interpolation problem in connection with the hyponormality of block Toeplitz operators.